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Proceeding

The 1st Almuslim International Conference
on Science, Technology, and Society

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CHAPTER II

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Message from the Rector

Assalamu'alaikum Wr. Wb.
Greetings.

Ladies and gentlemen,

It is an honor indeed to open this conference, the 1st Almuslim International Conference on Science, Technology, and Society (AICSTS). On behalf of Almuslim University (Umuslim), I would like to extend a warm welcome to all participants and our speakers who are with us to make this a notable and exciting event a success.

At Almuslim University, we emphasize the best possible achievements in education and research and are also committed to innovation and technology. Today, we are faced with more challenges in these spheres, and therefore, as members of the academic community, we have a duty to find innovative research solutions for them. Hence, this conference is an excellent forum for experts, professionals, researchers, and students as well, to present, share, and discuss their knowledge and experiences with all of us. In line with such idealism, it is really a privilege for us to host you, not just this year, but for years to come, to give and provide opportunities to contribute lasting and practical solutions to the challenges that confront us from time to time. This conference includes keynote speeches, oral and poster parallel sessions on topics in the field of sciences, life sciences, engineering, social sciences and humanities.

Finally, we know that in the origination of this conference there may be some shortcomings, for which we would like deeply apologize in advance to all of you. This is the University's first experience in organizing an international conference like this. With deepest sincerity hereby we would also like to thank all the keynote speakers for your contribution, time and support for this conference. Our heartfelt appreciation goes to all the authors of the selected papers for their effort and hard work. I also would like thank the organizing committee of the conference for their hard work in making this event a success. I wish to encourage them to continue organizing more events and to take other initiatives as well in future. To support and sustain important research linkages for dialogue and facilitate exchanges of ideas such as this will certainly generate more new discoveries and innovations in years to come. It is everyone's optimism that all we will learn from this first international conference in 2015 will be used as a reference for the development of research, as well as guidance for the readers in education and in academic profession.

I am sure the committee of this conference has served you in the best way they can to make your brief stay with us a lasting memory.

Thank you.

Dr. Amiruddin Idris, SE, M.Si

Message from the Committee Chairman

Assalamu'alaikum Wr. Wb.
Greetings,

Ladies and Gentlemen,

I would like to take this occasion to cordially welcome all participants of the 1st Almuslim International Conference on Science, Technology, and Society (AICSTS). This conference is held at our beloved campus of Almuslim University (Umuslim), Bireuen, from November 7th to November 8th, 2015. Almuslim University, the home of 7 faculties, is one of the major private universities in Aceh. We are assured that the 416 scientific participants will contribute to productive discussions and exchanges of scientific experiences that will bring about success to this conference. Participants from 9 countries, Indonesia, Malaysia, Thailand, Philippines, United States, India, Taiwan, England, and Qatar, have optimally marked an international scope to the conference.
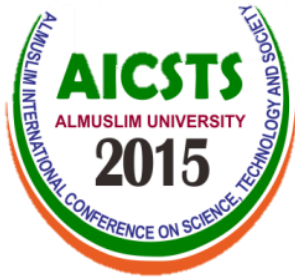
I would like to express my gratitude to the Coordination of Private Higher Education Regional XIII Aceh, the Institute of Research and Community Services of Almuslim University and the committee members for helping us in organizing the conference. The conference and proceedings are a credit to a large group of people and everyone should be proud of the outcome.

We are delighted with the vast responses of 152 submissions from researchers and practitioners. The knowledge bases that we are aiming to generate in the conferences topics are overwhelming due to the involvement of these experts from various fields of studies. Their papers will be published in the proceedings to provide permanent records of what has been presented. The proceedings are divided into four, Life Sciences, Engineering, Social Sciences and Humanities (Science Educations), and Social Sciences and Humanities (Economics, Social and Arts), and the papers published here will exhibit the current state of development in all aspects of important topics that are instrumental to all researchers in the various fields. They have succeeded in bringing together various aspects of developments and innovations in knowledge and technology that will benefit not only the academic community, but the society itself as well.

We realize that there are still many shortcomings in the implementation of the arrangements of this conference. Therefore at this opportunity we also expect criticism and constructive suggestions from all stakeholders so that the conference arrangements in future will be more successful. Finally we would like to thank you all for all the support and assistance you have contributed to making this conference and its proceedings successful.

Thank you,

Drs. Marwan Hamid, M.Pd

KEYNOTE SPEAKERS

ASEAN ICT Manpower: (Case Study of Thailand, Indonesia, and Vietnam)

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Abstract

This study investigates the situations of ICT manpower in Thailand, Indonesia, and Vietnam in 2012 and performs a projection of ICT manpower for 2018. This study involved both qualitative and quantitative research approaches. It describes the ICT development policies in the three countries to provide some context of the study. In-depth interviews and questionnaires were conducted to collect data from ICT manpower in core ICT industries, non-ICT industries and education sectors. The majority of ICT manpower in Thailand, Indonesia and Vietnam obtained a bachelor's degree, and are currently officer/technician/ engineer. In addition, the average salary rate is 690 USD in Thailand, 630 USD in Indonesia, and 350 USD in Vietnam. In 2018, the number of ICT manpower in Thailand will have about 634,981 persons, 3,122,800 persons in Indonesia, and 868,136 persons in Vietnam. It is found in the study that the ICT manpower in these countries has the same weakness, which is English communication. Regarding AEC, most ICT companies in three countries will gain advantages from AEC by seeking business opportunities and expanding businesses. This is an empirical study which investigates cross-country the profile of the ICT Manpower in Thailand, Indonesia, and Vietnam in 2012. It identifies the strengths and weaknesses of ICT manpower in the three countries based on the survey data obtained. Based on the results, it offers some recommendations on how to develop ICT manpower for a global labour-market competition and ASEAN.

Keywords: ASEAN, ICT Manpower, Thailand, Indonesia, Vietnam, ICT Professional Standards

Introduction

Nowadays, information technology has been rapidly changed with respect to an algorithm, structure and platform. In order to cope with the challenges of the waves of innovation and technological changes, ASEAN submitted ICT development in the next five years under the name "ASEAN ICT Masterplan 2015

(AIM 2015)". This Masterplan is driven by six strategies of economic transformation, people empowerment and engagement, innovation, infrastructure development, human capital development, and bridging the digital divide to deliver 4 key outcomes: 1) ICT as an engine of growth for ASEAN countries, 2) recognition for ASEAN as a global ICT hub, 3) enhanced quality of life for peoples of ASEAN, and 4) contribution towards ASEAN integration (ASEAN, 2011). As a result, ASEAN Membership: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnamwill planto develop their ICT infrastructures and ICT manpower. Nevertheless, factors that affect the development and capacity of ICT manpower in ASEAN countries are: 1) the mechanisms of education and innovation, 2) the support for ICT infrastructure in the country, 3) facilities of education/training, 4) the wages of labour, 5) the desire for a country to move forward, 6) the level of the community's economy, and 7) Government policies related to ICT.

The paper first describes briefly the ICT development policies of Thailand, Indonesia and Vietnam. Then, it discusses ICT professional standards, and describes the research methodology and data collection. After that, it provides the results of the quantitative and qualitative analyses on the current situations of ICT manpower, number of the ICT manpower, need for ICT manpower in market, strengths and weaknesses of ICT manpower, professional standards of ICT employees. Finally, it provides the impacts of ASEAN Economic Community (AEC) and ICT business trends in Thailand, Indonesia, and Vietnam.

ICT Development Policies in Thailand, Indonesia and Vietnam

In 2011, Thailand had been upgraded income categorization from a lower-middle income economy to an upper-middle income economy by The World Bank, and rank sixty-seven in the Networked Readiness Index in 2015 by The World Economic Forum. In order to enhance the competitiveness of the Thai industrial sector and prepare Thailand for the ASEAN Economic Community, the Government has revealed the Masterplan under name "Digital Economy". This Masterplan covers in four areas: Digital Commerce, Digital Entrepreneur, Digital Innovation, and Digital Content, and consists of five strategies, namely, Hard Infrastructure, Soft Infrastructure, Service Infrastructure, Digital Economy Promotion, and Digital Society (GSMA, 2015).

According to Thailand ICT Development Policy, the Ministry of Information and Communication Technology (MICT) has formulated the ICT 2020 Policy Framework. According to vision and goals of the ICT 2020 policy, "ICT is a key driving force in leading Thai people towards knowledge and wisdom and leading society towards equality and sustainable economy" (NECTEC, 2011). Furthermore, the ICT 2020 policy framework set five strategies: Strategy 1: Universal and secure ICT and broadband infrastructure, Strategy 2: ICT Human Resource and ICT Competent Workforce to emphasise the development of ICT employees' knowledge and skills and the expansion of a number and quality highly-skilled ICT manpower based on international standard. Strategy 3: ICT industry competitiveness and ASEAN integration, Strategy 4: Smart government: ICT for government service innovation and good governance, and Strategy 5: ICT for Thailand competitiveness and vibrant economy.

Indonesia has the largest of population in ASEAN and ranks seventy-nine in the Networked Readiness Index in 2015. In order to develop Indonesia as one of the world's main food suppliers, the Government has revealed the Masterplan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI). This plan is implemented for the period of 2005-2025 by focusing on eight main programs, namely the development of agriculture, mining, energy, industry, maritime, tourism, telecommunication, and development of strategic zones. The implementation strategy of MP3EI will integrate three main elements: 1) developing the regional economic potential in six Indonesia Economic Corridors: Sumatra Economic Corridor, Java Economic Corridor, Kalimantan Economic Corridor, Sulawesi Economic Corridor, Bali – Nusa Tenggara Economic Corridor, and Papua – Kepulauan Maluku Economic Corridor; 2) strengthening national connectivity locally and internationally; and 3) strengthening human resource capacity and national science & technology to support the development of main programs in every economic corridor (Ministry for Economic Affairs, 2011).

According to ICT development, this Masterplan emphasises ICT industry development in Java Economic Corridor only. Furthermore, in order to link the producers and users of science and technology, the government of Indonesia established intermediary institutions to achieve this objective such as Business Innovation Center (BIC), Business Technology Center (BTC), Center for Innovation - LIPI, Center for Nuclear Partnership - BATAN, BPPT engineering, and Technology Incubator Center – BPPT.

Meanwhile, Vietnam has quickly and continuously developed all ICT sectors, and ranks eighty-five in the Networked Readiness Index in 2015. In order to develop Vietnam into an industrialised and modernised country in 2020, the government has revealed Vietnam's Socio-Economic Development Strategy for the period of 2011-2020 (Ministry of Planning and Investment, 2012). This strategy is aimed to stimulate investments in major industries through tax incentives, for example, goods export, agriculture and forestry, advanced technology industries (such as manufacturing computer software and components), environment, research and development, labour intensive industries, and natural resources and infrastructure.

Regarding ICT development in Vietnam, Ministry of Information and Communication set the National strategies and plannings on ICT development to drive ICT sector during 2011-2020. . In 2013, the Government of Vietnam established the National Commission on Application Information Technology (NCAIT) to promote the use and development of IT in state agencies. Moreover, Vietnam expanded ICT sector to upcountry by establishing Department of Information Communication in 63 provinces (MIC, 2014). As for ICT manpower development, by the end of the year 2013, Vietnam had 290 universities and colleges and 228 vocational schools which offered training courses on telecommunications and IT majors with the total enrollment quota exceeding 80.000 students (MIC, 2014).

ICT Professional Standards

The ICT professional standards have been used to measure or evaluate each individual ICT employee in terms of potential, skills, attitudes, competency, and knowledge. In addition, the ICT professional standard can enable public and private organisationsto more effectively recruit and develop ICT

employees. Based on the existing relevant data and information, it is found that various ICT professional standards to implement in several countries.InEurope, the European Commission developed and implemented European Qualification Framework (EQF) and European e-Competence Framework (e-CF).The EQF uses to compare the education standard levels between the European Union member countries. The e-CFaims to develop ICT manpower, and support all industries in Europe. In the United Kingdom (UK), government developed The ICT professional standards under name Skills Framework for the Information Age (SFIA). In Asia, Japan proposed standard under name Skill Standards for IT Professional (ITSS).

Meanwhile, ASEANhave developed ICT professional standard, in order to measure ICT manpower knowledge and skills, and use to compare the ICT professional standard between the ASEAN member states. ASEAN ICT professional standard set ICT competency at three levels as follows: Level 1 Basic Level - Has basic knowledge and skills which is adequate to perform a given task(s) under supervision of management. Level 2 Intermediate Level - Has professional knowledge and skills to perform a given task(s) independently, and, if required, can supervise others; understand the number of comparative approaches to problems in their fields; and be able to apply them efficiently, and Level 3 Advanced Level - Has professional knowledge and skills in both technical and management to lead a team in inexperienced environment.

Methodology

This study used qualitative research, and quantitative research approaches. We conducted in-depth interviews with executives responsible for ICT management in public and private organisations, and then questionnaire surveys to collect relevant data during 2012 –2014 in Thailand, Indonesia and Vietnam.

The sampling respondents were selected from ICT manpower in core and non-core ICT industries sectors in the three countries. The total number of returned and usable questionnaires are 589 questionnaires and 87 interviews from Thailand, 214 questionnaires and 15 interviews from Indonesia, and 200 questionnaires and 15 interviews from Vietnam.

Findings

The results of the study on ICT manpower in Thailand, Indonesia, and Vietnam are presented as follows:

ICT Manpower in Thailand

The study of demographic characteristics reveals that there were 589 respondents, 70.6% of which were male and 29.4% were female and the average age of the respondent was not over 33 years old. Most respondents are employed as technician/ engineer. Regarding education, most of them had a bachelor's degree, followed by master's degree, and their average work experiences are between 1-10 years. For salary rate, the average salary rate was 690 USD.

1.   *The Number of ICT Manpower in Thailand.* Base on the report of Thailand ICT manpower - National Statistical Office of Thailand and Office of the National Economic and Social Development Board during 2001-2012, in order to forecast the number of ICT manpower in

Thailand during 2013 – 2018, this study uses the Inverse Cobb – Douglas Production Functions, which uses Regression Analysis for the calculation to find the relationship between the number of manpower and gross capital stock, and time. Thus, if the Thai economy keeps expanding with consistent growth of GDP and CAP, the overall number of ICT manpower also tends to increase from 519,703 persons in 2013 to 540,947 persons in 2014, 563,065 persons in 2015, and 634,981 persons in 2018.

2. Need for ICT Manpower in Thailand Market. The result of interviews suggest that hardware sector needed for employees to fill in the position of product managers (who possess understanding and knowledge about ICT businesses and technology), network engineer, system engineer, developer, data communication specialist, security specialist, system manager, project manager, and system architecture specialist. The software and service sectors required employees in the level of software development specialist and project manager with the software specialist abilities. While telecommunication sector required employees in telecommunication engineering, radio network, database administration, IT security, network security and data analytic (Employee with IT knowledge and abilities to analyse data to find out customers' needs which will enable the company to better respond to their needs).

3. Strengths and Weaknesses of ICT Manpower in Thailand. As for strengths of Thai ICT manpower when compared with those of other ASEAN countries, the executives of the sample organisations viewed that Thai employees are careful and can work effectively in programming. They have problem solving skills and can effectively develop systems. Also, they are flexible and helpful, which are good for consultation services. Meanwhile, the weaknesses mentioned by the interviewed executives include the following: lack of presentation skills, lack of management skills, lack of business knowledge, lack of overall business pictures, lack of discipline, lack of responsibilities, impatience, lack of determination, lack of motivation to seek more knowledge by themselves, and lack of English skill.

All the executives advised that English texts are necessary. Thus, Thai ICT manpower must be increased English skills because English is important for development of knowledge and abilities since ICT technology originated from the West while Eastern countries adopted such technology from them.

4. Professional Standards of ICT Employees in Thailand. According to the professional standards of ICT Employees in Thailand, several government offices,such as Thailand Professional Qualification Institute (TPQI), Council of Engineers, Department of Skill Development, Office of the Education Council, etc.are attempted to develop professional standards to evaluate the potential of ICT manpower. This might affect the ICT manpower or entrepreneurs. Meanwhile, private sectoremphasised universal standards, such as ISO, ITIL and COBIT, as well as vendor certificates, such as MCITP (Microsoft Certificate IT Professional), CCNA (CISCO Certified Network Associate), VCP (VMware Certified Professional), SAP and ORACLE.

However, the results of surveys and interviews suggested a advantages of ICT professional standards to support the ICT manpower and companies as follows: 1) increase potential: ICT professional standards enable employees to learn about their own knowledge and abilities, it is a way to encourage

themselves to learn and meet the set standards; 2) clear self-development strategies: ICT professional standard framework set requirements for ICT employees to pass criteria in each level so employees see how they can grow in their professions, set the goals for themselves, and learn which areas they need to develop to meet the goals; 3) reliability and acceptance: ICT professional standards are criteria for setting the minimum knowledge and expertise in professions, employee passing professional standards will receive certificates certifying the knowledge and abilities in accordance with what is specified in the professional standards; 4) employee planning: ICT certificates that an employee receives from passing the professional standards certifies skills, knowledge and the minimum abilities of that person, it is an additional information useful for recruiting employee for work to suit each position; 5) build mutual understanding: ICT professional standards enable all the sectors related with ICT systems in Thailand to understand correctly about ICT ability levels in different fields. This professional standard framework can also be used as a reference for developing ICT manpower; 6) upgrade industries: ICT professional standards help develop the ICT manpower in terms of knowledge and abilities, they can perform tasks better. Once employees possess knowledge and abilities in accordance with the set standards, the overall productivity of the industry will be better, meet the standards, and is more widely accepted.

In addition, the results of the surveys and in-depth interviews showed disadvantages of ICT Professional Standards to impact ICT manpower and companies as follows: 1) lack of knowledge in the field of work: as professional standards encourage employees to have expertise; this may lead to the fact that ICT employees view the tasks only in the dimension of their own expertise. As a result, the overall Thai ICT employees may lack the comprehensive ICT knowledge; 2) higher expenses: Various businesses will have more expenses on employee as they are needed for supporting ICT employees to pass the professional standard tests.

5. The Impacts of AEC and ICT Business Trends in Thailand. AEC will bring advantages to Thailand in term of businesses, technologies and manpower. At the business level, most companies are expected to be able to rapidly expand business and outsource their business activities in the ICT service sector. Furthermore, they can recruit foreignmanpower with lower wage. On the other hand,In order to compete in AEC market, Thai companies should be developed and adjusted products quality to high standards, including technology change. At the same time, ICT manpower should be developed individual skills such as English language skill and working skills.

Regarding the new ICT business in the future, the results of technology and customer behaviour continued to change in Thailand market. As a result, most of ICT companiesand non-ICT companies will adjust business plans and develop new products/services by focusing on Cloud Computing, Big Data, and Mobile Application and Business.

ICT Manpower in Indonesia

The study of demographic characteristics found that there were 216 respondents, 74.10% of which were male and 25.90% were female and the average age of the respondent was 30 years old or below. Most respondents were employed as a technician/ engineer. Regarding education, most of them had a

bachelor's degree, followed by diploma, and the experience was 1- 5 years. For salary rate, the average salary rate was 630 USD.

1. The Number of ICT Manpower in Indonesia. Based on the information of ICT manpower in Indonesia during 2005-2010 by The Economic and Social Commission for Asia and the Pacific (UNESCAP or ESCAP), this study used the method of Linear Regression to predict ICT manpower in Indonesia during 2011-2018. The result suggested that, the ICT manpower in Indonesia will increase from 2,042,000 persons in 2013 to 2,258,000 persons in 2014, and 2,474,000 persons in 2015. Moreover, Indonesia will have about 3,122,800 persons of ICT manpower in 2018.

2. Need for ICT Manpower in Indonesia Market. According to a study by the Economist Intelligence Unit conducted for British Council in June 2012, it was found that the Indonesian economy is experiencing changes, from the focus on agriculture to manufacturing industry. According to Indonesia's economic plan for 2011 – 2023 (MP3EI), most of the budget is allocated for coal, mine, petroleum and natural gas. Meanwhile, the ICT industry is one of the ten industries the government aims to develop. The ICT industry development developed the broadband business to reach the growth of 8% in 2014 (from 0.5% in 2010) and aimed to stimulate four main businesses, including device manufacturing, professional and consulting services, content and applications development, and ecosystems innovation. In order to develop these businesses, Indonesia needs to have employees with a degree in computer science, which is still rare at present.

For Indonesian market need, important knowledge and expertise for the ICT manpower were in network, databases, integrated systems, software engineering and the ability to analyse needs, system planning, quality assurance, filing system, and integration with Cloud Computing.

However, there are some factors about how significant changes can affect demand for Indonesia ICT manpower: 1) when companies use computerized devices and modern tools, 2) the entry of foreign companies in the pioneering technology to Indonesia, 3) the flow of information and communication needs that are quite high in every work unit/institution/company, 4) started to use the system information in doing a job that is considered to be more practical and easier than the job manually.

3. Strengths and Weaknesses of ICT Manpower in Indonesia. According to a review of strength in ICT manpower in Indonesia when compared with other ASEAN countries, the executives of sample organisations who were interviewed gave the opinion that IT manpower in Indonesia is of high potential, particularly in software operation and adoption. Some Indonesian employees possess qualifications suitable for job positions in ICT large companies. The ICT manpower in Indonesia has some weaknesses, for instance, initiatives, innovation, diligence, access of information, lack of interest from the government sector to develop ICT knowledge and English skills, and breadth of knowledge.

In order to increase ICT manpower performance, some organisationsrecognised the importance of aiding technology of developers, such as programming, education, knowledge and experience development, logics in problem solving, importance of computer systems, and organisation leadership. Moreover, mutual guidance for operation should be established, for example, arranging regular training to

develop new knowledge, undergoing training, workshops and seminars to gain modern knowledge and expertise by including the Employee training budget in the annual budget, and organizing internal and external training.

4. Professional Standards of ICT Manpower in Indonesia. For professional standards of ICT manpower in Indonesia, the standards mentioned by Indonesian respondents are for certificates issued by some companies like Cisco, Mikrotik, Microsoft and others. Furthermore, there are some standards in Indonesia which have received the international certification, for instance, standards for ICT graduates or SKKNI. It was mentioned that the standards should link with the international standards. The organisation with the role to set Indonesia's professional standards is the Ministry of Communications and Informatics). In general, professional standards are one of the factors for determining the manpower's salary rates. The sample respondents viewed that the current professional standards are good and sufficient, for example, certificates of various companies, such as CISCO, MSEE, ORACLE, JAVA, etc. which are accepted in Indonesia and internationally.

In their view, The advantage of ICT professional standards are: 1) develop universal language system to facilitate ICT jobs without having to undergo long training 2) have manpower with widely accepted certification 3) potential of ICT manpower is determined by the same standard, and they have a chance to prove their potential both at national and international levels 4) professional standards help increase skills of ICT manpower. Despite a lot of advantages, ICT professional standards also had some loopholes, including 1) financial problems related with the certificate issuing organisations as they are not located in Indonesia. 2) ICT professional standards will not be taken into consideration or neglect to process the application portfolio. When ICT employees have the knowledge and accept their performance by their agencies. 3) It will be more difficult to search for employees which meet ICT professional standards. As a result, all the related organisations should involve ICT curriculum, including private and foreign organisations, in the same way as Indonesia's governmental organisations.

5. The Impacts of AEC and ICT Business Trends in Indonesia. Regarding the impacts of AEC, most of the ICT executives thought that they can gain benefits from AEC by seeking business opportunity into AEC market, exchanging knowledge and technology, sharing technological development, and expanding cooperation. On the other hand, some ICT executives thought that they will not gain advantages from AEC.

For the ICT business trends in the future, enterprise state and private sector firms have important roles to drive ICT industry in Indonesia. Most of companies expect changes in the ICT industry such as: 1) a more "user friendly" technology, 2) the establishment of strong technology-based companies, like Google, Microsoft or Macintosh, in Indonesia, 3) the ability to compete internationally, 4) the shift towards the use of mobile devices (mobile device), 5) the development of software industry as well as hardware industry. Based on telecommunication structure and ICT manpower skills, ICT companies in Indonesia will use joint venture strategy to develop new products/services by focusing on Cloud Computing, Mobile Business, ICT Outsourcing, and Call Center.

ICT Manpower in Vietnam

The study of demographic characteristics found that there were 200 respondents, 69.5% of which were male and 30.5% were female and the average age of the respondent was not over 30 years. Most of the respondents were employed as a technician/ engineer. Regarding education, most of them have a bachelor's degree, followed by diploma, and their work experiencesare in the range of 1- 5 years. For salary rate, the average salary rate was 350 USD.

1. The Number of ICT Manpower in Vietnam. Based on Vietnam ICT White Book in 2009 - 2014, this study used the method of Linear Regression to predict ICT manpower in Vietnam during 2013 - 2018, and found that, Vietnam ICT manpower will have about 441,008 persons in 2013, 505,086 persons in 2014, 578,324 persons in 2015, and 868,136 persons in 2018. However, the ICT personnel development plan of the Ministry of Information and Communication (MIC) aims to increase the number of Vietnam ICT manpower to 1 million persons in 2020 in order to support ICT Industry and export ICT manpower to global market (Minister of Information and Communications, 2012).

2. Need for ICT Manpower in Vietnam Market. The result of in-depth interviews suggested that the ICT manpower should possess knowledge and expertise in hardware and software. Employees must be able to control themselves emotionally and be flexible in stressful working environment, develop specialisation and accomplish tasks assigned by the company. In addition, Vietnam market need manpower with good communication skills and could communicate with foreigners. Thus, the most important elements are foreign language skills, abilities to do research, management, team work and presentation skills. In other words, Vietnam has a lot of knowledgeable ICT manpower, but without expertise.

3. Strengths and Weaknesses of ICT Manpower in Vietnam. According to a review of strength in the ICT manpower in Vietnam when compared with other ASEAN countries, the executives of sample organisationsviewed that Vietnam has large number of ICT manpower who are youths with creativity, and love for learning and new experiences. They are active and dedicate themselves to work, and can learn fast. Its ICT manpower has high skills and the wages are lower than in other countries. Strength of Vietnam's ICT is knowledge. Vietnam possesses knowledge and the ICT manpower with the right degree and potential in research and development in specialised ICT. In general, Vietnam manpower is hard-working and determined. Each employee has various abilities. For example, programmers can learn about network or system integration. For weaknesses, the ICT manpower in Vietnam has limitations in language and professional training. These include the lack of creativity, independence, teamwork skills, knowledge and experience. As a result, they are required for more technical training. Their working environment is not professional and there is no training in educational institutions. But the training in Vietnam is not systematically organised. Many training institutions have been established without trainers' quality control. The ICT manpower can increase their skills only through work experiences. As a result, new graduates have low-level skills.

4. Professional Standards of ICT Manpower in Vietnam. Based on the result of interviews, this study found that ICT professional standards do not affect the worker's salary rate. The salary rate is dependent on the employee's ability, knowledge and work experiences. However, the Vietnam government has a plan to develop professional standards of ICT manpower in the future.

5. The Impacts of AEC and ICT Business Trends in Vietnam. Most of the ICT executives believed that AEC will bring advantages in that Vietnamese ICT manpower will get to learn new technology more. Manpower with required skills will be easier to find, their wages will be cheaper than those in ASEAN, and more cooperation will be enhanced. The chance to export software and expand markets will also increase, with the focus on Indonesia or Malaysia market. The cooperation with other ASEAN countries can help promote the company among their overseas counterparts. In addition, there will be transfers of manpower, knowledge, new working methods, and exchanges of expertise or problem solving strategies.

Regarding the new ICT business trends in the future, most of the ICT executives viewed that ICT companies in Vietnam will use joint venture strategy to develop and launchnew products/services. There are 1) Software Outsourcing Cluster 2) Data Center Service, and 3) Cloud Computing.

Conclusion

Regarding ICT demographic data of Thailand, Indonesia, and Vietnam, most of the ICT manpower in the three countries were male. Vietnam ICT manpower had a higher ratio of female manpower than Thailand and Indonesia, and most respondents in the three countries are employed as a technician/ engineer. Regarding education, most of the respondents have a bachelor's degree, followed by master's degree for Thailand, and diploma for Indonesia and Vietnam. Their ICT work experiences range from 1-10 years for Thailand and 1-5 years for Indonesia and Vietnam. For the average salary rate, Thailand has higher salary rates than Indonesia and Vietnam (690 USD in Thailand, 630 USD in Indonesia, and 350 USD in Vietnam). According the forecast of the number of ICT manpower in 2018, Thailand will have about 634,981 persons, 3.2 million persons in Indonesia, and 887,025 persons in Vietnam. Thus, Indonesia has the largest number of ICT manpower in ASEAN. As a result, Indonesia can quickly develop and launch ICT products/services to domestic markets and global markets. As for strengths and weaknesses of ICT employees in Thailand, Indonesia, and Vietnam, the interviewed executives of sample organisations viewed that the strengths of ICT employees in each country is different. Meanwhile the ICT employees in every country have the same weakness, which is English communication.

Based on AEC in 2015, most ICT companies in three countries will gain advantages from AEC by seeking business opportunities and expanding businesses. However, they must be emphasised manpower skill development. For ICT businesses in the future, Thailand has planned to develop Cloud Computing, Big Data, and Mobile Application and Business. Indonesia will develop Cloud Computing, Mobile Business, ICT Outsourcing, and Call Center. Meanwhile, Vietnam has emphasiseddevelopment in terms of Software Outsourcing Cluster, Data Center Service, and Cloud Computing. Thus, these countries should plan to developed ICT manpower skills to serve new ICT businesses.

In sum, the result of this study can help the public and private sectors in these three countries as well as in other countries in ASEAN to plan for the development of ICT manpower for a global labour-market competition and ASEAN.

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Water Quality Evaluation System for Assessing the Status and Suitability of the Citarum River Water for Various Uses and Its Aquatic Ecosystem

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Abstract

The Citarum river water is the most important water sources in Indonesia. The river that supports a population of 28 million people, delivers 20% of Indonesia's gross domestic product, and provides 80% of surface water to carry through the West Tarum Canal to the Jakarta's water supply authority, is one of the most polluted rivers in the world. Water quality degradation of this river increases from the year to year due to the increasing pollutant loads when released particularly from Bandung region of the upstream areas into river without treatment. This will be facing the chronic problems of water pollution for supporting the suitability of water for different uses. This study used the Water Quality Evaluation System to asses the suitability of water in term of the Water Quality Aptitude (WQA) for five different uses and its aquatic ecosystem. The assessment of ten selected stations was found that the WQA ranges from the suitable quality for agriculture and livestock watering uses to unsuitable for biological potential function, drinking water production, and leisure and sport upstream the Saguling reservoir, generally. The role of Citarum river water in providing the demands of multipurpose uses particularly for Jakarta's water supply will still be present in question for the years to come. The aptitude of water along the river is evaluated to contribute to decision support system for decision-making process and to provide as proper information for water users in allocating their water right wisely.

Keywords: Citarum River, water quality aptitude, water quality evaluation system, water use.

Introduction

The problems of water quality degradation in the Citarum river will increase from the year to year due to the increasing of the pollutant loads particularly from Bandung region located in the upper areas of the river basin when released without treatment. Deterioration of water quality causing by the human activities in upper river basin reduces the usability of the resources for stakeholders in the down-stream

areas. Over the past 20 years, rapid urbanization and industrial growth have resulted in growing quantities of untreated domestic sewage, solid waste and industrial effluents being dumped in the river. Pollution levels now compromise public health, and the livelihoods of impoverished fishing families have been jeopardized by widespread fish kill (DGWR, 2007). To handle the problems in implementing of integrated water quality management are necessary to consider all the related aspects entire the basin to ensure the quality of stream water managed will improve gradually. For example, a refined the waste load allocation process is proposed with a reexamination of water quality violation to improve the allocation decision under uncertainty (Chen and Ma, 2008). Participatory surface water management is emphasized in order to achieve a holistic and sustainable water management decision-making process (Hartmann et al., 2006).

The government of Indonesia has been acquainted with integrated approach since the Government Regulation No. 82 on water quality management and pollution control (PP No. 82/2001) was enacted in the year 2001. The PP No. 82/2001 serves as the national guideline to be referred in managing of water quality especially for water managers and operators who work at the national, provincial, and river basin level institutions. Although this regulation guides the role sharing amongst the related institutions and provides the technical arrangements including the classification of the national water quality criteria, the operational guidelines in implementing of the regulation to the specific characteristics of a river basin are still not envisaged properly. However, conducting an adaptive guideline in managing of water quality to the specific local condition is necessary (Fulazzaky, 2005). For example, salinity tolerance of macro-invertebrate communities varies in Eastern Australia; hence, water quality guidelines should be developed at a local or regional scale (Dunlop et al., 2008), and the nutrient pollution effects of moderate eutrophication to Runde river in Zimbabwe need to be addressed by appropriate agricultural and environmental policies that relate to water pollution and land use (Tafangenyasha and Dube, 2008).

Water quality evaluation system (WQES) has been developed to aim two objectives that are (1) to classify the water quality in accordance with the actual condition of water in the stream and (2) to classify the water suitability for different uses and its ecosystem in accordance with the available water quality in the river (Oudin et al., 1999). Thus, the WQES serves to assess the status of water quality in the stream and to identify what the level of water is suitable to provide for the different uses and its ecosystem. This tool is considerable to a comprehensive approach in evaluating of water quality. The earlier study showed that a modeling approach can be used to estimate the impacts of water quality management programs in river basins (Holvoet et al., 2007). The models are possible to analyze the best recommendations needed for different levels of treatment derived in order to improve the water quality (Muhammetoglu et al., 2005). The results of water quality analysis using the WQES are offered to be considered in formulating of the water quality standards and the priority of measures needed to each region in the country, or anywhere, based on the specific local conditions. A systematical analysis of water quality data scientifically introduces to translate the data to actual explanations may be envisaged as decision support system (DSS). The accurate information obtained helps the decision makers in preparing the locally adaptive

policies and guidelines to water quality assessment and management besides serves as the proper tool to water users in allocating their water right wisely.

The objectives of this study are (1) to identify the suitability of Citarum river water in providing the different water uses and its aquatic ecosystem, (2) to warn the water users in allocating their water right wisely based on the actual quality of water, and (3) to recommend the priorities of measures needed to be envisaged by the local authorities, central government, and all related stakeholders for improving water quality.

The importance of WQES to assess the Citarum river water

The Citarum river is the largest river in western Java, the region which contains Jakarta, the capital of Indonesia. The river originates in the mountain range near the southern coast of Java that includes many high volcanic peaks including Mount Wayang (elevation 2,200 m), and travels in a generally north-westerly direction for about 270 km until it empties into the Java sea east of Jakarta. Its drainage area is about 6,600 km^2. The upstream reaches of the river run in mountainous to gently undulating hilly lands for about 200 km while the lower 70 km stretch drains a vast plat alluvial plain. The total area of the river basin to include certain bordering rivers and its tributaries as shown in Figure 1 is about 11,500 km^2 situated at *latitude* of 6°43′ S to 7°04′ S and *longitude* of 107°15′ E to 107°55′ E. The climate of the basin area is characterized by two distinct seasons: rainy season and dry season. The rainy season occurs during the months of November to April, while the dry season occurs during the remaining months. January is the wettest month, while August is the driest month. Naturally, runoff follows the same seasonal pattern. The average annual rainfall varies from 1,500 mm in the coastal areas to 4,000 mm in the mountainous areas in the upper part of the basin. This total runoff from the catchments is generally considered to be adequate to supply demands for all uses well into the future. To regulate surface water the Citarum river system has three cascade reservoirs, i.e., Saguling in the uppermost, Cirata in the middle, and Jatiluhur in the lower location. However, the spatial distribution of surface water resources is not uniform, and shortages do occur from time to time in certain areas.

Figure 1. Location of Citarum river basin

The population in the river basin area in 2003 was 17.8 million, with 4.1 million households – 30% derived livelihood from agriculture, 25% from industry and 45% from services. The population is projected to rise to 21.3 million by 2010. Industrial locations are generally interwoven with settlement and there is no clear zoning or separation of these land uses in the region. The area is a key rice producer for the country. There are a total of 390,000 ha of irrigated paddy fields, with 240,000 ha served by the Jatiluhur reservoir and canal system in the lower basin. Average annual demand from the Jatiluhur dam has increased from 140 m^3/s in 1996 to 156 m^3/s in 2004. The river that supports a population of 28 million people, delivers 20% of Indonesia's gross domestic product, and provides 80% of surface water to carry through the West Tarum Canal to the Jakarta's water supply authority is one of the most polluted rivers in the world (DGWR, 2007). Urbanization in the last three decades was followed by rise in untreated household sewage, solid waste and industrial effluents. The more waste enters the river the more chances for spreading diseases, and already there are many fishing families that are starving because of tremendous decrease in fish population due to heavy pollution.

Methodology

General of quality evaluation system

The assessment of river quality as shown in Figure 2 is commonly based on three choices, which are: (1) water choice, referred to as the WQES, to assess the physicochemical and biological quality of water in terms of the water quality index (WQI) and the suitability of water for supporting natural functions of the aquatic environment and water uses in terms of the water quality aptitude (WQA); (2) physical structures choice, referred to as the physical quality evaluation system, to assess the level of manmade change on the main channel, channel margins, and river banks; and (3) biological choice, referred to as the biological quality evaluation system, to assess the state of the biosciences of the aquatic environment (Oudin et al., 1999). The qualities of water and physical structures of a river influence the quality of biological aquatic substances component. This economically influences the exertions of water resources management in order to ensure the sustainable environmental development technicality.
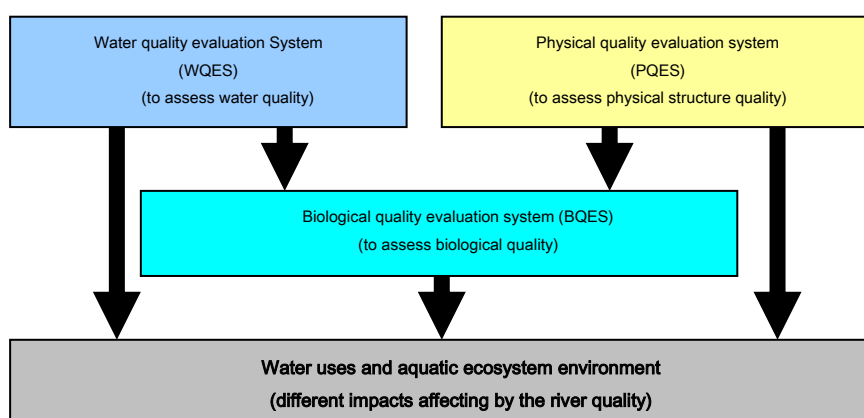

Figure 2. Global quality assessment of a river

The aims of the system are to assess river quality according to the qualities of each component, to identify the alterations in water quality or physical environment which are the cause of biological inbalances, and to assess the effects of an alteration of the river quality for human uses or on the natural functions of rivers. The tools for the assessment of the quality of rivers have been defined in a modular way and are adaptable to scientific and technical development as well as regional peculiarities. For example, water quality is assessed by reference to average alterations of parameter groups; new parameters can be included later in the description of quality by modifying the framework and functions of the evaluation tool. The evaluation tools for river quality consider three quality evaluations system that are: (1) common to all water partners consisting of the technicians, decision makers, and water users, (2) consistent with the international, regional, and local water regulations, and (3) help appreciate the environmental and asset problems. They make a link among partners. In this way, they are a tool for decision-making in the monitoring and the planning of the protection of rivers.

Application of WQES is a part of river quality assessment that aims to convert the data of water quality to information is more suitable. This envisages possess the operational procedure standard generating the data to information based on all the parameters monitored. The information produced from the WQES as shown in Figure 3 provides two categories that are the water quality status and the water suitability for different uses and its aquatic ecosystem (Fulazzaky, 2009; Fulazzaky at al. 2010). Besides, to identify the critical parameter(s) affecting the quality of water and to verify the sources of pollution discharged to the stream water are reasonable (Fulazzaky, 2005). The WQES is based on the notion of indicators of modification from natural conditions. Parameters of similar nature and impact on environment are grouped into 15 alterations of indicators of water quality (see Table 1).
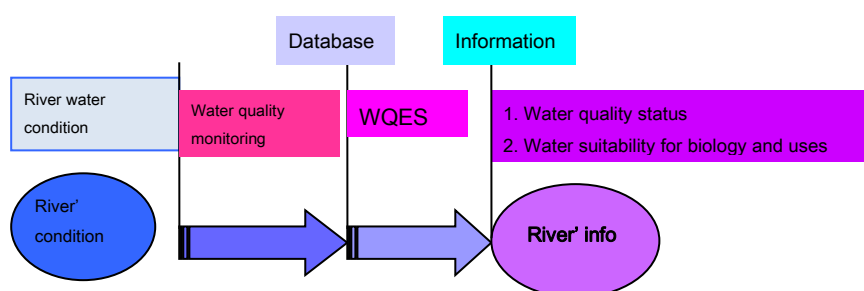
Figure 3. Link of river water quality condition to river water quality information

Sources: Fulazzaky 2009; Fulazzaky et al. 2010

Certain institutions have the different objectives of water quality standardized such as WHO's water quality standards specifically aim to standardize drinking and recreational water qualities, it is not compatible to only use the standard formalized by an institution to assess all the criteria of river water quality for the different uses of aquatic biota, drinking water production, recreation and aquatic sports, irrigation, livestock watering, and aquaculture comprehensively. This study used the thresholds criteria of French Water Agencies Study No. 64 original from the different sources of water quality standards i.e., Directive European, France, EPA USA, WHO and Canada, and completed by the rational advices from

the water quality experts (Oudin et al., 1999). The WQES promotes a tool to synchronize the evaluation of all water quality parameters data monitored to convert to the WQI or WQA. Hence, this study only focused on the analysis of WQA for understanding the suitability of Citarum river water for the different uses and its aquatic ecosystem.

The use of WQES in examining the valid data to assess the suitability of water for different uses and aquatic biota is systematized using an aggregation method. Since the aggregation method to study the data of water quality monitored from a river is not necessary to conduct with a statistical analysis, the probability of exceptional situation takes account into evaluation in excluding the inconvenient results of lower than 10% from the list of useable data when the anomalous consequences of samples monitoring were verified. To assess the classes of WQA of stream water in a river using the WQES is to carry out after screening of the data via the Rule of 90% that is

$$F = (i - 0.5)/N \text{ or } i = 0.9 \, N + 0.5 \qquad (1)$$

where i is row of the results, N is total number of results; and $F = 0.9$ is percentage or 90% of acceptable data to evaluate.

To assess the alteration of suspended particles, the withheld rule is the 50% percentage, to avoid qualifying water after rainfall events which no exceptional characteristics and with a frequency superior to 10%. The formula is then

$$i = 0.5 \, N + 0.5 \qquad (2)$$

The rules need to be implemented due to the results monitoring the same parameter(s) of water quality are numerous. For instance, the parameters used to be analyzed as the valuable data in preparation of water quality management plan are indispensable to monitor regularly for certain locations along the river.

Table 1 Water quality parameters in accordance with their alteration

No	Alteration	Parameters
1	Oxidized organic matter	O_2, %O_2, COD, $KMnO_4$, BOD, DOC, NKJ, NH_4^+
2	Nitrogen matter	NH_4^+, NKJ, NO_2^-
3	Nitrates	NO_3^-
4	Phosphorus matter	PO_4^{3+}, P-total
5	Suspended particles	SS, Turbidity, Transparency
6	Colour	Colour
7	Temperature	Temperature
8	Mineralization	Conductivity, Salinity, Hardness, Cl^-, SO_4^{2-}, Ca^{2+}, Mg^{2+}, K^+, Na^+, TAC, Hardness
9	Acidification	pH, Dissolved Al
10	Micro organisms	Total Coliforms, Feacal Coliforms, Feacal Streptococci

11	Phytoplankton	ΔO_2, ΔpH, $\%O_2$, and pH, Chlorophyl a + pheopigments, Algae
12	Mineral micro pollutants in raw water	As, Hg, Cd, Cr-total, Pb, Zn, Cu, Ni, Se, Ba, CN
13	Metals in Bryophytes	As, Hg, Cd, Cr-total, Pb, Zn, Cu, Ni
14	Pesticides in raw water	List of pesticides (see Oudin et al., 1999)
15	Organic micro pollutants non pesticides in raw water	List of organic micro pollutants non pesticides (see Oudin et al., 1999)

Sources: Oudin et al., 1999

## WQA assignment for different purposes

The assignment of WQA as shown in Figure 4 is fixed to assess the suitability of water for different destinations of water uses and to verify the impact of pollution downgrading biodiversity. The biological potential function shows the suitability of water for aquatic life, when hydrological and morphological conditions of the habitat are good. The pollutants in the stream water such as metals and organic matters affect the declination of biodiversity and sediment quality. For instance, despite high metal concentrations associated with roots, the major part of the metals in the marsh soil is still associated with the sediment as the overall biomass of roots is small compared to the sediment (Teuchies et al., 2008). Five suitability classes of WQA have been defined. They indicate a gradual impoverishment of the biological structure, including the disappearance of the taxa most sensitive to pollution.

Defining the suitability classes for drinking water production depend on (1) the related regulations which are held as priorities for defining the blue/green class thresholds associated with suitability for consumption and orange/red class thresholds associated with unsuitability for production of drinking water and (2) the opinion of the producers and of the suppliers in defining intermediary thresholds for simple and complex treatments of raw water. The definition of suitability classes is grouped into five classes. The use of leisure and aquatic sports is mainly applied in bathing areas and the legislation thresholds which principally relate to the turbidity of the water and the occurrence of microorganisms. Three suitability classes for recreation and aquatic sports have been defined.

The main factors to classify the suitability of water for irrigation are: ground texture, irrigated crop, frequency, and duration of irrigation. Crops have been divided into four sensitivity groups, ranging from very sensitive plants to very hardy plants. The crops taken into account in these groups are liable to differ from one parameter to another, meaning that the composition of each group is also variable. For instance, the arsenic content in soil and plants is influenced by the degree of arsenic amount in irrigated water (Dahal et al., 2008). It is equally necessary to take into account the type of soils. These have been divided into two groups which overlap, i.e., (1) all soils including the most sensitive and (2) neutral or alkaline soils, which are the most resistant. Combinations of soil/plant groups have been limited to

sensitive-very sensitive plants/all soils and to resistant-very resistant plants/alkaline or neutral soils. Five suitability classes for irrigation uses have been defined. Water quality indices provide a simple and understandable tool for managers on the quality and possible uses for irrigation water (Almeida et al., 2008).
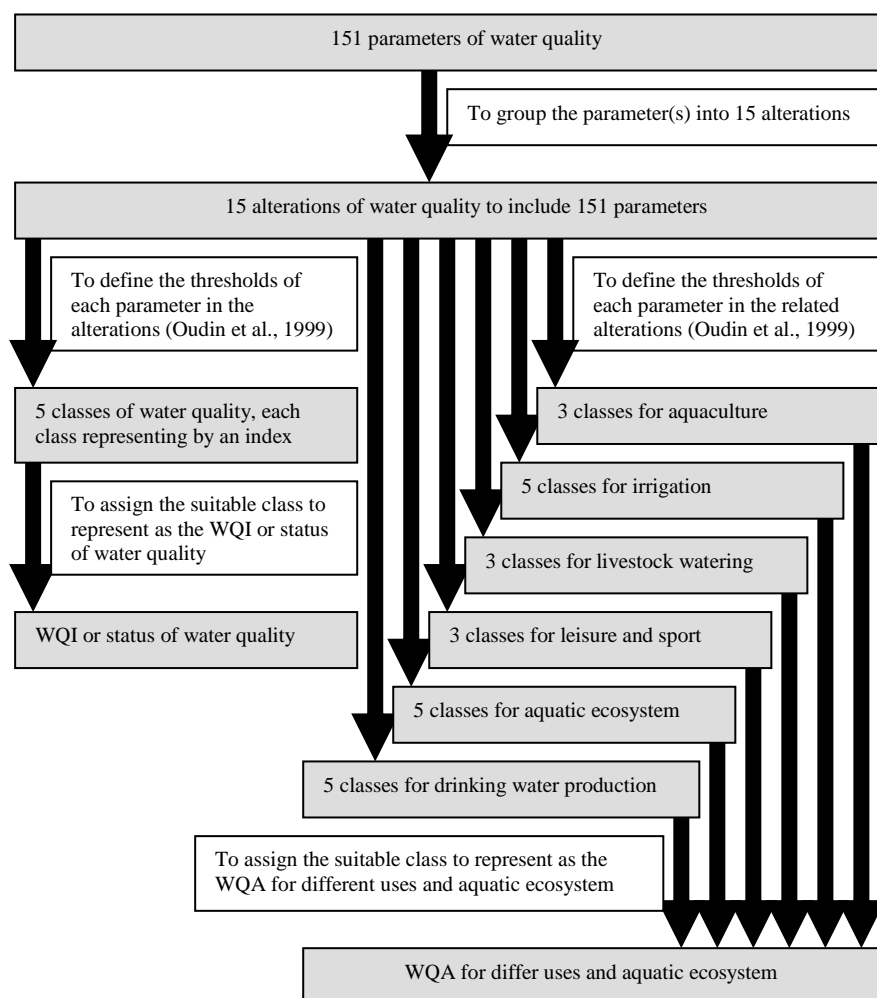
Figure 4. Flow chart of WQI and WQA class assignment

Livestock watering use is the suitability of water to allow the watering of breeding animals. These can be classified according to three age classes and sensitivity i.e., (1) young animals as chicken, pigs, calves, which are growing fast and are very sensitive to all pollutants, (2) animals of mature age which have a slow growth and are less vulnerable, and (3) animals for reproduction, they have strict needs during the gestation and milking period. In the case of livestock watering, water has to be useable immediately by the breeder. If the water is not useable, the breeder will then turn to the water supply. Three suitability classes for livestock watering use are adopted (Oudin et al., 1999).

Aquaculture use mainly shows the water suitability to be used in fish breeding. Water is the main factor of production in intensive fish breeding, particularly in salmon breeding. Water carries oxygen, eliminates

wastes, and conductions production performances by its physicochemical variability. Three suitability classes for aquaculture have been defined.

WQES to assess the suitability of water for different uses

Since the aggregation method is only performed to assess the suitability of river water for the different uses and its aquatic ecosystem, the following steps are carried out using the WQES that are: (1) grouping 151 parameters of water quality into 15 alterations that classify in accordance with their similar nature and its impact on environment (see Table 1); (2) defining the thresholds of each parameter into five classes with respective colors of blue, green, yellow, orange, and red to express the most suitable aptitude of unpolluted water, good suitable aptitude, moderate suitable aptitude, bad suitable aptitude, and unusable aptitude of very polluted water, respectively, except thresholds defining by three classes with respective colors of blue, yellow, and red to asses the water uses suitability for leisure and sports, livestock watering, and aquaculture; (3) formulating the classes that are five classes to assess the WQAs of aquatic ecosystem, drinking water production and irrigation uses and three classes to assess the WQAs of leisure and aquatic sports, livestock watering, and aquaculture uses, as shown in Figure 4 and the aptitude of water for the different uses and its ecosystem in accordance with the level of suitability or WQA that ranges from the most suitable to unsuitable water, as shown in Figure 5; (4) assessing the value of each parameter and put it into the respective classes of WQA for water suitability to the different uses and its ecosystem; (5) verifying the worst quality of parameter(s) and choose it to represent the aptitude of related alteration; and (6) identifying the worst quality of alteration(s) and choose it to represent the WQA for water suitability for the different uses and its ecosystem (aquatic biota).
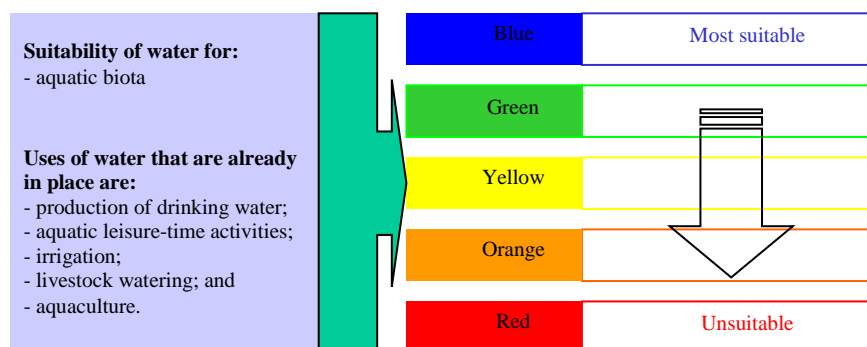

Figure 5 Classification of water suitability for different uses and aquatic biota

Source: Oudin, et al., 1999 modified by Fulazzaky, 2008

Results and Discussions

Application of WQES for the Citarum' river

The Citarum river segments distinguish into three different parts of water uses destination. The government of West Java province in the local regulation No. 39 Year 2000 (Perda Jabar No. 39/2000) enacted the water quality category in the upper and lower parts of the river as the standards Class C and D for the segments of main river in the upstream of Curug Jompong station and immediate the

downstream of Tanjungpura station. The middle parts from immediate the downstream of Curug Jompong to the upstream of Tanjungpura station as shown in Figure 6 is destined as the standards Class B, C and D. Whereas, the stream water in all the tributaries entire the river basin is the standards Class B, C and D. The Class B, C and D means the class of water which is suitable to provide the uses of drinking water production, aquaculture, livestock, agriculture, municipal and industrial affairs, and hydropower energy. The Class B and C means the class of water which is suitable to provide the uses of aquaculture, livestock, agriculture, municipal and industrial affairs, and hydropower energy. The stations of water quality monitoring were chosen at 10 locations that are: 01 Cijeruk, 02 Margahayu, 03 Nanjung, 04 Curug Jompong, 05 Saguling dam, 06 Cirata dam, 07 Jatiluhur dam, 08 Bendung Curug, 09 Tanjungpura and 10 Rengasdengklok along the main river (see Figure 6).
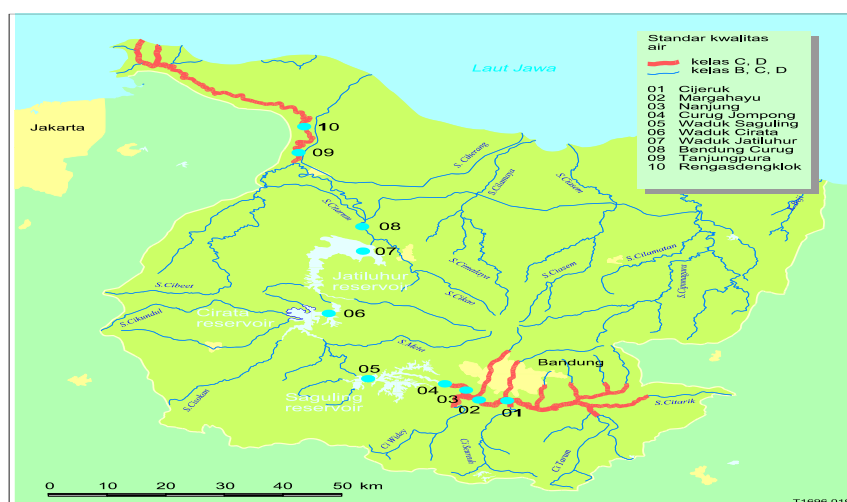
Figure 6. Water quality monitoring stations along the Citarum river

The rules in the Equations (1) and (2) need to implement due to the results of water quality monitoring along the Citarum river are numerous. Since 1990, the Jasa Tirta 2 Public Corporation (PJT2) as the institution in charge to monitor water quality of this river has been traditionally monitored at 10 locations, as shown in Figure 6. This study specifically uses the data that were monitored by the Centre for Water Resources Research and Development of the Indonesian Ministry of Public Works in 2005 to concentrate in the upstream areas of river segment. The data monitoring as shown in Table 2 were tested of 33 parameters. To assess the classes of quality and water suitability in the river were used the data monitored from 10 stations that are: 01a Wangisagara, 01b Majalaya, and 01c Sapan as the additional stations in the upstream of Cijeruk, 01 Cijeruk, 03a Dayeuhkolot and 03b Brujul as the additional stations in the upstream of Nanjung, 03 Nanjung, 08 Bendung Curug, 09a Bendung Walahar as the additional stations in the upstream of Tanjungpura, and 09 Tanjungpura along the main river. This is due to the pollutant loads are more important to discharge the river coming form the Bandung region. The need to insert three additional stations in the upstream of Cijeruk and two stations in the upstream of Nanjung is to investigate the impacts of untreated household sewage, solid waste and industrial effluents on the quality of stream water. One more additional location was also monitored in the upstream of Tanjungpura to understand the impact of industrial pollution loads discharging from the industries located in the

downstream areas. Because of the lack of data monitoring, two alterations i.e., pesticides in raw water and organic micro pollutants non pesticides in raw water as shown in Table 2 were no included to evaluate in this study. To assess WQA, this study examines 3,960 testing results that were specially monitored from 10 selected stations above along the main river during the period of 1 year with the frequency of monitoring was one per month.

WQA of the Citarum River

The excessive pollutants in the stream water will face the problems of biodiversity degradation. The earlier study supports the need for incorporating functional measures in evaluations of stream ecological integrity (Castela et al., 2008). The effects on zooplankton were caused by changes in habitat structure due to the strong decline of macrophytes. The slow degradation of metazachlor combined with the absence of recovery in both chlorophytes and macrophytes is likely to cause long-lasting effects on aquatic ecosystems (Mohr et al., 2008). Considering the results of WQA analysis, this study remarks that the stream water in the upper part of Saguling dam as shown in Table 2 is unusable to conduct the sustainability of aquatic ecosystem, judging the WQA class is red. This translates water capability of considerably reducing the number of sensitive taxa or eliminating them with a very low diversity. In the downstream areas of Jatiluhur dam, water quality causing the disappearance of certain sensitive taxa with adequate diversity is evident, see location 09a Bendung Walahar, judging the WQA class is green, or water capabilities of considerably reducing the number of sensitive taxa with adequate diversity are manifested, see locations 08 Bendung Curug and 09 Tanjungpura, judging the WQA classes are yellow. To improve the quality of the stream water particularly in the upper part of the basin is still will be suitable for aquatic biota this study recommends to the related local authorities including all the stakeholders to envisage as high priority the problems of river pollution. This suggests the need to have a specific legal instrument of integrated water quality management plan in order to guide all the participatory of multiparty entire the river basin to involve in improvement of water quality in accordance with the role and responsibility of each participant.

A deeper understanding of the practical and theoretical underpinnings of risk management can be made between organizational capabilities in the essential water business process (MacGillivray and Pollard, 2008). This preventive feature lies at the core of risk management for the provision of safe drinking water (Hrudey et al., 2006). Referring to this study, water in the upper Citarum river as shown in Table 2 is not recommended to produce drinking water generally excluding in the stream water from the upper part of Bandung city see upper part of the station 01a Wangisagara and at the station 03a Dayeuhkolot, judging the WQA classes are red. Because of no more industries located in the upstream areas of Bandung city, water quality upper the station 01a Wangisagara was justified as moderate (yellow). The improvement of water quality at the station 03a Dayeuhkolot was verified as orange due to a good water quality from Ciwidey river penetrates the water quality of Citarum' river. Utilization of Citarum river water from the upstream areas of Bandung city is acceptable to produce drinking water. This study recommends to perform the conventional technologies in producing of drinking water for raw water in the stream from the

upper Bandung and the advanced technologies to treat water from the station 03a Dayeuhkolot. Because the intake of raw water from the Jatiluhur dam to supply water for the Jakarta city in the downstream area is still operated, the study recommends to the Jakarta water supply authority to use conventional technology in treating the water since the closed conveyance is used to transport the water from the Jatiluhur dam to Jakarta. This recommendation based on the moderate quality of river water, judging the WQA class as show in Table 2 is yellow. Unfortunately, to date the transport of water is still operated in the open canal. The use of this system will face the risk of pollution discharged from the industrial and domestic wastewaters along the canal when water flows. The contamination of water eventually declines the WQA of such as from the yellow classes at the stations of 08 Bendung Curug and 09a Bendung Walahar to orange class at the station of 09 Tanjungpura so the advanced technologies should be considered to be implemented by the Jakarta water supply authority in treating the river water purposed to public consumers.

Table 2. Application of WQES to assess the WQA for the Citarum river water

Type of water uses	Results of WQA analysis									
	01a	01b	01c	01	03a	03b	03	08	09a	09
Aquatic ecosystem	r	r	r	r	y	r	r	y	g	y
Drinking water production	y	r	r	r	o	r	r	y	y	o
Leisure and aquatic sport	r	r	r	r	r	r	r	y	y	r
Irrigation	b	g	g	g	g	g	g	b	b	g
Livestock watering	b	b	y	y	y	y	y	b	b	b
Aquaculture	r	r	r	r	r	r	r	y	y	r
Number of parameters	33	33	33	33	33	33	33	33	33	33

Notes: 01a Wangisagara, 01b Majalaya, 01c Sapan, 01 Cijeruk, 03a Dayeuhkolot, 03b Brujul, 03 Nanjung, 08 Bendung Curug, 09a Bendung Walahar, 09 Tanjungpura, b = blue, g = green, y = yellow, o = orange, and r = red.

Water in the main river as shown in Table 2 is not acceptable to be used for leisure and aquatic sports excluding the stations 08 Bendung Curug and 09a Bendung Walahar, judging the WQA class is red. A moderate water quality at these stations caused by self purification occurs in three cascade reservoirs, i.e., Saguling, Cirata, and Jatiluhur. Due to the pollutant loads from industries discharging the river in the downstream area are evident, degradation of water quality as shown in Table 2 increases gradually in the stream towards the sea. Considering the strategic role of Citarum river regulated effectively by three cascade reservoirs functioning as the potential recreational parks, hydropower generation, sources of

water for domestic, municipality and industry, as well as the source of irrigated water for paddy fields and fishponds, delivers 20% of Indonesia's gross domestic product, this study recommends to the central government of Indonesia to envisage as first priority the problems of this river pollution. This suggests the need to install correctly the wastewater treatment plants for each industry and for each city of the entire the Citarum river basin particularly for the upstream areas of the basin to reduce the pollutants of organic matter, microorganisms, and suspended particles. Besides to improve the quality of water related to suspended particles, there is a need to consider the occupation of lands to implement the best practice of soil conservation effectively.

To analyze the suitability of water for irrigation purpose is summarized in Table 2. This informs that water quality in the river is still suitable to irrigate especially for paddy fields of as the major part of water uses in the region, judging the WQA classes for all the station selected are classified as blue or green aptitude. It is remarkable that the Jatiluhur dam serves suitably water for 240,000 ha of paddy fields in the downstream areas. Unfortunately, the overflow of irrigated water is usually to drain back into the river. The runoff from paddy field as verified in the Ile de Camargue, France, carries important loads of dissolved pesticides to the wetlands including river (Comoretto et al., 2008). Drinking water pollution in the Evros region Northern Greece can be attributed to excessive fertilizer use from agricultural sources (Nikolaidis et al., 2008).

For more accurate assessment of the effects of water quality, for a given livestock production system the format should be based on ingestion levels, as opposed to a mg/l basis, and should take into account site-specific synergistic and antagonistic interactions within and external to the water to a greater extent (Meyer et al. 1997). The aggregation method of WQES using in this study led to the formulation of a water quality guideline index system based on WQA basis. Referring to the classification in the literature (Oudin et al., 1999), this study concludes that utilization of Citarum water to provide the livestock watering of all animals including the most sensitive such as young animals, animals in gestation or milking is still suitable for the stream waters from the upper Bandung city (see the stations 01a Wangisagara and 01b Majalaya) and the downstream of Jatiluhur dam (see the stations 08 Bendung Curug, 09a Bendung Walahar, 09 Tanjungpura), judging the WQA classes are blue (see Table 2). The stream water along the river segments between Bandung city and Saguling dam is suitable to provide the livestock watering of mature animals that are less vulnerable such bovine and ovine and needs to control strictly the quality of water used, judging the WQA classes as shown in Table 2 are yellow (see the stations 01c Sapan, 01 Cijeruk, 03a Dayeuhkolot, 03b Brujul, 03 Nanjung).

Fish and crayfish perform all bodily functions in water which include eating, breathing, excreting wastes, reproducing and taking in or removing salts. Water quality can affect these functions and therefore will determine the health of the fish and consequently the success or failure of a fish farming operation. For example, carbohydrate addition in water affects to (1) increase the nitrogen retention in harvested shrimp biomass, (2) reduce the demand for feed protein, (3) reduce the concentration of NKJ and NO_2^-, and (4) reduce nitrogen discharge making extensive shrimp farming more ecologically sustainable and economically viable (Hari et al. 2006). Despite the stream water in the river is unsuitable for direct use in

aquaculture generally, judging the WQA classes are red (see stations 01a Wangisagara, 01b Majalaya, 01c Sapan, 01 Cijeruk, 03a Dayeuhkolot, 03b Brujul, 03 Nanjung, and 09 Tanjungpura), Table 2 shows that the river water immediate the downstream of Jatiluhur dam is suitable for all adult fishes which are not very sensitive to pollution, judging the WQA classes are yellow.

Conclusion

This study used the WQES to assess the suitability of water for different uses and its ecosystem for the Citarum river water. The suitability of the river water was examined through WQA assessment to forbid strongly the uses of water in the upstream the Saguling dam to provide (1) the suitability of biodiversity growth and productivity, (2) drinking water production except the stream water upper Bandung city, (3) leisure and sport activities, and (4) aquaculture uses. Although the stream water of the river segment between the Bandung city and Saguling dam needs to be controlled strictly, the quality of water is still suitable to be used for irrigated lands and livestock watering. The improvement of water quality was verified immediate the downstream areas of Jatiluhur dam due to the self purification occurs in three cascade reservoirs, i.e., Saguling, Cirata, and Jatiluhur, consecutively. This gives the advantage to supply raw water from the Jatiluhur dam to Jakarta city for drinking water production with adequate quality since the closed conveyance is used for transporting the water.

The stream water upstream the Suguling dam (see upper the station 03 Nanjung) is totally prohibited for supporting the biological potential function, leisure and aquatic sports, and aquaculture purposes judging the WQAs of these water uses are unsuitable, indicating as red color (see Table 2). This study justifies that the factual water quality of the river no matches the standards regulated in Perda Jabar No. 39/2000. This gives the rational argument to urge the local authorities, central government, and all related stakeholders to concern for improving the river water quality. This study shows that the use of WQES practically remained comprehensive in evaluating water quality systematically. There is the analysis of water quality data to convert into the usable information that serves as DSS in managing of available water comprehensively.

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Religious Memory and Scientific Ethics after Hiroshima and Nagasaki

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Abstract

2015 has been a year of anniversaries, notable for the 70th anniversaries of the events of the last year of World War II (or the Asia-Pacific War) and the advent of our still postwar world. Japan's surrender on August 15th, 1945, followed a series of heavy fire-bombings of Japanese cities, including Tokyo on March 10th; the fall of the German Reich in April; the invasion of Okinawa in April and its surrender in June, culminating in mass, coerced suicides; the Potsdam Declaration promising "complete and utter destruction" in July; and then, on August 6th, and again on the 9th, the destruction in a flash of two Japanese cities. Because Indonesian independence was declared immediately after the collapse of the Japanese empire and because Americans were anticipating an invasion of the main islands as intensive as the one in Okinawa, the general perspective in both countries has been that the Atomic Bombs were somehow necessary, a perspective we can call "from above the mushroom cloud." At the same time, to consider what happened "below the mushroom cloud" and even begin to recognize the sheer horror of the instantaneous destruction and annihilation also forbid us to think only from that perspective, as this events as two more in the long history of hostilities, but rather as unparalleled, as also outside history. I went back to Hiroshima and Nagasaki this August. I went partly to grapple with what happened there and how it is remembered in the present and partly to try to see how religion and religious studies can be a helpful framework for examining the process of memory, which is at once deeply situated in political contexts and transcending such limits for the taste of existential destruction that happened there. In this paper, I attempt to ask about religion and memory after seventy years and to then raise the questions of science and ethics, given that Hiroshima (like Auschwitz) was a marvel of science, the result of intensive and secretive scientific inquiry, the largest in world history to that date.

Religious Memory

On August 6th 1945, 90% of Hiroshima was incinerated. Thousands in the immediate zone of the hypocenter disappeared, sometimes leaving a shadow of carbon on concrete or a bit of metal—a lunchbox, a watch, a tricycle. 140,000 were dead by the end of 1945 and as of this year a total of almost

300,000 victims—called in Japanese *hibakusha*-- have been entered into the memorial books. This was a city with military operations but it was a city and the victims were men, women, and children; Japanese citizens and Korean forced laborers, Southeast Asian students, European prisoners of war. A smaller city in the far southwest, Nagasaki was not the first target for the 9ᵗʰ but cloud cover over Kokura led the plane carrying the second atomic bomb to be redirected. Nagasaki has a long history as a trading port, the one place the Dutch were allowed to maintain a base during the 250 years during which the country was closed to the West, and a center for Catholics who just thirty years earlier had dedicated a cathedral barely a kilometer from where the bomb was detonated.   70,000 were dead by the end of 1945 and the memorial books now record close to 170,000. The average age of the survivors is now past 80 but it still possible to hear their testimonies directly, of the flash and the boom (*pika* and *don* in Japanese), of the blistering bewildering heat, of making their way home to discover who among their family and community was still alive, of health problems without end, of discrimination.

Memory can be understood in at least three interconnected senses here. First, memory as an operation of the human mind to store and recall the past in the present is paired with the two operations which disrupt this humanly fallible process: forgetting, on one hand, happens to us all and trauma, on the other, follows injury to the body, the psyche, the community. Such memory is also at times set against history that is defined and seemingly supported through a documentary basis and bias. As in the case of the so-called comfort women or *jugun ianfu* whose memories of sexual enslavement by the Japanese military have challenged the documented and often male official narrative, it can be what the subaltern possesses in order to make claims on dignity and justice. Second, as famously explicated by Pierre Nora and his research team in their search for the *lieux de memoire* that define the French nation, memory can mean the explicitly political narration of a past that holds together a nation or other community. Two decades ago, a controversy over the exhibition of the B-52 called *Enola Gay*, from which the atomic bomb was detonated on Hiroshima, was reduced to simplistic terms and then reached the United States Senate which felt compelled to pass a resolution declaring the use of the A-bomb morally good and force the elimination of nuanced historical explanation, an indication of the moral ambivalence still pervading the U.S. Third, memory can mean remembrance, the obligation to the dead to hold onto and honor their existence until it too, with us, slips into oblivion. Memory is pursued through the activities of memorialization and commemoration, of holding rituals and erecting monuments, of visiting graves and memorials as a moral and emotional obligation. This is one of the tasks of religion, though one it often rejects.

To inquire into religion likewise means to take on two interconnected meanings. First, there are the ways that religious language and ritual patterns pervade memory and the ways of commemoration, particularly at sites and on occasions that are sanctified with reference to memory and the community—which remains, by design, not clearly designated. Second, there are the activities of specifically religious groups that extend beyond this occasion and which bring religious and inter-religious purposes to the project of memory. Though Robert Bellah reportedly described "civil religion" in response to questions from Shinto priests visiting Washington in the 1950s and asking how it could be that American

nationalism was so full of God-talk while the American occupiers had banned the State Shinto of the prewar state, this is not quite his civil religion because it does not make clear who it defines—indeed it is generally, on one hand, a specific community of experience transposed onto a modern city, often at odds with the national government, and, on the other, a "universalized" experience that could easily be the fate of any person anywhere, regardless of the specificities of culture or history. It does however retain the prophetic potential pointed to by Bellah to make demands from its own logic and sense of what is right

In the first category, I can point to four ways religious forms pervade these commemorations.

1. **Prayer**. In the official ceremonies, "prayer" occupies a prominent place in the name and function of the ceremony. Consider the very names of the official annual ceremonies held on the anniversaries of the two atomic bombings: (in my literal translation; the usual English is simply "Memorial") the Hiroshima City Atomic Bomb Dead Spirit Consolation Ceremony and Peace Prayer Ceremony and the Nagasaki Atomic Bomb Sacrificed Spirit Consolation Peace Prayer Ceremony. There is a homonym at work here as well: *ki'nen*, with one of two other characters pronounced *ki*, ones meaning to record, indicates memory in the sense of memorial: such a *ki'nen* appears in the names of the museum and park at Hiroshima though not at Nagasaki: the setting for transcendent memory is within secular memory. Prayer, in the form of silent prayer (*mokutō*), is at the heart of the official ceremonies which are timed such that the moment of the detonation of each bomb—8:15am, 11:01am—is one of silence and/or the tolling of a bell. Wordless and led by no one, no direction is suggested for this prayer and it concludes as the moment of the detonation passes. In both locations, silence is immediately followed by speech act by the central event of the commemoration: the peace declaration read by the mayor. Beginning in 1947 and 1948, these declarations have issued annually without interruption since 1951. They are appeals to world leaders to enact and enforce treaties against nuclear weapons and to the Japanese government to provide adequately for the surviving *hibakusha*. One might also see prayer in the practice of folding origami cranes and bringing strings of a thousand to lay before the children's monument recalling the story of Sadako Sasaki, a girl who was exposed to radiation in the womb and died of leukemia.

2. The **concept** of witness is also key to the memory of the atomic bombs and of particular importance at this juncture of 70 years, for as was noted repeatedly the average age of the survivors has now passed 80. Because of instant annihilation of untold thousands followed by the agonized deaths from internal and external burns of thousands more, many beyond recognition (totaling, by the end of 1945, 140,000 in Hiroshima and 70,000 in Nagasaki), the physical presence of those who did survive has come to be of great importance. As Lisa Yoneyama has shown, the process of narrating memory as *kataribe* or testifiers is fraught with a kind of politics of recognition as survivors (for whom access to specialized health care

was contingent on proving where one was at the moment of the blast or if one entered the city later) but at the same time it carries a kind of urgency on behalf of others who cannot speak and on behalf of a future peace in which nuclear weapons will not be used again.

3. **A third way religious concepts** are central to memory is in the hallowed ground of the memorial sites, the two Peace Parks and adjacent areas. In the delta of Hiroshima, the park was built between two branches of the river, below a T-shaped bridge said to have provided the target, and a central memorial was put in place in line with the ruins of one of the few structures to have survived the blast, the Prefectural Products Exhibition Hall now known as the A-Bomb Dome. It is now known that the architect Tange Kenzō's cenotaph is the repurposing, on a smaller scale, of an earlier design that was meant to align with Mt. Fuji and commemorate Japan's victory in Asia. Few other traces of the mostly wooden neighborhood remain in Hiroshima, though one of the many smaller ceremonies each year commemorates that neighborhood. Instead, a new park was built on the burned out grounds, centered on the museum and the cenotaph, but with space for a variety of monuments that met certain "universalizing" gestures. Famously, the monument to Korean victims was constructed outside the park, on the facing river bank, and was moved into the grounds only in the late 1990s. At Nagasaki, the Peace Park or grounds for the annual official ceremony face a statue of a seated man with arms and legs in different directions, echoing in that way a Buddha but looking more like a Greek god. (for years I assumed it represented Prometheus who brought down fire from the heavens to the earth) This "sacred ground" is in fact the site of a prison, the foundations of which remain visible, in striking contrast to the structure that parallels most closely the A-bomb dome: the Urakami Cathedral which was reconstructed with only a few pieces of its previous existence preserved in statuary. The monuments that fill this peace park are of two types: memorial greetings primarily erected in the 1980s by socialist states and recent monuments to the diversity of the victims, including for example the Chinese (forced laborers) who died in the prison. On the anniversaries, these grounds and the surrounding streets become the site of multiple commemorations as well as protests. Perhaps because of its more central location and its historical position, there were far more groups in Hiroshima, high school students with petitions, leftists with alternate publications, religious groups considered outside the mainstream, peace commemorators seeking out foreigners, and so on. Most moving were the *hibakusha* who came to speak without a platform other than their story. There were also government directed memorial activities in the twilight: the famous floating lanterns in Hiroshima echoed by wax candles at Nagasaki.

4. The language of "comforting souls" *irei* is present in the titles of the Hiroshima cenotaph and the memorial ceremonies in both cities. It is linked to what we might call a Japanese "mystic

synthesis," in which the spirits of the dead are present alongside the divinity within nature and do need consolation, especially when they have died traumatically. One unique and moving addition to atomic bomb commemorations is water imagery, recalling how those who were badly burned but not killed instantly sought water to relieve their unquenchable thirst and cool their burned flesh. They were often heard crying "*mizu kure*" "give me water" but often their badly shocked systems could not accept the water they did find and they died immediately. When water is poured from individual containers—as in those carried by various religious leaders into their shared ceremony in Hiroshima or when, in the official ceremony in Nagasaki, brought from springs in various corners of the city—into one bowl, it can be a reminder of the collectivity of life itself. The second is that the most material remains honored in these places is a set of books containing the names of the atomic bomb dead. These books have been and will be updated annually until the last *hibakusha* has died. This August, 5,359 names were added to bring the total to 297,684 (recorded in 109 books) in Hiroshima and 3,373 names were added in Nagasaki to bring the new total to 168,767 (recorded in 170 books). Each city maintains an office to manage the books and to process applications for inclusion and the names of non-Japanese are also included. Curiously, the other place this act of memorializing through names handwritten in books is at the Yasukuni Shrine in Tokyo, where nearly 2.5 million war dead from Japan's modern wars from 1868 to 1945 are enshrined as kami.   There are significant differences in that the Yasukuni Shrine is formerly part of a state civil religious apparatus and now technically a private religious organization that uses religious language a ritual, which, when patronized by government officials, potentially violates the Constitution's proscription against government use of religious activities. Moreover, there have been no new entries into enshrinement register since 1978, when the top-level officials executed as a class-A war criminals were added, ratcheting up the controversy over the lack of remorse the shrine represents to the countries in Asia Japan invaded. Still, the same question of how physical presence following the devastation of war, either through the advanced weaponry or through death in distant lands and oceans, is part of memorialization. These books, stored deep inside monuments, are also different from the Cornerstone of Peace in Okinawa, an extensive black granite monument carved with the names of combatants and civilians from all sides killed in the Battle of Okinawa (April to June 1945).

The second meaning of religion and memory is, of course, the activities of religious groups and surrounding the official ceremony in each place are both joint and specific memorial services and actions. At Hiroshima, this took the form of first a joint Buddhist-Shinto-Christian service early on the morning of the 6th, followed throughout the day by various sects of Buddhism as well as Catholicism and Protestantism. Not included are the so-called new religions which originated in Japan (some of which,

like Tenri, date to the nineteenth century). These services face the *genbaku kūyōtō*, a mound-style grave containing unclaimed *hibakusha* remains, with a list nearby inviting families to take these ashes back to the family graves. *Kuyō* is Buddhist language originating in the concept of *pūja* or reverence for the presence but seemingly shared here.

At Nagasaki, the 43ʳᵈ Genbaku Junnansha Ireisai (Festival to Console the Spirits of those who Suffered from the Atomic Bomb) was held on the night of the 8ᵗʰ in the park surrounding the hypocenter, at the base of the hill where the peace ceremony would be held the next day. While this service had many of the same elements as the public ceremony, each was led by a different religious leader and member of the sponsoring organization which translates its name to English as the Fellowship of Religionists in Nagasaki for Dialogue. According to its roster, it is made up of clergy of Japan's religions including eleven Christians (among them the organization's advisor, the archbishop), eight Shinto priests, thirty-six Buddhist priests, and nine "miscellaneous," including Tenri which invited a Turkish Sufi to do whirling meditation. This category of religionist (*shūkyōsha*) was a new one for me, invoking a category as reified in law and academia as agama but one which most Japanese reject as requiring some kind of extreme doctrinal loyalty that takes them into dangerous territory, as with AUM Supreme Truth which launched apocalyptic terror in the subways in 1995: it seems to recognize that religion has a definite interest in certain issues, especially peace and the memory of atrocity (regardless of the religious identities of the victims) and it is always plural. The most prominent use of the terms is in the name of the global network Religions for Peace which was launched in Kyoto in 1970, but its Japanese branch dates to 1951 and a sense of the shared responsibility of religious organizations for the war, an opportunity for penitence (metanoetics).

Scientific Ethics

In the weeks following this commemoration, from the perspective of many Japanese, the memory of the A-bomb victims was violated in two ways by the actions of the current Liberal Democratic Party-led government of Prime Minister Shinzō Abe. First, two days after the Nagasaki memorial, the Sendai Nuclear Power plant 100 miles to the south was restarted, the first nuclear power plant to go back into operation since all were taken offline in the wake of the triple disaster that hit northeast Japan on March 11ᵗʰ, 2011. In its wake, and in the fears of long-lasting radiation contamination over a wide area, Fukushima has become a third disaster in which a city name is written with phonetic syllabary. But this requires a redefinition of what happened at Hiroshima and Nagasaki, from technologically advanced atrocities that have not been repeated and serve as warning to the use of nuclear weapons and the need for disarmament to a broader warning against nuclear energy in all forms. While the Nagasaki Museum and the Nippon Myozan (Buddhist) peace marchers already included those exposed to radiation from nuclear weapons tests in the South Pacific and elsewhere (most famously the Japanese fishing boat Lucky Dragon #5, exposed in the Marshall Islands in 1955), Fukushima is something new and unresolved (and part of a history in which the U.S. foisted "atoms for peace" onto the same country it had used two atomic bombs on just years earlier.). Where the appeals remain directed against nuclear weapons and in

support of the non-proliferation treaties, the Religionist group fasted instead for "a 21st century without nuclear weapons or nuclear power."

Second, as the commemorations were going on, Japan was being shaken by perhaps the most substantial public political demonstrations since Prime Minister Abe's grandfather forced through a renewal of the U.S.-Japan Joint Security Treaty in 1960. The bill the government finally did push through the Diet in September re-interprets Article 9 of the 1947 Constitution, "forever renounc[ing] war as a sovereign right of the nation," as allowing something called a "right of collective self-defense" through which Japan may enter, for example, U.S.-led military interventions. The movement against it, which took form in mass demonstrations in many cities as well as surrounding the Diet building, was quick to name it the "War Bill" and to see in it a dark turn in Japanese politics away from democracy and peace. Prime Ministers have spoken at both ceremonies for several decades and their remarks, which follow the "pledge for peace" (*heiwa he no chikai*) read by local children, are the one unscripted part of the program. Abe's remarks at Hiroshima were criticized for mentioning neither Article 9 nor Japan's so-called "Three Nuclear Principles" (not making, not possessing, not harboring nuclear weapons) and in Nagasaki he did make a gesture at the latter. Because the programs are timed so carefully around the exact moment of the detonation, demonstrators were able to intrude sonically on Abe as he spoke, reminding the assembled that he had not earned a sacralized atmosphere.

By way of conclusion, I would like to go a little deeper into the work of religion in memory: to the concept of sacrifice. Recently, the secular philosopher Takahashi Tetsuya has named a sacrificial system which inculcates the belief that some part of the community must accept that it must be sacrificed for the whole: his examples are Okinawa, where American military bases are an obnoxious and destructive presence, and Fukushima, the cost of which is far from understood but the calculations were made long ago by politicians, electric company executives, compliant scientists and the public. Since I first visited Hiroshima and Nagasaki in the mid1990s, the Japanese State has built its own memorial halls in each place (Hall to Pray for Peace and Eulogize the Atomic Bomb Dead). Borrowing methods from Holocaust memorials, these halls seem set to counter the city-run museums which set the cities apart as universalized sacrifices (hence the slogans: no more Hiroshima, no more Nagasaki, to which is now added no more Fukushima) apart from the nation. Even so I was surprised by the statement at the entrance in Hiroshima: in the official translation: "The National Peace Memorial Halls for the Atomic Bomb Victims in Hiroshima and Nagasaki are an effort by the Japanese national government to remember and mourn the sacred sacrifice of the atomic bomb victims. They are also an expression of Japan's desire for genuine and lasting peace." Sacred sacrifice by whom, for what? Can we continue to allow there to be sacrifice without meaning? Is that a question religions and/or religionists should try to answer?

One answer is in the refusal to sacrifice or to sacrifice others. Here the example of a second Japanese intellectual Takagi Jinzaburō. Takagi promoted the idea of the "citizen-scientist" who can utilize the knowledge and method of science but is self-consciously independent of power, including the intimate relationship of the university with the military, government, and the corporate world. For a nuclear

chemist like Takagi, severing ties with this kind of power meant loss of access to the high-tech methods of research but it also gave him the freedom to use his knowledge to counter the government and academic experts, particular in their interpretation of data most citizens cannot make sense of, which sometimes, as with nuclear power, has life-and-death consequences. With the prize money from the 1997 Right Livelihood Award, sometimes called the alternative Nobel Prize for lives well lived, his little community gives small grants to independent science and, after the March 11th triple disaster, they, the Citizens' Nuclear Information Center (www.cnic.jp) were some of the very few independent experts who could understand what was happening and counter the official government-corporate assurances that nothing was wrong. On one hand, citizen science might be understood as the most secular conclusion to the idea of the rational scientist, but on the other was Takagi's Buddhist ethic of reverence for all life, which came through less in some kind of religionist practice than in his love of the Buddhist Japanese writer Miyazawa Kenji, who died in 1937 and did not see the destruction of August 1945. But we have seen it and we must learn to see it from below the mushroom cloud. And remember.

Undertaking Global Health Issues through Research and Innovation

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Abstract

There is an estimated 8.2 million under –five child deaths per year, and from this number, 3.3 million occur during the neonatal period – babies in their first 28 dyas of life. Around 66.67% of these newborn deaths are preventable if effective health interventions are provided at birth & during the first week of life.Moreover, maternal mortality is exceesively high, around 830 women die daily from preganacy or childbirth - related complications globally and these deaths could have been prevented. The aim of this study is to identify the contributory factors of maternal and neonatal mortality globally and to determine interventions in addressing these global health issues. Meta – analysis showed that the contibutory factors of both maternal & neonatal deaths include LACK, this is an acronym, which stands for L- location, A – age, C – cultural beliefs, and K – knowledge deficit.For the location, it has been validated by published researches that the distance of the home residence among pregnant mothers would greatly affect their utilization of maternal health care services, as to age, it has been found out that extreme age, adolescents (13 – 17 years old) and 42 years old and above have been associated with both high maternal & neonatal deaths, in addition, cultural beliefs was the priority measure that pregnant mothers would embrace in dealing with their pregnancy problems, and employing health care services would be their last resort, regarding knowledge , it has been revealed that insuffient knowledge of mothers on the complication of pregnancy and the importance of pre natal check up affects their utilization of health care services, furthermore, deficient knowldge of the health care providers also contributed to the increasing maternal & neonatal deaths. For the interventions, HEALTH should be implemented, H – stands for health education, educating mothers, families, communities on the importance of pre- natal and post – natal check – up, nutrition, exclusive breastfeeding, complications of pregnancy, would change the mothers behavior, there will be improvement in their utilization of health care services, educating health care providers through trainings, seminars and workshops, E – stands for empowerment , building capacities of mothers families and comminity, A stands for access, health care insurance should be provided to all mothers, focusing on those living in the remote areas, establishing birth camps should also be introduced to those far away areas, E also refers to the implementation of

Essential Intrapartum Newborn Care, L – stands for leadership and governance, which specifically comprised five (5) equally important variables, and these include, transparency & accountability, community participation, fair access to quality care, increase coverage of skilled care at birth in health facilities, and sustainable programs, T – stands for technology, all health care facilities should be equipped with sufficient supply of medicines, devices, laboratory agents, equipments for medical and surgical procedures, laslty, H – stands for home visits, health care providers should visit the mothers and their newborn on the first day, third day and seventh day after delivery, to thoroughly assess the mothers and their babies , to be able to address any untoward complcations. Employing the HEALTH interventions may be able to solve the maternal and neonatal deaths.

Keywords: Location, access, cultural beliefs, knowledge, health education, empowerment, essential intrapartum newborn care, leadership & governance, technology, home visits, maternal & neonatal deaths
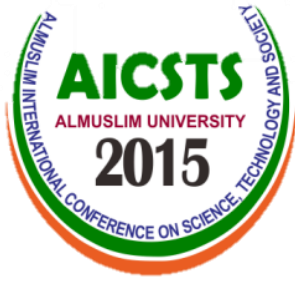
Climate Change: Its danger for our production and why it escapes our prediction

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Abstract

Our planet earth has a unique but complicated climate that presently is changing due to the influence that our (mankind's) activities appear to have on the composition of its atmosphere. It is called anthropogenic (man made) climate change. The world's agricultural systems face an uphill struggle in feeding a projected nine to ten billion people by 2050. Climate change introduces a significant hurdle in this struggle. There is general and widely held scientific consensus that the observed trends in atmospheric & ocean temperature, sea ice, glaciers as well as climate extremes, during the last hundred years, cannot be explained solely by natural climate processes and so reflect human influences. The argument that what we experience could be natural climate change can also be refuted by the fact that present understanding of cyclic climatology of the past points to a cooling planet without the presence   of mankind. On the simplest level,   the weather is   what is happening in the atmosphere at any given time. The climate, in a narrow sense, can be considered as the "average weather". In a more scientifically accurate way, it can be defined as: "the statistical description in terms of the mean and variability of relevant quantities over a period of time". One may argue that "global warming" is like "ageing": You can reduce the consequences but it will continue to happen. Stopping it is impossible, so adaptation is necessary.

SCIENCE EDUCATION CHAPTER

Teaching Methods of Religious Education to Developing Ability Read Quran Students SDN 1 Kuta Blang Bireuen

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Abstract

This study, entitled "Method of Teachers of Religious Education in Developing Ability Read Qur'an Students SDN 1 Kuta Blang Bireuen". To get answers to these research objectives, qualitative research method is used. Data collection techniques that the author did was to observation (observation), interviews and documentation. Results of research on methods of religious education teachers in improving the reading ability of the Qur'an students Kuta Blang SDN 1 indicates that the implementation of the teaching of reading the Qur'an at SDN 1 Kuta Blang students through the implementation of methods Baghdadiyah and Methods Iqra'. The most commonly methods used in reading the Qur'an are Baghdadiyah and Iqra' methods, demonstrations, assignments and memorization, So with the rote method will improve student reading the Qur'an and bring good results in order improve the ability to read the Qur'an students of SDN 1 Kuta Blang. The results of this research can be concluded that the method adopted by a religious education teacher has a maximum. However, in order to improve the ability of students read the Qur'an, there are still constraints faced by religious education teachers at SDN 1 Kuta Blang, namely the lack of support from parents, because of the influence of the uncertain environment, the impact of globalization increased, as well as the lack of al- Quran owned by the school.

Keywords: Reading the Quran, islamic religious education, improve, ability.

Introduction

Education is a conscious effort of a nation, because through education is expected to achieve a goal or purpose in life of the nation. The role of education is very important to improving the quality of human resources and in creating intelligent life, peaceful, open and democratic.

Implementation of education in schools can not be separated from the learning process in the classroom. Teachers and students is a major player in the process where there is direct interaction. Learning will work as expected when teachers and students are actively and seriously follow the process of learning activities. Interaction between teachers and students do not always go well many obstacles faced, one of which is the lack of attention of students.

In today's world of education, improving the quality of learning in both the mastery of the material and teaching methods are always sought. One of the efforts of teachers in improving the quality of learning that is how the right method of teaching so that students more easily understand in studying at school. Teachers are very important to master the method of teaching so as to lead students in the educational process at school. Special religious subjects taught material requires appropriate methods targeted because students are required to think and practice in life. Subjects the Qur'an is one of the subjects given in elementary education.

Learning studied the Qur'an is a very basic to understanding a wide range of science is no exception in the field of science that studies the phenomena and natural phenomena empirically, logically, systematically and rationally involving processes and scientific attitude. When studying the Qur'an, students will be introduced to the principles and laws that exist in the Qur'an. Students will also be taught how to read al-quran with a method that is easily understood by the students themselves. Therefore, the success of education is determined by the religious teachers in increasing interest in reading the Qur'an.

Materials and Methods

The method used in this study is qualitative. Qualitative research assumes that "human beings are active, who have freedom will, whose behavior can only be understood in the context of cultural behavior is not based on the law of cause and effect. Bogdan and Taylor, as quoted by Basrowi Sukidin revealed that "Qualitative research is a research procedure that produces descriptive data in the form of speech or writing and behavior of the people being observed, in which researchers can identify the subject and feel what they experience in everyday life-day ". In a descriptive research that are used to answer the problem of research, with appropriate consideration to the situation and circumstances. Descriptive research is research that seeks a symptom or events and become the focus of attention for being recognized as the material is poured and described in the report. Research subjects used in this study are: a school principal five Islamic religious education teachers at SDN 1 Kuta Blang Bireuen. Techniques determination subject of research was done by using purposive sampling, namely the determination of research subjects that are based on certain considerations. Consideration taken is the chosen subject is considered able to provide as much information as possible about the phenomenon that occurs as the issue of research.

Results and Discussion

From author interviews with Mr. Saifuddin as religious education teachers at SDN 1 Kuta Blang, he states that have implemented the method Baghdadiyah, methods Iqra 'as well as many other methods are

applied, but which can provide results only by using spelling or Baghdadiyah and methods iqra ', the implementation of this method is always executed and practiced with two systems, namely before entering school hours and when there are recitals together Friday in the school hall. Evaluation used in the learning process in the form of daily tests and test volumes rise set in cooperation with the school's head teacher of Religious education. Memorizing method, namely: before the start of learning to read and write the students are required to memorize short letters from the Qur'an orally is by way of reading together. This should be repeated many times until they are memorized. Giving Task method, namely: one way delivery of instructional materials in the Qur'an in the form of a specific task, such as; told to seek legal reading of the Qur'an and understanding as much as possible. This is to speed up the delivery targets stated goals.

Results of field observations, the majority of religious education teachers also use the method in which the teacher read see always read the Quran and learners to follow after a teacher read, there also showed me a large writing as a medium that is written on cardboard after the teacher calls one by one students to read or spell her readings were written on cardboard colorful, seems pretty much to his students who like this style rather than rote and paid-up given to the teacher after a given time.

Islamic religious education teacher (PAI) strategies and methods to improve the ability of students read the Qur'an SDN 1 Kuta Blang is to provide the Qur'an although the amount is not adequate. The method most commonly used method is Baghdadiyah and methods Iqra 'in reading the Qur'an, method demonstrations, assignments and memorization, So with the rote method will improve student reading the Qur'an and bring good results in order improve the ability of students read the Qur'an the SDN 1 Kuta Blang. Thus it can be understood that the use of methods, both methods iqra, Baghdadiyah method, question and answer method, demonstration method and other methods in teaching the Qur'an to be followed and consider the circumstances of learners in this regard is the student.

As for the constraints of teachers PAI in improving the ability to read the Qur'an students of SDN 1 Kuta Blang is the lack of support from parents, because of the influence of the uncertain environment, the impact of globalization increased, as well as the lack of the Qur'an which is owned by the school, Another thing which found that there was only a slight difficulty on recitation of legal literature, mad, endowments are sometimes difficult to be understood by the students because of a lack of available hours for presenting the Qur'an lessons are available just one hour at school is not enough, there is also the half-heartedness of the students themselves also become an obstacle in studying the Qur'an.

The results showed that religious education teacher at SDN 1 Kuta Blang using a variety of methods in the teaching of the Qur'an verses to students including Baghdadiyah method, the method Iqra 'as well as the implementation is done using the method of lecture, discussion method, a method of assignment, the method of reading see, this result looks after researchers conducted preliminary observations in visiting the school and was found a lot in the field ordinances rote methods presented in the form of short verses. In accordance with the results of interviews with religious teachers in improving literacy that the Qur'an

using methods lecture FAQ and memorization as well as in the application read the Qur'an using methods Baghdadiyah (spelling) and methods iqra.

The obstacles faced by religious teachers in strategies to increase the ability of students read the Qur'an SD Kuta Blang ". The results showed that from the interview with the author of religious education teachers can be verified, it is in accordance with the results of the interview that the lack of the Qur'an with the school and the families of students who are impediments to improving the ability to read the Quran elementary students Kuta Blang.

Conclusion

1. The application of the teaching of reading al-Qur'an'ān at SDN 1 Kuta Blang students through the implementation of Baghdadiyah method, Method of Iqra 'in learning to read the Koran held by the two systems, namely before entering school hours and when there are recitals together Friday in the hall the school. Evaluation used in the learning process in the form of daily tests and test volumes rise set in cooperation with the school's head teacher of Religious education.

2. Strategies and methods to enhance the ability of teachers PAI read the Qur'an students of SDN 1 Kuta Blang is to provide the Qur'an although the amount is not adequate. The method most commonly used method is Baghdadiyah and methods Iqra 'in reading the Qur'an, method demonstrations, assignments and memorization, So with the rote method will improve student reading the Qur'an and bring good results in order improve the ability of students read the Qur'an the SDN 1 Kuta Blang.

3. As for the constraints of teachers PAI in improving the ability to read the Qur'an students of SDN 1 Kuta Blang is the lack of support from parents, because of the influence of the uncertain environment, the impact of globalization increased, as well as the lack of the Qur'an which is owned by the school.

4. Another thing which found that there was only a slight difficulty on recitation of legal literature, mad, endowments are sometimes difficult to be understood by the students because of a lack of available hours for presenting the Qur'an lessons are available just one hour at school is not enough, there is also the half-heartedness of the students themselves also become an obstacle in studying the Qur'an.

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Measuring The Effective Speed Reading (ESR) of Student Prospective Indonesian Language TeacherAnd Efforts to IncreaseBy P2R Method

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Abstract

This research conduct to obtain data about the effective speed reading (ESR) of student prospective Indonesian language teacher and efforts to increase by P2R method. The research population is all students of Indonesian Literature Program, and Regional Almuslim University as 149 students. The research sample of 30% of the total population, or as 45 of student prospective Indonesian language teacher Almuslim University taken by random. The type of research is experimental research (true experimental) and quantitative approach by research *design pretest-posttest control group design*. The results showed that the P2R method is effective to apply for increasing the effective speed reading of student prospective Indonesian language teacher Almuslim University. This is evident from the test results, the results of the pretest ESR value obtained experimental class is 20 students or 90% lower categories and 2 or 9% medium category. While the results of postes, is 9 students or 40% lower category, 7 students or 32% of medium category, and 6 students or 27% scored higher ESR category. From the observation also seen in the learning activities of students are very active, amounting to 86% of the students active, serious, and very enthusiastic in learning. In addition, the poll results also show that the P2R method received a positive response from the students, 91% of students feel P2R method is very helpful and facilitate students in reading. Based on the test results, observations, and questionnaires can be concluded that the P2R method is effective in increasing the effective speed reading of student prospective Indonesian language teacher, FKIP Almuslim University academic year 2015/2016.

Keywords: Effective Speed Reading (ESR), P2R

Introduction

Reading is one of language skills that are no less important than the other language skills such as listening, speaking, and writing. This is cause almost every activity of human life required reading skills because in modern era and great as today various information delivered by print media. To obtain the information need reading.

Reading activities for the majority of our society is not entrenched yet. Really different from the habits of people in developed countries. Reading culture in Indonesia like faced with a blurred mirror, vague and unclear. Reading culture seems to be the culture of developed countries. This view makes the Indonesian people forget the role of reading itself until that reading interest becomes less. Those problems had been conveyed by Megawati Suekarnoputri as President in her speech, that "compared to Singapore's population of 200 million people, Indonesia has many students who are intelligent and capable than Singapore, but the lack of interest in reading makes Indonesia lagged in developing the technology and knowledge" (Kompas, 30 July 2004). The same thing happens, Reading in university is still lacking. Especially in today's emerging and evolving technology rapidly. Students prefer to *usefacebook, twitter, chatting*, and other than the reading journal or article. This tell us that interest in reading for students need to be improved. This is because the student as a candidate for the next generation that should be more reading and writing scholarly works produce more competent the civilization of a nation going forward.

Lack of society interest in reading because of many factors, one of which is a limited time. Some villagers argued that to do reading activities require special time and spend a lot of time as reading literature, scientific papers, and others. In fact, to get information in the literature, we don't need to read intensively. We can read in certain parts without spending a lot of time, but the information obtained can be maximum. All ofthat is very dependent on the purpose of reading itself. For that, one of the way that can be achieved is by having a fast reading skills.

Speed reading is one of the skills in reading to get information quickly by taking into account the effectiveness of time. According Nurhadi (1987:31-32) "speed reading is the type of reading that prioritizes speed, but leave not understanding of Reading aspect. Muchlisoh also (1992:149) says that the speed reading does not mean the type of reading that wants to obtain the numberof readings or pagesin a short time. By reading quickly we will get some information what we need without spending a lot of time.

Fast reading skills needed by anyone and anywhere circles, especially by students who daily acivities is grapple with books. In this case the scholars most of his life is grappling with books. By mastering speed reading skills will assist students in getting information quickly.

Associated with speed reading, many issues get in the field, the reading skills of Almuslim students still very poor and have not been effective. In that sense, students are able to read, but do not understand what has been read. In addition, time spent in reading is not effective. An average of one minute, students can only read about 200 to 250 words. This fact shows the effective speed reading (ESR) students at the junior high level students (SLTP), little or 5% of the students who read 300-350 words per

minute with 30% comprehension of the text. Though the university level, students should be able to read 300-350 up to 70% of the reading comprehension. This fact in getting from the results of tests conducted on students by chance, at the seminar. This fact shows that the effective speed reading (ESR) students need to be improved in order to assist students in reading until the students reading interest will grow up and increase.

Based on the above facts, the authors measured the effective speed reading of student prospective Indonesian language teacherbecause as a prospective Indonesian language teacherreading speed must be effective truly. This is because the speed reading is a skill that must be mastered, and students will become teachers of Indonesian. Teachers should become a model for the students, if teachers can not afford the students will be less able. For that to know the effective speed reading (ESR) of student prospective Indonesian language teacher, researchers as lecturers Indonesian provide measures to enhance these capabilities. Action that involve is the application of P2R method.

P2R method is one ofmethods or strategies that can be used to improve reading skills. P2R method consists of *preview* stage, *read*, and *reviews* that are usually used most readers quickly and efficiently. According to Gordon (in Haryadi, 2006:91), with this method will train students to read in a glance, gain an understanding of the structure of the reading, can know the speed of reading, can repeat readings and determine whether there are missing or not. With the implementation of this P2R method, researchers hope the effective speed reading Almuslim University will be improved. By increasing the reading speed, reading interests of student prospective Indonesian language teacher, University Almuslim will grow and develop until that it will become an example for other student and slowly, read will become a culture among students in Almuslim University.

This research was conducted to obtain data aboutthe effective speed reading (ESR) of student prospective Indonesian language teacher. In detail, the research objectives can be described as follows.
1) To find out the result of the effective speed reading (ESR) of student prospective Indonesian language teacher.
2) To determine the level of effective speed reading (ESR) of student prospective Indonesian language teacher.
3) To determine whether the P2R method will be effective to increase the effective speed reading (ESR) of student prospective Indonesian language teacher.

Material and Methods

Effective Speed Reading (ESR) is the speed reached by the reader which is calculated by using the formula. To get the needed ESR result reading speed and comprehension of the reading results. Speed reading capability of a person is not solely measured how many words are read in every minute, but also to be seen what percentage of the people's understanding of the content of the reading. This is in accordance with the opinion of Fitria (2010:37), which measures the effective speed reading by measuring two aspects, namely as follows.

(1) KM amount of time (minutes) Measuring the speed of reading (SR) by counting the number of words read per minute by the formula:

$$KM = \frac{Jumlah\ kata\ yang\ dibaca}{Jumlah\ waktu\ (menit)}$$

(2) The content of reading comprehension (P) overall score by calculating the percentage of correct answers on the ideal answer scores of questions testing reading comprehension by the formula

$$KM = \frac{Jumlah\ kata\ yang\ dibaca}{Jumlah\ waktu\ (menit)}$$ measure by the formula $$KM = \frac{Jumlah\ kata\ yang\ dibaca}{Jumlah\ waktu\ (menit)}$$

The standard effective speed reading can be explained as follows.

ESR Category	Number ESR
1. Low speed	below 250 kpm
2. Medium speed (adequate)	250 – 350 kpm
3. High speed (effective)	over 350 kpm
School Type	**ESR Number**
1. Elementary School	150 - 200 kpm
2. Junior High School	200 – 250 kpm
3. Senior High School	250 – 300 kpm
4. University	300 – 350 kpm

P2R strategy

P2R method is a method which consists of reading the *preview* stage, *read*, and *reviews* that are usually used most readers quickly and efficiently. According to Gordon (in Haryadi, 2006:91) Explanation of the third stage in this method is as follows:

1) *Preview*, is read in a glance to know the structure of literature, basic thoughts, relevance, and so on. At this stage, the reader conducted an introduction to the reading of the basic things that are superficial. After that, the reader decided whether it is necessary to the next stage (read) or not. If you already know about the reading, the reader may just assume have not to read, if you do not know, readers continued the next stage.

2) *Read*, is read as soon as possible in accordance with the objectives to be achieved and the appropriate level of reading difficulty. The general objective is to find the information read in the reading. Information is basic or core and can also is not the core information or explanatory. If you just want to know who the principal, reader could only superficial reading (skimming) so that it takes a short time. But if you want to know all the information in the reading, the reader readcarefully.

3) *Review*, is another cursory reading to make sure nothing is missed and to strengthen the memory of the main ideas that have been obtained from the stage read. At this stage, the reader read as necessary as in the preview. What is different is the goal: if the preview to the readings, while a review to re-establish what has been understood and to check whether the text has been read to the purpose. The three stages in this method should not be used all in an orderly manner. It depends on the situation. If necessary, the third stage was used in an orderly manner. At other times, the reader does not perform preview stage as readers already the structure of the reading material. It might, readers do not read. He just did a preview and review stage because there are no new things in the readings that do not need to be read. Another possibility is that the reader does not have to do a review because the reader already feel sure there were missed and had to remember all of the information obtained.

Research Methods

This research uses research methods "true experimental design". This is because this research used two classes as the sample research, the control class and experimental class were chosen randomly. Furthermore, the experimental group was given a treatment or action such as the application of P2R method to see the influence or increased ability to read quickly (ESR) of student prospective Indonesian language teacher, while the control class absence of treatment. To get the results as expected, the researchers set up a research design. The research design was *pretest-posttest control group design* .In this design, there are two groups of randomly selected then given a pretest-posttest to see a change or improvement of students' ability to read quickly (ESR) after being given treatment.

The research population was all students of Indonesian Literature Program, and the Regional University Almuslim the first semester as much as 149 students. While the sample is a student of the first semester unit / class A and B as 45 students were taken randomly.

Research instrument used in this research is testing, observation, and questionnaire responses of students. Tests done twice, the pretest and posttest. Each of these tests / question is given in the form of multiple-choice and essay totaling 10 questions. Given problem contains the ability to read quickly and the ability to understand the content of reading. Items given between control and experimental classes together. It mean, no additional questions for the experimental class. For the effectiveness of the P2R method were observed by observers at the time of learning to read by the P2R method lived. While, the questionnaire used to know the response or responses of students to P2R method researchers gave questionnaires.

Results and Discussion

This research data of test results and the results of the questionnaire. Results of the data is processed by using statistical formulas. Based on the results of data processing obtained the following results.

1. Results of Effective Reading Ability (ERA)
    a. Pretest value

Pretest results indicate that the ability to effectively read (ERA) Indonesian prospective teachers are still very low. This is evident from the results obtained pretest, which is 20 or 90% of the students scored low and ERA category 2 or 9% of students who scored ESR medium category. In addition, the average time spent at 2-5 minutes of reading and comprehension of the content is also low. The results of the pretest ERA clearly experimental class can be presented as follows.

Category	Amount	Percentage
Low Speed	19	86%
Medium Speed	3	14%
High Speed	0	0%

b. Results postes

After learning by using P2R method, effective speed reading can be improved. This is evident from the results of the posttest, is 9 students or 40% scored lower ESR category, 7 students or 31% of medium category, and 6 students, or 27% scored higher ESR category. The average time spent achieving of 1 - 1.5 minutes. From the results of these tests proved that the result postes effective speed reading abilities of students has increased. The results can be presented clearly postes following table.

Category	Amount	Percentage
Low Speed	9	41%
Medium Speed	7	32%
High Speed	6	27%

c. Increased Value

From the results postes P2R shown that the method is able to improve the effective speed reading of student prospective Indonesian language teacher. This is evident from the results obtained postes. More clearly, the increase in the effective ability to read (ESR) students can be presented in the following diagram.

Diagram Peningkatan ESR
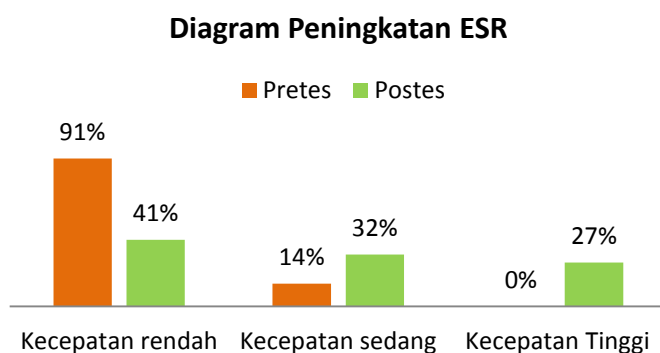
2. Effectiveness P2R Method

Observations indicate that the P2R method is effective to increase the effective speed reading (ESR) of student prospective Indonesian language teacher. This is evident from the results of observations obtained by 86% of the students active, serious, and very enthusiastic to learn, both the preview stage, the stage read, and the stage of the review. When learning takes place, almost all the student look seriously, especially when shared reading material especially P2R method is very concerned about the effectiveness of time. In other words, with a little time, can get more information.

3. Student Response Results

In addition, the poll results also show that the P2R method received a positive response from students. This is evident from the value obtained by 68% percent of students answered strongly agree and 32% agree that the student replied P2R highly preferred method. In addition, students feel P2R method is very helpful and facilitate students in reading. This is evident from the value obtained was 91%. In addition, students are also satisfied to learn the methods of P2R, is 85% of the students answered strongly agree. Previously, they have difficulty in reading. Based on the results of the questionnaire can be concluded that the P2R method is effective in increasing the effective speed reading of student prospective Indonesian language teacher, FKIP Almuslim University academic year 2015/2016.

Conclusion

Based on the results of the progress that has been described above, this research can be summarized as follows.

1) Effective Speed Reading (ESR) of student prospective Indonesian language teacher, FKIP Almuslim University academic year 2015/2015 can be increase by using the P2R method. This is evident from the test results obtained. ESR value pretest results obtained experimental class is 20 or 90% of the students scored low and ESR category 2 or 9% of students who scored ESR medium category. While the results of postes, is 9 students of low category 40%, 7 students or 32% ESR scored medium category, and 6 students, or 27% get ESR value high category. From the results of these tests proved that the result postes able to improve the reading skills of students.

2) Effective speed reading (ESR) of student prospective Indonesian language teacher73% does not suitable with ESR criteria based education. This proved 16 students, is 9 students reading below 250 words per minute (elementary, junior), 9 students are able to read 250-350 words per minute (SMA), and only 6 students can read 301-350 words per min (University level).

3) Observations indicate that the P2R method is effective to increase the effective speed reading (ESR) of student prospective Indonesian language teacher. This proved Hadi observation results obtained by 86% of the students active, serious, and very enthusiastic about learning. In addition, the poll results also show that the P2R method received a positive response from students.

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The Benefits Teacher Performance Assessment (PKG) for Teacher Career Development in Karo District

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Abstract

Why Teacher Performance Assessment (PKG) as PKG is an assessment of each item of her main tasks of activities in order to develop a career, rank and position. In the assessment are important requirements should be adhered to by the appraiser. Adapaun requirements in PKG system are: Valid, Reliable and Practical Implementation of the principle of PKG should be based on the provision, based on performance and based on documents PKG. The purpose of the author may from interviews with school supervisors and principals in Karo is 1) still tahunya teachers disatuan educators that are entitled to become assessor it is the teachers who have ever received education and training on teacher performance appraisal and cause the results of PKG is not as expected. 2) assessors often can not tell which is fact and what is opinion. So often the case in awarding a score of 0.1 and 2 are not in accordance with the facts on the ground. But for the provision of value competence 1, 2, 3 and 4 assessors already understand it. 3) Obstacles often discovered how to use formative reports form the basis for determining the Profession Sustainable Development (PKB) teacher. But in summative reporting is sufficient skills and already looks up to the acquisition of credit number of teachers in one year. Based on the above it is essential to the authors recommend to the relevant parties as education department Regency/City, forums working group of teachers, principals and supervisors as well as LPMP itself to join the war active in socializing and monitoring the implementation of the Teacher Performance Assessment in Karo.

Key words: Assessment, teacher, competence, career development

Introduction

The teacher is a key element in the educational system, especially at school. All other components ranging from curriculum, facilities - infrastructure, costs, and other sebagainnya will not mean much if the essence of learning is teacher interaction with students not qualified. All other components, especially the curriculum will be "live" when carried out by the teacher. Once the importance of the teacher's role in transforming the input - input of education, up - to many experts claim that in schools there will be no change or an increase in quality without changes and improving the quality of teachers. Unfortunately, the culture of Indonesian society to this day work of teachers is still closed. Even the tops of teachers as

principals and supervisors although not easy to get the data and observe the daily reality of teachers in front of students' performance. Indeed, classroom visits by principals and supervisors, may not be rejected by the teacher. But not rare teachers try to show their best performance both in aspects of planning and implementation of learning only during the visit. Furthermore, he will return to work as usual, sometimes without preparation and without the spirit and enthusiasm.

Teacher performance appraisal is one of the important tasks that supervisors and also the most difficult. Therefore, a supervisor should be able to set standards and performance evaluation in order to assess the performance of his men in an objective and accurate. PKG implementation is intended not to make it difficult for teachers, but instead PKG implemented to realize the professional teachers, because the dignity of a profession is determined by the quality of professional services quality. Find exactly about the activities of teachers in the classroom, and help them to improve their knowledge and skills, will contribute directly to improving the quality of learning is done, while helping the career development of teachers as professionals. Therefore, to ensure that every teacher is a professional in his field and in recognition of his achievement, then PKG should be made to the teacher at all formal education units organized by the government, local governments, and communities. Guru is not limited to teachers who work in educational units under the authority of the Ministry of National Education, but also includes teachers who work in the education unit in the Ministry of Religion.

PKG results can be used to profile the performance of teachers as input in the preparation of Sustainable Profession Development program (PKB). Results PKG is also the basis for determining the credit scoring of teachers in the framework of teacher career development, as mandated in the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform No. 16 of 2009 on the Functional Master and credit figures. If all this can be carried out properly and objectively, then the government's aspiration to produce "intelligent human being comprehensive and highly competitive" more quickly realized.

Based on the data in the field is the lack of understanding of teachers with the functionality and usability Teacher Performance Assessment. The teachers still feel PKG is a burden that adds to their work and that will menghabat their career development to a higher one. In addition, ignorance of the teachers that are responsible for assessing the teachers is an assessor who has been involved training of teachers performance assessment based on data from the year 2012 in the Karo district of assessors PKG amounted to 500 people. Institute on these issues, the authors feel interested in discussing the benefits of teacher performance appraisal (PKG) for career development of teachers.

This paper is expected to broaden the understanding of all stakeholders on the principles, processes, and procedures for the implementation of the PKG, as a performance evaluation system based on evidence (evidence-based appraisal).

The concept of Teacher Performance Assessment

a. Understanding PKG

According to the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform No. 16 of 2009, PKG is an assessment of each item of her main tasks of activities in order to develop a career, rank and position. Implementation of the main task of the teacher can not be separated from the ability of a teacher in the mastery of knowledge, application of knowledge and skills, as competencies required as mandated by National Education Minister Regulation No. 16 Year 2007 on Academic Qualification Standards and Teacher Competency. Mastery of competencies and application of knowledge and skills of teachers, largely determines the quality of the learning process or the achievement of coaching learners, and the implementation of additional tasks that are relevant to the school / madrasah, especially for teachers with the additional tasks. PKG system is a rating system designed to identify the skills of teachers in performing their duties through the measurement of competence mastery shown in its performance.

System Requirements of PKG

PKG is important in the system requirements are:

1) **Valid**

   PKG system is said to be valid when the aspect assessed actually measure the components of the teacher's task in carrying out the teaching, coaching, and / or other duties relevant to the functions of the school / madrasah.

2) **Reliable**

   PKG system is said to be reliable or have a high level of confidence if the process is done the same results for a teacher who assessed performance by anyone and at any time.

3) **Practical**

   PKG system is said to be practical when it can be done by anyone with relative ease, with the level of the same validity and reliability in all conditions without the need for additional requirements.

c. Implementation Of The Principle Of PKG

Key principles in the implementation of PKG is as follows: 1) Under The Provisions Of PKG must be carried out in accordance with the procedure and refers to the regulations; 2) **Based On Performance** Aspects assessed in PKG is the performance that can be observed and monitored, the teachers in carrying out his daily duties, namely in conducting teaching, coaching, and / or additional tasks that are relevant to the functions of the school / madrasah; 3) **Based Document PKG,** Assessors, teachers are assessed, and the elements involved in the process of PKG must understand all the documents related to the PKG system. Teachers and assessors must understand the statement of competence and performance indicators as a whole, so that both are aware of the aspects assessed as well as the basic and the criteria used in the assessment.

d. Aspects Considered in PKG

To facilitate the assessment in PKG, 24 (twenty four) competencies are summarized into 14 (fourteen) competence as published by the National Education Standards Agency (BSNP). Details of the number of these competencies are described in Table 1.

Table 1. Competence Master Class / Subject Teachers

No	Competence Realm	Amount	Competence Indicators
1.	Pedagogic	7	45
2.	Personality	3	18
3.	Social	2	6
4.	Professional	2	9
	Jumlah	14	78

Teacher evaluations are BK / counselor refers to the four domains of competence which includes 17 (seventeen) competencies as outlined in Table 2.

Table 2. Teacher Competence Counseling / Counselor

No	Competence Realm	Amount	Competence Indicators
1.	Pedagogic	3	9
2.	Personality	4	14
3.	Social	3	10
4.	Professional	7	369
	Jumlah	17	69

And the additional task of the teacher is the head of school / madrasah 40 competencies, vice principal 29 competencies coupled with the specific task of teaching the deputy, head of the library 65 competencies, head of the laboratory / workshop / like 46 komptensi, chairman of the 37 skills competency program.

e. Implementation device PKG

The device should be used by the assessor to carry out PKG in order to obtain an objective assessment, accurate, valid, and accountable are:

1) **Guidelines PKG**

   Guidelines PKG regulates procedures for assessment and norms to be followed by the assessor, teachers assessed, as well as other elements involved in the assessment process.

2) **Instrument performance assessment**

Performance assessment instruments that are relevant to the duties of teachers, consisting of: a. Instruments-1: Implementation Study for the class teacher / subject (Appendix 1); b. Instrument-2: Implementation of Mentoring for teachers Bumbingan and Counselling / Counsellor (Appendix 2); and c. Instrument-3: Implementation of Additional tasks that are relevant to the functions of the school / madrasah (Appendix 3). Instrument-3 consists of several separate instruments in accordance with the additional task carried teacher.

3) **Report of control of the performance of teachers**

PKG results for each individual teacher (teacher of learning, guidance and counseling teacher / counselor, and teachers are given additional tasks that are relevant to the functioning of the school / madrasah) then recapitulated in the control of teacher performance report format (Appendix 4). At this format included the results of the formative PKG, the target PKG value to be achieved after the teacher following the CBA process, and the results of summative PK GURU for the next few years. Thus, the teacher's performance will be monitored and can be directed in improving teacher performance is concerned in order to provide quality education to students.

Implementation Procedures Results PKG and Conversion Into Credit Score

a. **Time and Operating Procedures PKG**

1) **Time Frame**

PKG done at least 2 (two) times a year, namely at the beginning of the school year and the end of the school year.

a) **PKG Formative**

PKG formative be used to profile the performance of teachers and should be implemented within a period of 6 (six) weeks at the beginning of the school year. This profile is based on teacher performance and the results of self-evaluation conducted by independent teachers, school / madrasah plan PKB.

b) **PKG Summative**

PKG summative used to set perolahan credit number of teachers during the year. PKG summative also used to analyze the progress achieved in the implementation of PKB teacher, both for teachers whose value is below the standard, has reached the standard, or exceeds the standards of competence specified.

2) **Implementation Procedures**

a) **Preparation**

Guidelines PKG understand, understand the teacher competency statements set out in the form of performance indicators; PKG understand the use of instruments and procedures for the assessment to be carried out, including how to record all observations and monitoring, as well as collecting documents and other physical evidence that reinforces the assessment results; and notify the PKG implementation plan to the teacher who will be assessed at the same time determine the time span of the implementation schedule.

b) Implementation Phase

Before Observations: The initial meeting between the assessment of teachers who assessed prior to observations carried out in a special room without any third person. 2) During the observation During observation in the classroom and / or outside the classroom, the assessor must record all activities performed by teachers in implementing the learning process or guidance, and / or in the implementation of the additional tasks that are relevant to the functions of the school / madrasah. In this context, the performance appraisal is done by using the appropriate instruments for each performance appraisal. 3) After Observations: At a meeting after the observation of the implementation of the learning process, guiding, or the implementation of additional tasks that are relevant to the function of schools / madrasah, the assessor can clarify certain aspects are still in doubt.

c) Phase grading

Assessment: At this stage appraisers set the value for each competency with a scale value of 1, 2, 3, or 4. Before giving the value, the assessor must first give a score of 0, 1, or 2 in each of the indicators for each competency. Scoring should be based on the observation and monitoring records and evidence in the form of other documents collected during the process of PKG. 2) Statement of Objections to Assessment: Assessor's decision is open to verification. Teachers are assessed may file an objection to the assessment results. Objections submitted to the Principal and / or the Department of Education, which in turn will appoint an appropriate person to act as a moderator. In this case the moderator to repeat the implementation of PKG to certain competencies that are not agreed upon or repeat overall performance assessment.

3) Phase reporting

After PKG formative and summative grades obtained, PKG appraiser must report the results to the authorities to follow up the results of the PKG. PKG formative results be reported to the school principal / coordinator PKB as input for planning activities of the annual CBA. Results PKG summative assessment team reported to the district / city level, provincial level or the national level in accordance with their authority. PKG summative report is used by the assessment team at the district / city, province, or center as the basis for the calculation and determination of the number of credits (PAK) subsequent annual considered for promotion and functional position of teachers. Reports include: (1) reports and evaluations per competence according to the format; (ii) Recap PKG results according to the format; and (iii) other supporting documents. 3. Conversion Value Results PKG to Credit Score

The value of teacher performance PKG results need to be converted to a scale of values according to the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform No. 16 of 2009 on the Functional Master and credit figures. The conversion result is then used to assign a designation the results of PKG and the percentage of corresponding credit scoring rank and functional position of teachers. Before performing the conversion results of PKG to the number of credits, the assessment team should verify the results of PKG. Verification activities is implemented using a variety of documents (Results PKG are recapitulated in the Format Recap Results PKG, record observations, study of

documents, interviews, and so on which is written in report format and Evaluation per competence together with supporting documents) submitted by the school for the nomination of determination Credit figures. If necessary and possible, PKG results of verification activities can include visits to schools / madrasah by the assessment team at the district / city, province, or center.

Results and Discussion

1. Results

Based on the interview with the author of several supervisors and principals in Karo, the authors obtain results as follows;

Assessors PKG

Still not him disatuan educators that teachers are entitled to become assessor it is the teachers who have ever received education and training on teacher performance appraisal. But what happens in the field a lot in the education unit that assessment is the teachers who have never received the knowledge of assessment, coupled with a lack of socialization to schools on performance evaluation, so in the field occurred for teachers kepangkatannya III / a judge teachers rank III / b or language subject teachers assess premises to other subjects. This causes the result of PKG is not as expected.

Teacher Performance Assessment Process

Which often become obstacles by assessors in the assessment process is at the time of recording the facts. Assessors often can not tell which is fact and what is opinion. In addition assessors also trouble scoring on competence indicator due note written findings that the assessor is not in accordance with the existing demands on the competence indicator. So often the case in awarding a score of 0.1 and 2 are not in accordance with the facts on the ground. But for the provision of value competence 1,2,3 and 4 assessors already understand it.

Reporting

Statements made there are two kinds of reports formative assessment and summative assessment report. Obstacles often discovered how to use formative reports form the basis for determining the Profession Sustainable Development (PKB) teacher. This is because not skilled in planning coordinator PKB PKB teachers. But in summative reporting is sufficient skills and already looks up to the acquisition of credit number of teachers in one year.

2. Discussion

Criteria for Performance Appraisal

Teacher evaluations are conducted at the school by Principal. If the Principal is unable to perform its own (for example because of the number of teachers who assessed too much), then the principal can appoint the coach or coordinator Teachers CLA as an appraiser. Principal performance assessment carried out by the Supervisor. Appraisers must have the following criteria. a) Occupy the position / rank equal to the lowest position / rank teachers / principals assessed. b) Has a Certificate of Educators. c) Has an appropriate educational background and master field of study Teacher / Principal will be assessed. d) Have a high commitment to actively participate in improving the quality of learning. e) Have integrity,

honest, fair, and open. f) Understand PKG and declared to have the expertise and are able to assess the performance of teachers/Principals.

For the period of the teacher's performance appraisal team determined by the Principal or the Department of Education no later than three (3) years. Assessor performance is evaluated regularly by the Principal or the Department of Education with regard to the principles applicable assessment. For schools that are in special areas, teacher performance assessment carried out by the principal and / or teacher local coaches. The number of teachers who can be assessed by an appraiser is 5 to 10 teachers per year.

b. Teacher Performance Assessment Process

At this stage appraisers set the value for each competency with a scale value of 1, 2, 3, or 4. Before giving the value, the assessor must first give a score of 0, 1, or 2 in each of the indicators for each competency. Scoring should be based on the observation and monitoring records and evidence in the form of other documents collected during the process of PKG. Scoring for each competency done in stages as follows: a) awarding a score of 0, 1, or 2 for each indicator each competency. Scoring is done by comparing the summary record of the observation and monitoring and evaluation report format sheets per competence with performance indicators of each competency. Rules scoring for each indicator are: • Score 0 declare indicators are not carried out, or do not show proof, • Score 1 states indicator partially implemented, or there is evidence but not completely • Score 2 states indicator fully implemented, or there is evidence to complete.

Acquisition score for each competency are then summed and the percentage is calculated by: dividing the total score obtained by the total maximum score of competence and multiplying by 100%. Acquisition percentage score for each competency is then converted to a scale value of 1, 2, 3, or 4. The value of each competency are then summarized in the form of teacher performance assessment results. The total value is then converted into a scale of values according to the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform No. 16 of 2009.

c. Reporting

PKG results for each individual teacher (teacher of learning, guidance and counseling teacher / counselor, and teachers are given additional tasks that are relevant to the functioning of the school / madrasah) then recapitulated in a report format control of the performance of teachers. At this format included the results of PKG formative formative value used for the CLA plan, PKG value to be achieved after the teacher following the CBA process, and the results of summative PK GURU for the next few years.

Conclusion

1. Not yet in force him teacher educators that are entitled to become assessor it is the teachers who have ever received education and training on performance assessment of this gurudan cause the results of PKG is not as expected.

2. Assessors often can not tell which is fact and what is opinion. So often the case in awarding a score of 0.1 and 2 are not in accordance with the facts on the ground. But for the provision of value competence 1,2,3 and 4 assessors already understand it.

3. There are skilled in planning coordinator PKB PKB teachers. But in summative reporting is sufficient skills and already looks up to the teacher credit scoring in the know.

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The 5 E's Instructional Model as a Constructivist/Conceptual Change Approach to Enhance Students' Learning in Science

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Abstract

Traditional teaching approach is still applied in most of the schools in the world. There is a critique to traditional teaching approach, because traditional teaching approach does not meet students' need and fail to prepare students for the demand of society. 5 E's instructional model is a constructivist/conceptual change approach to teaching. The aims of this paper is to discuss 5 E's instructional model. Considering to the benefits that have been provided in this paper, it can be concluded that 5 E's Instructional Model might be a solution to the critiques of traditional approach to teaching and learing.

Keywords: The 5 E's Instructional Model, Constructivist/Conceptual Change Approach, Science learning

Introduction

Currently, traditional teaching approach is still applied in most of the schools. In Korea, general public and parents have criticized the public schools which are still adopted traditional teaching approach, they argued that traditional teaching approach does not meet students' need and fail to prepare students for the demand of society (Kim, 2005). Constructivist approach might be a solution to the problems that are faced in traditional teaching approach. Curriculum concept (n.d.) suggested, although there is no one type of teaching approach perfect for all students, the educators recommended to emphasize more on the constructivist approach to teaching than behaviorism or traditional approach to teaching. 5 E's instructional model is a constructivist/conceptual change approach to teaching (Hubber and Tytler, 2004).

The aims of this paper is to discuss 5 E's instructional model. As 5 E's instructional model is a constructivist approach, it might be necessary to review constructivist or conceptual change approach.

Constructivist or Conceptual Change Approach

Traditional approach to learning and teaching is a process where the teaching and learning only occur in one way process, from the teacher to the students (Zhao, 2003). In this teaching and learning approach, students are considered as passive learners, and a teacher has an important role as an expert which responsible to transfer the knowledge to their students. Zhao added this model is no longer considered as an effective model of teaching and learning for preparing students as educated citizen, because this model of teaching is unable to improve students' creativity. As considering students as passive learner, traditional approach to teaching and learning might not in accordance to students' conceptions in science. In addition, Gilbert, Osborne and Fensham stated that "children are not passive learners and the way they make sense of their experiences led to this intuitive knowledge being called 'children's (Duit and Treagust 2003).

Researches into students' conceptions in science suggested that students have their own conceptions and understanding of the phenomena in the world before the come into the class (Tytler, n.d.; Duit and Treagust, 2003). Therefore, before they study the science lesson in the class, they already have the conceptions on the topic of the lesson. Tytler stated that most of their conceptions are alternative conceptions which are very different to scientific conceptions. He also added that, mostly students' alternative conceptions are difficult to shift to scientific conceptions. In contract, sometimes students' alternative conceptions in form of prior knowledge will be useful in helping the students to learn the concepts in science effectively. As consequence to results of research into children's conceptions, there are some teaching sequences which are proposed to apply in teaching science. These sequences of teaching include the various types of constructivist theory and the empirical results of students' conceptions research (Hubber & Tytler, 2004). Hubber and Tytler refer these as constructivist or conceptual change approaches.

Constructivist approach to learning emphasis that the students construct the meanings from their experiences and influenced by their existing knowledge, and the meanings might be different from those expected (Tytler, n.d). According to Duit, conceptual change is learning science from the perspectives of constructivist (1999, cited in Duit and Treagust, 2003). Throughout 1980s and 1990s, conceptual change received significant support from researchers, because the researchers realize that there is parallelism between the idea of scientific revolution in scientists and conceptual change in students (Tytler, n.d). Duit and Treagust (2003) classify conceptual change approach into two types, namely: "weak knowledge restructuring, assimilation or conceptual capture and strong radical knowledge restructuring, accommodation or conceptual exchange"

According to Hubber and Tytler (2004), the roles of teacher in constructivist/conceptual change approach is different with the roles of teacher in traditional classroom which provide and explain the knowledge to the students, in constructivist/conceptual change approach, the teacher have more complex roles, they have roles as 'stimulator of curiosity', 'challenger of the ideas', 'resources person', 'senior co-investigator', and 'discussant.

Hubber and Tytler suggested that there are various model of teaching and learning can be used in adopting constructivist/conceptual change approach to learning and teaching, namely, Lawson's 'learning cycle', Glasson's 'learning cycle, generative learning model, interactive approach, children's learning in science (CLIS) model, 5 E's model. In general, students' prior knowledge and ideas are explored and challenged by all these models (2004). However, this essay only discusses 5 E's model.

5 E's Instructional Model

The 5 E's model was developed from SICS learning cycle by Bybee and his colleagues from Biological science curriculum study (BSCS) in the mid of 1980s. It has five phases, namely, 'engagement, exploration, explanation, elaboration, and evaluation'. The middle three phases of 5 E's model; exploration, explanation, and elaboration are basically equivalent to three phases of SCIS learning cycle; 'exploration', 'invention (term introduction)', and 'discovery (concept application)' (Bybee et al., 2006). In addition, Tytler, Darby, and Peterson stated that each phase in 5 E's instructional model have specific purposes (n.d.). The following paragraphs discuss and explain about each phase and advantages of 5'E instructional model.

1. Engagement

The first phase is engaging students to learn. According to Bybee at al., there are several ways that can be used to engage students in this phase, namely; "asking a question, defining a problem, showing a discrepant event, and acting out a problematic situation" (2006, p. 8). They also added that the roles of teaches in this phases is "to present the situation and identify the instructional task. The teacher also sets the rules and procedures for establishing the task" (p. 9). Moreover, in this phase the teacher has an opportunity to identify students' misconception or alternative conception (MCPS Science Office, 2001). Tytler, Darby, and Peterson (n.d.) also added that the assessment framework in this stage is diagnostic assessment.

In accordance to Bybee et al., Liu et al. stated that in this phase the teacher should determine students' prior knowledge and encourages students' curiosity in learning the new concept. The teacher also should facilitate students in connecting their prior and present conceptions or knowledge, and stimulate students to understand the objective of present activities or learning (2009). Hackling, Smith and Murcia added that the communicative approach uses in this phase is interactive dialogic communicative approach (2010). There are interactions between teachers and students in this communicative approach, in the interactions the teachers listen to and take account of students ideas, even though students ideas are different with teacher expected (Mortimer and Scott, 2003).

2. Exploration

Bybee et al. (2006) stated that the purpose of this stage is to explore the activities; the experiences in these activities later can be used by the teacher and the students for introduction and discussion of concepts, processes, and skills. They added that in these activities students have time and opportunity to explore the objects, events, and/or situations. As consequences the students might involve mentally and

physically in the activities, they connect relationships, determine patterns recognize variables, and question events. In this phase, a teacher has roles as a facilitator or a coach.

Liu et al. suggest that in this phase the teacher should provide the activities for the students, and the activities should present concepts, processes, and skills (2009). Similar to engagement phase, communicative approach use in this phase is interactive dialogic communicative approach (Hackling, Smith and Murcia, 2010). In addition, assessment framework in this phase is formative assessment (Tytler, Darby, and Peterson, n.d.).

3. Explanation

Bybee et al. said that in this phase, the teacher encourages students' attention into a specific aspect of engagement and explanation activities. First of all, the teacher gives an opportunity for the students to explain their explanations of the activities in engagement and exploration phases; normally the explanations are based on their prior and present knowledge. Later, scientific and technological explanations are introduced by the teacher to the students in a direct, explicit, and formal ways. There are several ways and strategies that can be used by the teacher to develop students' explanation in this phase, namely: using verbal explanation, video, film and courseware (2006).

Moreover, in order to ensure students have deeper understanding in the concept, direct guide can be used by the teacher in this phase (Liu et al., 2009). Hackling, Smith and Murcia suggested that communicative approach use in this phase is interactive dialogic, interactive authoritative and non-interactive authoritative communicative approach (2010). According Mortimer and Scott, interactive authoritative communicative approach is the communicative approach where there are interactions between teacher and students, but in the interactions teacher only encourage students to answer in specific point of view. In contrast, non-interactive authoritative communicative approach is communicative approach where there are no interactions between a teacher and students, and the teacher only express his/her ideas in the explanations (2003). Moreover, Tytler, Darby, and Peterson said, the assessment framework in this phase is formative assessment, but sometimes formative assessment also involve in this phase (n.d.).

4. Elaboration

According to Bybee et al., (2006) after students have the scientific and technological explanations of their learning tasks, it is crucial for the students to involve in other experiences to elaborate their concepts, processes and skills. In this phase, students are facilitated to apply the concepts, processes, and skills that they have understood from the previous phases to a new situation, because there is a possibility that students still have misconception and/or only able to apply the concepts, processes and skill in term of activities in exploration phase.

Liu et al. (2009) stated that in this phase, "the teacher challenges and extends students' conceptual understanding and skills. Students learn to develop broader and deeper understanding and skills, through the above three phases. Hackling, Smith and Murcia added that the communicative approach use in this

phase is interactive dialogic and interactive authoritative communicative approach (2010). The assessment framework in this phase is formative assessment (Tytler, Darby, and Peterson, n.d.)

5.   Evaluation

Bybee et al. (2006) stated that in this phase, students have an opportunity to apply the skills they have mastered and the express their understanding of the concept. The students should receive the feedback from their teacher in this phase. In fact, the teacher can evaluate the students from the beginning and throughout the sequences of all phases in informal ways. In addition, in this phase the teacher able to assesses students understanding of the concepts in formal ways. Overall, the teacher can determine the level of students understanding in this phase.

In agreement to Bybee et al., (2006); Liu et al. (2009) stated, in this phase "the teacher evaluates students' progress toward achieving the instructional goals. Students learn to assess their understanding and abilities". The communicative approach use in this phase is interactive dialogic and interactive authoritative communicative approach (Hackling, Smith and Murcia). Tytler, Darby, and Peterson stated, the assessment framework in this phase is summative assessment.

The Benefits of 5 E's Instructional Model

There are some advantages in implementing 5 E's instructional model in teaching and learning activity. Firstly, this model can be applied in variety grades level (Liu et al., 2009). Secondly, 5 E's model able to elicit student's prior knowledge and help to shift students' misconception. Finally, students can argue and debate their idea, and that is important for the students in extending conceptual understanding (Balci, Cakiroglu, and Tekkaya, 2006, cited in Liu et al., 2009). In addition to these advantages, the teacher also satisfied to the outcomes that students achieve after learning in 5 E's instructional model (Beffa-Negrini et al, 2007, cited in Liu et al, 2009).

Conclusion

The 5 E's instructional model is a constructivist/conceptual change approach to learning and teaching. Considering to the benefits that may be gained from 5 E's instructional model, it might be a solution to the critiques of traditional approach to teaching and learning.

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Adopting Social Learning Framework into e-Books for Supporting Student-centered Learning

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Abstract

E-book as a learning media has been widely known and used for supporting teachers and students in learning process. The presence of e-books can be accepted because of its potential for aiding the learning process. They include a variety of interactivities to engage readers and deepen the impact of the written word. As such, they transform traditional books in creative ways that help bring content to life. However, e-books are available today are still have a static feature. They only allow learners to interact with e-books itself. While, in the context of learning, a learner may be interacting with other learners or even the teacher / professor (in a discussion forum, for example) related to the topics in the e-books. E-books feature today has not been able to engage the learner with the learning environment in the construction of interaction in order to make a learner-centered learning activity. Based on this characteristic of e-books, we do a research to propose a new model of e-books. In this research, a digital book is more than the digital version of the traditional books. In this paper we present a framework for introducing an interaction model in the e-books. The framework can be used as a platform for developing the dynamic feature e-books which incorporating the learner and the dynamic learning environments. We illustrate this interaction model with scenarios that shows how the interaction model has been applied to increase an effectiveness of learning for learner participants in learning activity using e-book.

Key words: Dynamic learning environment, interaction model, learner-centered, learning media

Introduction

E-books has been accepted as one of an alternative learning media because of its potential for aiding the learning activities. E-books provide interactive content such as audio, video, animation, image or movie for supporting students in learning. Unfortunately, e-books feature nowadays has not been able to engage students with the learning environment in the construction of interaction in order to make a student-centered learning activity. When using e-books, students only related to the reading content or find out certain topics which they learnt or search for a specific chapter in the appropriate e-books. The features of e-books didn't provide facility to make a discussion forum between the students, even with their teacher that sometimes needed by the student in their learning process. Besides, the use of e-books for learning in education has not been associated with the use of social networks for connecting individuals and communities. The feature of e-books only allow learners to interact with e-books itself. While, in the context of learning, a learner may be interacting with other learners or even the teacher / professor (in a discussion forum, for example) related to the topics in the e-books.

To address the problem, we propose a framework for introducing an interaction model in the e-books. The framework can be used as a platform for developing the dynamic features e-books which incorporating the learner and the dynamic learning environments. Design of e-books as a platform of mobile learning activities involves more than simply setting up the virtual learning space. The affordances of e-books and how learner perceive these affordances influence the design of e-books framework where the interaction model of e-books is implemented. Based on research (Gaver, 1991; Kirschner, Strijbos, Kreijns, & Beers, 2004; Norman, 1999; Wang, 2008, 2009) we are using three affordances for designing a useful e-books framework, they are pedagogy, social and technology. Pedagogical affordance refers to the characteristics of technology enhanced learning environments that determine whether and how learning activities can be implemented in a given educational setting for a learner and teacher; social affordance refers to the properties of the framework that promote social interaction among its users; and technical affordance refers to the usability of the framework for learning and task accomplishment.

Review of Relevant Literature

Learner-centered Framework

Research underlying the learner-centered principles confirms that learning is nonlinear, recursive, continuous, complex, relational, and natural in humans. Research also shows that learning is enhanced in contexts where learners have supportive relationships, have a sense of ownership and control over the learning process, and can learn with and from each other in safe and trusting learning environments (McCombs, 2003; McCombs & Whisler, 1997). Providing a context and opportunities for networking and collaboration is an important feature of learner-centered framework. It must be addressed in setting up technology-supported learning communities.

The learner-centered framework provides a foundation for transforming education, inclusive of the potential role of technology. Technology can be used to change the functionality of e-books as a platform

of online learning. It means that online learning is not about taking content and putting it on the desktop. It is about a new blend of resources, interactivity, performance support, and structured learning activities (Noroozi and Haghi, 2012). In this context, e-books as learning media can provide an interactivity aspect.

Social Learning

In globalization era, technology brings lots of effects in education. They provide opportunies for innovative teaching and learning. Social networking technologies have been viewed as tools that enable the use of participatory pedagogies able to address the problems that have traditionally plagued distance education: creating a sense of presence, community-building, and learner participation in interactive discussions (Brady et al., 2010; Lee & McLoughlin, 2010; Naveh et al., 2010).

New technologies expand the horizons of education, offering opportunities to explore practices based on collaboration and community rather than the individual teacher or learner. A social networking site was implemented with the aim of progressing online participatory culture and increasing student engagement both online and in face-to-face classes. In this context, learners have turned to online distance learning as a reliable alternative to face-to-face education (Brady, Holcomb, & Smith, 2010; DeSchryver, Mishra, Koehleer, & Francis,2009). Processes of meaning-making, integrating new information, and creating know-ledge are not only enhanced and stimulated through reaction, discussion, and argument with others but also much knowledge confirmation, interpretation, contextualization, and validation happens only through interaction with others.

One of the aspect of new technologies is social learning. A social learning is asumed as an electronically mediated context for teaching and learning. This kind of learning model offering the opportunities to explore practices based on collaboration and community rather than the individual teacher or learner. In social learning, participants (students and teacher) can share interest and learning activities. It allows students to share the opinións, activities and knowledge in the context of learning.

Result and Discussion

In this research, a social networking approach was adopted to extend the capability of e-books as a learning platform. We focused on interaction aspect that needed by the learners to engage with their learning environment such as the other learners, lecturers, content resources etc. in their learning activities, they can discuss some readings material with other students and teacher in one space and the discussion can be formed in readings material context.

E-Books as A Learning Platform

The aim of this research is to develop e-books as a platform of learning. In this context, e-books has ability to support the interaction between learner and the learning environment when they are using e-books. In order to guide the design of interaction mechanism in e-books, we propose a conceptual framework to describe how the interaction mechanism will be developed. This proposed framework is inspired on social networking learning. Social networking sites (SNSs) have the potential to facilitate

interaction, communication, and collaboration, and as a result have been prominently featured in discussions centering on the use of technology to support and amplify educational endeavors (Greenhow, Robelia, & Hughes, 2009).

In this research, we try to offer a holistic picture of interaction between technology (mobile learning), pedagogy (e-books as media learning) and educational setting (management of learning and mechanism of interaction) (Duffi and Kirkley, 2004; Georgouly *et al*, 2008). Our conceptual framework has three main components: Content Component, Activity Component and Interaction Component (see Figure. 1).
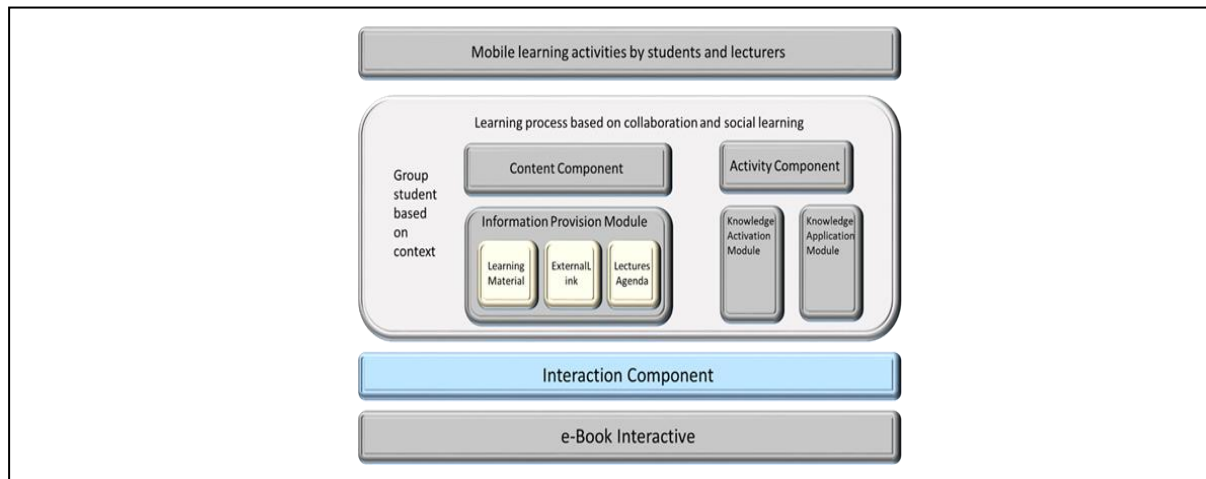
Figure 1. E-Books Conceptual Framework

Content Component provide the learning object such as reading materials, notes, and others supporting learning materials. The learning object are designed to be easily accessed through the internet, both for downloading and for online reading. Further links to other parts of learning materials or to relevant learning materials are added to this component.

Activity Component represents the functionality of learning activities that performed by the student and teacher in learning and teaching using their e-books. Teacher can build their e-books library by downloading from the Internet or make an e-books by themself. Students can do learning activities (record, reinterpret, recall and relate) when they are using their e-books. The learner may use e-books to capture, preserve, memorise, note or create information (record). The learner may use e-books to discover, process or enhance existing knowledge so that it is transformed into new knowledge, or remixed to enhance learning (reinterpret). The learner may use e-books to recall information, experiences, events or stories stored on the e-books, or by using the e-books to access the information remotely (recall). The learner may use e-books to communicate with other learner, or with a teacher (relate). They can also recommend and share reading materials to other learner.

Interaction component provide a mechanism that can be used to implement our proposed interaction model. In the interaction model, we define some objects that represent the domain model. We explain the objects as follows:

- A Topics (T_i) represent the real objects of the domain model. The objects can be a part of e-books such as chapter or paragraph. A topics can involve multiple Actor (A_i) and Actor can perform some action or Operation (O_i) related to the Topics in the Context (C_i).

- E-books (E) is a collection of objects representing topics.

  $\{T_i\} \in E$

- A Context (C_i) is a bounded conceptual area that link and attach a collection of interrelated entities to object that represent Topics in focus. An Actor (A_i) represents an object/participants that involved in one or more Topics discussion. An Operation (O_i) represents activities or capabilities that can be done by Actor. There is a relationship between Actor and Operation that always attached by a Context in the Topics. The relationship can be defined as follows:

  $C_i : \{\{A_i\} \wedge \{O_i\}\}$

- A set of operation for modelling the interaction mechanism in e book can be defined as follows:

  $op : \{send; addT; rmvT; addA; rmvA; null\}$

  The *send* operation transmits a message P from the sending Actor A_i to the receiving Actor A_j.

    $send\ (A_i; A_j; P)$

  The *addT* operation is used to add the Topics.

    $addT\ (T_1, T_2, \ldots, T_j)$

  The *rmvT* operation is used to remove the Topics.

    $rmvT\ (T_1, T_2, \ldots, T_j)$

  The *addA* operation is used to add the Actor.

    $addA\ (A_1, A_2, \ldots, A_j)$

  The *rmvA* operation is used to remove the Actor.

    $rmvA\ (A_1, A_2, \ldots, A_j)$

- Every discussion must be bounded to a specific Topics. In this model we are using *tagging* to attach a Context that define the participants, the interaction among them and the scope of discussion.

    $tag\ T_1, T_2, \ldots, T_j : C_i$

- The reactive mechanism is defined to make a Context operational. This mechanism binds Topics, Actors and Operations in a single framework, based on events. The events follow some rules: 1) an event can be system event or user-defined event, 2) a system event is generated by an operation, except null, while a user-defined event is triggered by a specific user status, and 3) the execution of any operation is always triggered by an event. A null operation is one that does nothing. It is used to define to end a conversation.

    $A[status] \rightarrow e$

    $op \rightarrow e$

    $on\ e\ \{op\}$

E-books User Interface Design

Figure 2 describes the component design of e-books. In order to explain how the interaction model can be implemented, we design the user interface for the proposed e-books.
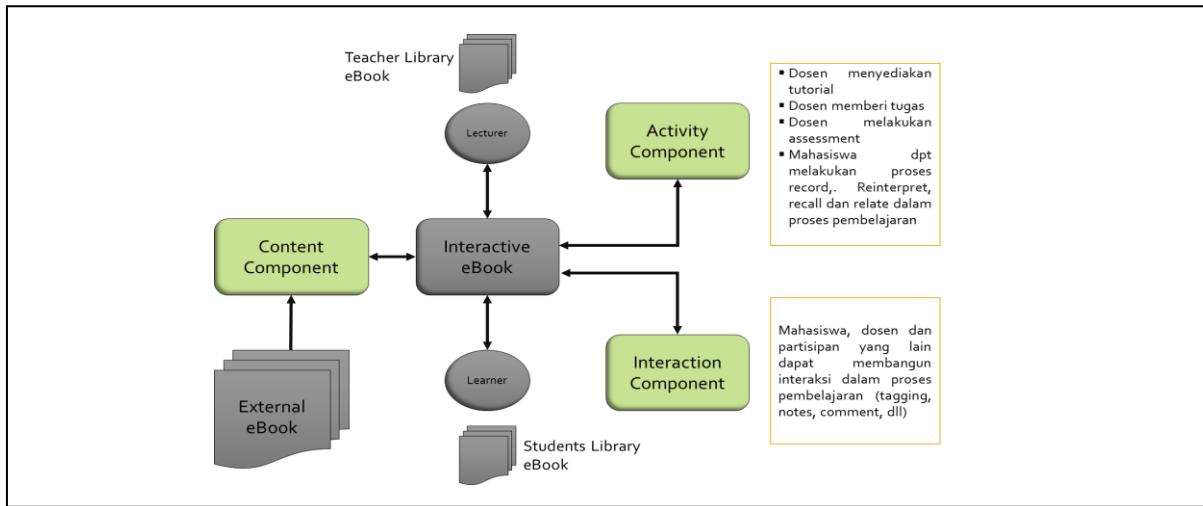
Figure 2. Component Design

Inteaction mechanism is a central to e-books design. In this design, students are able to create personal profiles (Figure 3 and Figure 4), add other students in friendlist (Figure 6 c), tag status for topics discussion (Figure 6 a), follow activity stream by bookmarking and subscribe to be notified of other students' action within the learning environment (Figure 5 c), upload reading materials (Figure 5 a), and take a note on reading materials (Figure 5 b).

| (a) | (b) | (c) |
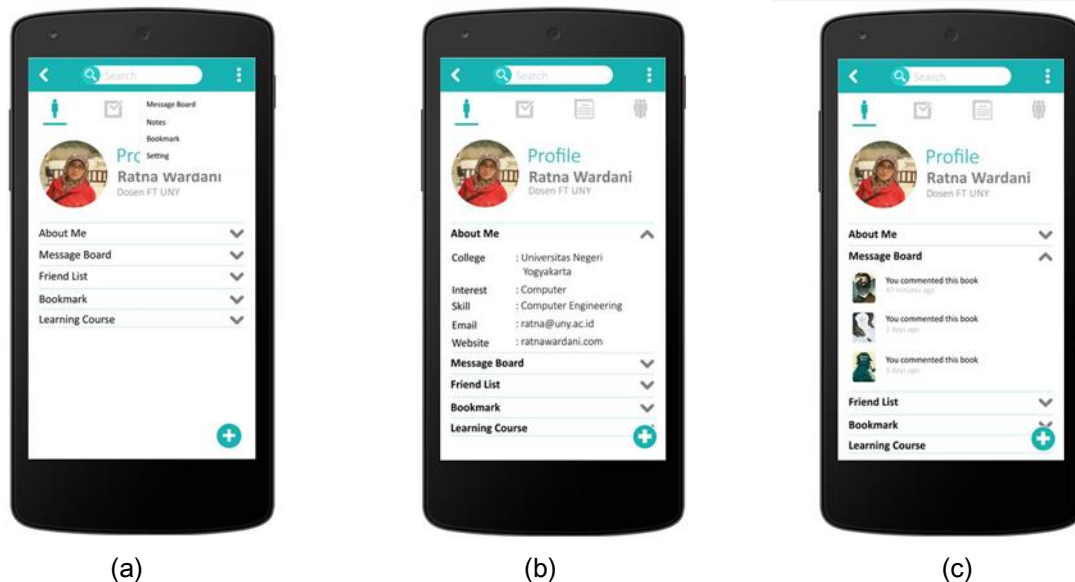
Figure 3. Profile Menu

<table>
<tr><td>(a)</td><td>(b)</td><td>(c)</td></tr>
</table>
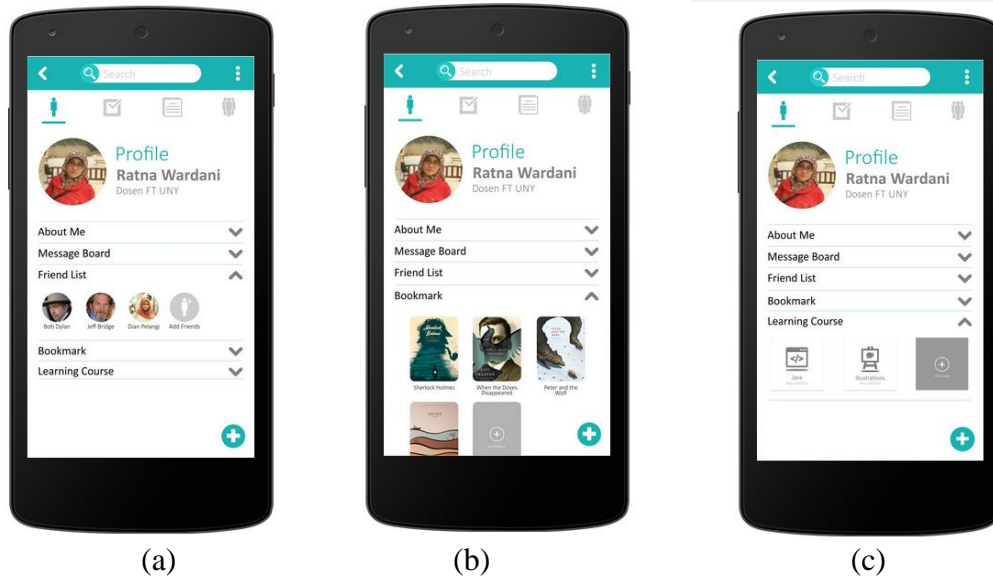
Figure 4. Profile Menu

Figure 3 and Figure 4 shows a student profile page. The dashboard contain some menu where students able to do some learning activities and interaction with other students.

<table>
<tr><td>(a)</td><td>(b)</td><td>(c)</td></tr>
</table>
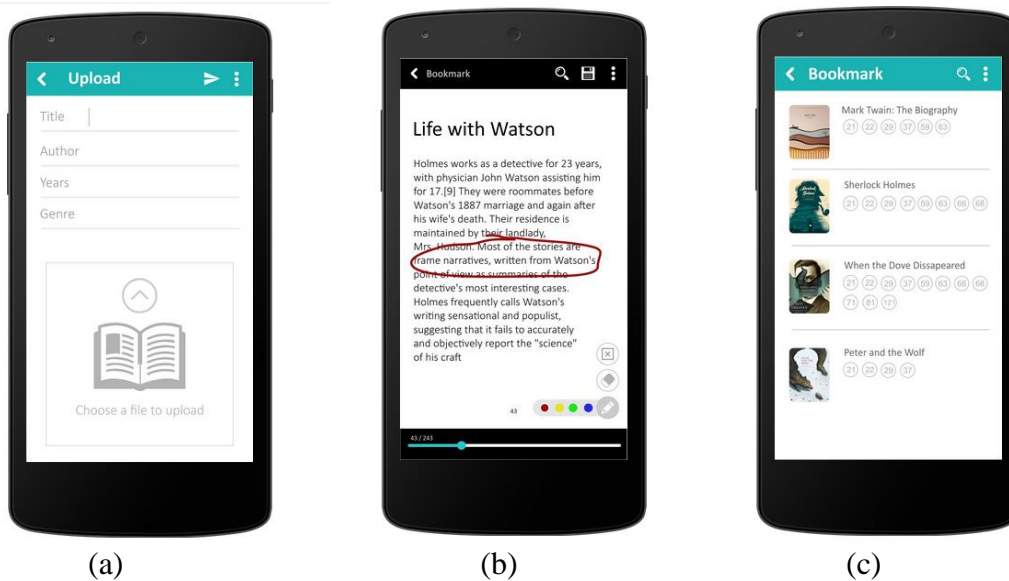
Figure 5. Upload and Bookmark Menu

Figure 5 (c) shows that students were able to follow other students' activities on their dashboard, they were able to visit specific pages in order to access update regarding to specific activities as well. The designs shows that the page allow student to visit and view everyone's bookmark.

Figure 6 (a) shows the student discussion regarding to specific topics. Student can tag some topics from the reading material he read and other students can give a respons in the context of topic discussion. The learning environment

(a)   (b)   (c)
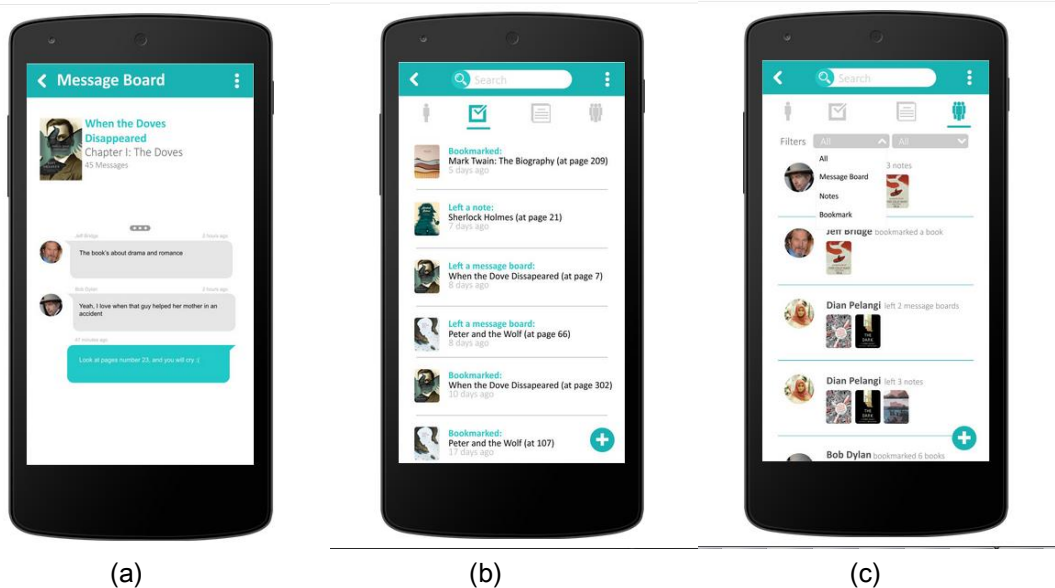
Figure 6. Message Board and Friendlist Menu

Conclusions

This study proposed a new approach to enhance the capability of e-books by adding the interaction model into e-books. We adopt the social learning approach to define the interaction model. Different from other e-books, our proposal shows that e-book can be developed as a platform for discussion. In this concept, the interaction between students can be bound into specified topics.

Adding the capabilities of handling the interaction into e-books can help students' motivation in the context of learning process, because students learn not in isolation but interacting with others around them.

Acknowledgements

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The Analysis Of English Communication Strategies Used By Non English Department Students With Native Speaker

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Abstract

This research focused on the communication strategies that speakers, Non English Department Students (NEDSs) produced in English communication with Native Speaker (NS). The samples of this research are 5 students of the third semester in 5 Education Study Programs of STKIP Bina Bangsa Getsempena, 5 NEDSs and 1 NS. The data was obtained by asking the samples to speak English. Then, the utterances were trancribed and analyzed. The finding showed that NEDSs used some communication strategies in speaking English with NS, for instance, repetition, clarification check, word coinage, circumlocution. NEDSs also produced non verbal communication with several communication strategies, for instance: repetition, word coinage, circumlocution, clarification check. Most of the utterances produced by the NEDSs are grammatically incorrect but NS still understands what she/he means. The NS lowers his speed and uses short sentences in communication because he knows the people, to whom he is speaking, cannot speak English well. NEDSs sometimes use non verbal communication, such as, smiling, laughing. However, the non verbal strategies they use are not for making meaning but for showing their happiness for being able to speak English with native speaker. The most difficult aspects the speakers face in speaking with NS are pronunciation (100%) and vocabulary (100%) followed by context of speaking (60%); grammar (40%); context of culture (40%) and knowledge of the topic (40%). However, 3 people (60%) of the samples disagree to say that grammar, context of culture and knowledge of the topic because difficulties in speaking and 2 samples (40%) disagree that context of speaking may cause difficulties. They also agreed that the difficulties they faced in speaking with NS dealt with pronunciation, vocabulary, grammar and so forth.

Key words:Communication strategies, students difficulties

Introduction

To face *Asean Free Tread Area (AFTA)* 2015, STKIP Bina Bangsa Getsempena will build a big program "Wonderful Wednesday" as English Day. This program created to habituate the students in use English in

their daily life. For the first, this program will familiarize the students to speak English only on Wednesday for all students except English Department students so that the students involved in a day of activities dedicated to practicing English each other.

In any conversation, there is the possibility that, at some point, the interaction will realize that they do not share common ground and that they have to work out or negotiate some forms of common ground before the interaction can continue. When the interaction come from different culture or have different first languages (L1), the likelihood increases that the interaction will be characterized by such negotiation of common ground. It is probably in recognition of this fact that a great deal of recent work in second and foreign language research has been devoted to investigating the language learners' roles in various types of negotiated interactioEDS: Several strands of such research are in place, some focusing on communication strategies, some on 'repair', on 'foreign talk' or on 'conversational adjustment'.

The researchers would agree that there has been a definite separation in the focus of different analytic approaches and that, with rare exception, researchers absorbed by one approach have neglected to pay attention to the work of the other approach. We would like to show that the analytic framework of the input studies does indeed tend to cope with only one side of page of the data transcripts. We will then show that one strand of inter-language studies, that having to do with strategies of inter-language communication, provides an analytic framework with cope very well with both sides of the page and may be of some use to those studying comprehensible input and negotiated interaction in second or foreign language acquisition.

In a movement which seems to have had its origins in the description of regular features of foreign talk (Ferguson, 1971), there has evolved a substantial body of work on the nature of the language addressed to foreign language learners. The early work in this area, following similar studies conducted on the talk addressed to the Non English Department Students, focused on the syntactic, lexical and phonological adjustment which Native Speaker made in speech addressed to non English Department Students. While research has continued in this type of analysis, especially with regard to 'Native Speakers' talks' in the foreign language acquisition, the emphasis has shifted from describing modification of linguistic form in analyzing conversational adjustment.

These adjustments occur when the Native Speaker, interacting with non English Department Students, has to ask for repetition, seeks clarification of meaning or try to get confirmation of what has been said. The analytic categories have changed from things like 'copula deletion' and 'analytic paraphrase' to 'clarification request' and 'confirmation check'.

The data for analysis has also changed, in the sense that there has to be some types of negotiation of meaning evidenced in the data before the analysis can take place. Extended one way talk by NS, directed to a non English Department Students audience, might provide examples of copula deletion, but is unlikely to contain many clarification requests. The methodology of obtaining the necessary data has also had to become more carefully constrained. If we need the interactive negotiation of meaning to take

place, then we have to create the necessity for two ways communication, preferably in the course of which some problems or difficult decisions require a negotiated joint solution.

The Statement of Problem

Relating to the title of this research, the researchers may mention the problems of her research as in the followings:

What communication strategies are used by non English Department Students (NEDS) of English while they get in touch with Native Speaker (NS)?

What kinds of difficulties do the non English Department Students (NEDS) face while speaking with Native Speaker (NS)?

Materials and Methods

Procedure

The researchers explain that she conducted two kinds of research. Firstly, she did library research to get the theory for her topic and the research which has ever been conducted by other researchers on this topic. The second is the field research. This research was conducted to collect the needed data by investigating the samples directly.

Furthermore, in order for the researchers to collect the data, she invited five non native speakers who were studying at 5 Education Study Programs (NEDSs) and one Native Speaker (NS) who was as consultant for the international NGO. Then, the researchers asked the six people (5 NEDSs and 1 NS) to interact one another. Not wanting to limit the conversation, the researchers did not give what topic to discuse. In other words, they could talk whatever they want. What the researchers needed only the interaction or utterances produced by the samples and what communication strategies they were using.

To make it easy to analyze the raw data, all utterances produced by the samples were recorded and observed by the researcher. Here, the researchers did not involve in conversation, they just observed and recorded what the samples have said and note down every non verbal communication. To know the difficulties the NEDSs faced in conversation with NS, the researchers interviewed the NEDSs samples. The whole utterances produced by the samples were transcribed as the follow:

The Transcripts of the Raw Data

Below is the transcription of the conversation among 5 NEDSs and 1 native speaker (NS) at the coffee shop. The native speaker (NS) was sitting at the middle of the non native speakers (NEDS 1-5). The topic was free and it lasted more or less 40 minutes. The native speaker has not known the non native speakers (NEDSs) before.

Line	Speaker	Utterances	Turn
1	NS	Hello + I'm Rebecca/+ I am as /consultant for international Education in Aceh++	1
2		Nice to meet you all/. Would you mind+ telling me about +yourself/	
3		Well++ *you want to know me*?/ (smiling)	
4	NEDS1	Yes+ I do/	2
5	NS	I am+ Mirna + just call me+ Mirna \ I ++live +on +Prada\	3
6	NEDS1	And you?/ (looking at the man sitting next to Mirna)	4
7	NS	What/ I ++ Iswar\++ call me+ Iswar\++ I ++born in Singkil.	5
8	NEDS2	Me++me+ Ronny\ sorry ++ my English ++just little\+	6
9	NEDS3	I+am+++Sopi\ me ++happy ++ know you\ (smiling)	7
10	NEDS4	Sorry++ Miss++ my name ++ Doles\ (Nod)	8
11	NEDS5	What you like to drink?/	9
12	NEDS4	Cocacola+ with ice+ please/	10
13	NS	++Are you working with NGO?/	11
14		Where+ are + you+ working?/	
15	NEDS3	Yes\ ++Me/+ I +am work++ in +Australia\	12
16	NEDS2	++You like ++live in Banda Aceh?\	13
17	NS	Yes+ I do. The people here+ are very friendly +and kind/ but it's a little bit +hot in	14
18	NEDS3	here/	15
19	NS	How long you ++have here?\	16
20		*Do you mean +the first time I came to Indonesia*?/ I yes I I arrived in + Aceh three	
21	NEDS2	months ago.\	17
22	NS	You ++like pecal?/	18
23		Sorry+ I don't know *what ++pe+cal is*I *what +is it*/I I like coffee+ very much/	
24	NEDS3	Em++some vegetable +with peanut. ++It is nice\	19
25	NS	Em+ That sounds delicious+ I will eat it+ sometime\	20
26	NEDS4	What about Kuah Pliek\ you like it\ *special in Aceh+ Only in Aceh+ +food*I	21
27	NS	I am very sorry+ I never eat it.	
28	NEDS2	**Em++Where+ you from\ your country**	22
29	NS		23
30		I'm from+ Australia+ Melbourne/ +Have/ you ever been there/	24
31	NEDS2	Oh+ kangguru/ No+ No+ No (laughing)	
32	NS	You ++can speak +*Indonesia/ language*?/	25
33	NEDS1	Yes+ just a little+ saya ++bisa +sangat+ sedikit++ sekali (smiling)	26
34	NEDS2	*Aceh+ language*+ you know/	
35	NS	Just +one word/+ assala++mualaikum+	27
36		*You married?/ you ++husband*I	28
37	NEDS3	No+ (laughing)	29
38	NS	**Ujung Batee?/ you go++ Ujung Batee/**	
39	NEDS1		30
40	NS	*Do you mean +Ujung Batee Beach*I IyesI I sometimes go to ujung batee. I like	31
41	NEDS5	Ujung Batee+ It's +very +beautiful +to me.	32
		You ++ eat *Rujak* in Ujung Batee+ *hot fruits+*	

42	NS	Yes+ I like +but ++without chilly. It's+ too hot for me/.++ I like + fresh fruits\	33
43		What ++your hobby/	
44		Well+ I like jogging +and swimming.++ I do jogging every morning\	
45	NEDS4	I like+ hiking +and reading/	34
46	NS	Me+ I like++ girlfriend\ (laughing)	35
47	NEDS3	Your English is+ very good/	
48	NS	No++ little\ (smiling)	36
49		You have++ sisters/	
50	NEDS2	Yes+ I have+ two brothers\	37
51	NEDS3	Sisters++ you have/	38
52	NS	No+ I don't have any sister/	39
53	NEDS3	Boyfriends/+ you have/ (smiling)	40
54	NS	Yes+ I have many boyfriends/ (laughing)	41
55	NEDS2	When++ come back ++ Australia\	42
56	NS	May be+ Next month+ My contract +ends next month\	43
57	NEDS4	Em+ You+ will come+ again/	44
58	NEDS3	I don't know+ if my contract is extended I will ++ Well+ I've enjoyed +meeting and	45
59	NS	+ talking with you+ see you later/	46
60	NEDS2	Thank you++ Miss + bye/	47
61	NS		48
62			
63			
64			
65	NEDS5		49

Notes:

NS	: Native Speaker; NNS1-5	: Non Native Speakers	
+	: pause		
++	: Longer pause		
I I	: Overlapping		
I?I	: Unclear part		
/	: Rising tone		
\	: falling tone		
/ \	: Rise/fall		
\ /	: Fall/rise		

Results and Discussion

Based on the raw data presented in sub-chapter 3.3 above, the researchers can analyze to see the communication strategies, non verbal communication and other phenomenon uttered by NEDSs and EDS.

1. Repetition: the first communication strategy used by NEDSs is repetition. That is to say, the speaker repeat the word she or he have already uttered, for iEDStance:

Turn 32:

NEDS1   : *Ujong Batee*/You go++ *Ujong Batee* up a new word in order to communicate the desired concepts. For example:

   a) Turn 34:

   NEDS5 : You ++ eat *Rujak* in Ujung Batee+ <u>hot fruits</u>/   (line 46)

   b) Turn 30-31:

   NEDS3 : You *alon*/+You++*friend*/   (line 40)

   EDS   : No+ (laughing)   (line 41)

   c) Turn 23-24:

   NEDS2 : Em++ *Where + you from\your village*\   (Line 31)

   EDS   : I'm from Bireuen+ Have you ever been there/   (Line 32)

2. Circumlocution: the speaker describes the characteristics or element of the object or action instead of appropriate target language item. For instance:

   1) Turn 17 – 19:

   NEDS2   :You + like *pecal*/   (line 23)

   EDS   : Sorry+ I don't know what++ pecal is\ what +is it/I I   (line 24)

        I like coffee+ very much/   (line 25)

   NEDS3   : Em+ *some vegetable + with peanut*++ it is nice \   (line 26)

   2) Turn 21

   NEDS4   :What about +Kuah pliek\+You like it*special in Aceh*+ (Line 28)

        Only in Aceh+ *Food*/   (Line 29)

3. Clarification Check: the speaker asks further question for clarification to makesure she or he understands what she or he is talking about. For example:

a) Turn 1-3

NS: Hello + I'm Rebecca/+ I am as /consultant for international   (line 1)

   NGO in Aceh++ Nice to meet you all/. Would you mind +   (line 2)

   +telling me about yourself/   (line 3)

   NEDS1 :Well++ *you want to know me*?/ (smiling)   (Line 4)

   EDS   :Yes+ I do/   (Line 5)

   b) Turn 15-16:

   NEDS3   :How long you ++have here?\   (line 20)

   EDS   *: Do you mean +the first time I came to Indonesia*?

        / Iyes I I arrived in + Aceh three months ago.\   (line 22)

In addition to the communication strategies used by the speakers as described above, the researchers also find some phenomenon as below:

1. There is one question from NEDSs whiches not answered by native speaker, she just says 'no' and then 'laughing'. for example:

    Turn 30-31:

    NEDS3 : **You married/+ You++ husband/**   (Line 40)

    NS   : No+ (laughing)   (Line 41)

This phenomenon shows that the native speaker might refuse to answer the question since it is very personal one.

2. Most of the utterances produced by the NEDSs are grammatically incorrect but the NS (native speaker) still understands what she/he means. This tells us that even-though NEDSs do not master the grammar of English sufficiently, the conversation with native speakers can also happen, for instance:

    *   Line 4   : Well++ you want to know me/
    *   Line 6   : I ++live +on Prada\
    *   Line 9   : I ++born in Bireuen/
    *   Line 11   : My English++ just little\+
    *   Line 13   : What you Like to drink/
    *   Line 20   : How long you++have here/
    *   Line 23   : You ++like pecal/
    *   Line 35   : You++can speak+Indonesia/+language\

3. The NS lowers her speed and uses short sentences in communication because she knows the people, to whom she is speaking, can not speak English well.

    For instance:

    Line 47   : Yes+ I Like + but ++ without chilly+ It's+ to hot+ for me++ I like+ fresh fruits.

4. The NEDSs sometimes use non verbal communication, such as, smiling, laughing. However, the non verbal strategies they use are not for making meaning but for showing their happiness for being able to speak with native speaker.

    For examples:

    a) Line 4   : Well++ you want to know me/ (Smiling)

    b) Line 34   : oh+ Kangguru/ No+ No+ NO+ (laughing)

    c) Line 53   : Me+ I like++girlfriend (laughing)

The Difficulties Faced by the Non English Department Students (NEDSs)

After the conversation, the research tries to interview the samples to know what difficulties they face while speaking with native speakers. She (the researcher) asked them several questions on the difficulties they have. Below is the tabulation of the answers.

Table 1. The Tabulation Of The Nedss' Difficulties While Speaking With Eds

No.	Aspects of Difficulties	Agreeing (%)	Disagreeing (%)
1.	Vocabulary	100% (5 people)	0% (0 people)
2.	Grammar/Structure	40% (2 people)	60% (3 people)
3.	Context of speaking	60% (3 people)	40% (2 people)
4.	Context of culture	40% (2 people)	60% (3 people)
5.	Knowledge of the topic	40% (2 people)	60% (3 people)

The table above shows that the most difficult aspects the speakers face in speaking with native speaker are vocabulary (100%) followed by context of speaking (60%); grammar (40%); context of culture (40%) and knowledge of the topic (40%). However, 3 people (60%) of the samples disagree to say that grammar, context of culture and knowledge of the topic cause difficulties in speaking and 2 samples (40%) disagree that context of speaking may cause difficulties.

Conclusions

Dealing with the previous Chapters, the writer would like to conclude in the following:

1. Whenever we speak in any languages and especially perhaps when we speak in a foreign language, like English, there are times when we wish to say something, but we do not have the words or the grammatical structure to say it. Under these circumstances, people often use communication strategies namely 'verbal and/or nonverbal procedures for compensating gaps in speaking competence.

2. There are some instances of communication strategies.
   a) Paraphrase.
      Approximation: the writer use of a single target language vocabulary item or structure which the writer knows is not correct, but which shares enough semantic features in common with the desired item to satisfy the speaker (e.q. pipe for waterpipe);
      Word coinage: the writer makes up a new word in order to communicate the desired concepts such, airball for balloon;
      Circumlocution: the writer describes the characteristics or elements of the object or action instead of using the appropriate target language item or structure ("she is, uh, smoking something. I don't know what's its name. That's uh, Persian, and we use in Turkey, a lot of")
   b) Borrowing.
      Literal translation: the writer translate word for words from the native language (e.g. "he invites him to drink," for "They toast one another.").
      Language switch: the writer use the native language term without bothering to translate, such as, balon for balloon, tirtil for carterpilar.

c) Appeal for Assistance: the writer ask for the correct term, such as, "what is this" what called?".

d) Mime: the writer use nonverbal strategies in place of a lexical item or action, for instance, clapping one's hands to illustrate applause.

e) Avoidance.

Topic avoidance: the writer simply tries not to talk about concepts for which the target language item or structure is not known;

Message abandonment: the writer begins to talk about a concept but is unable to continue and stops in mid utterance.

3. This research shows that non native speakers of English use several communication strategies, for instance: repetition, word coinage, circumlocution, clarification check.

4. Most of the utterances produced by the NEDSs are grammatically incorrect but the NS (native speaker) still understands what she/he means. This tells us that even-though NEDSs do not master the grammar of English sufficiently, the conversation with native speakers can also happen. In addition, the native speaker (NS) lowers her speed and uses short sentences in communication because she knows the people, to whom she is speaking, can not speak English well. Furthermore, the NEDSs sometimes use non verbal communication, such as, smiling, laughing. However, the non verbal strategies they use are not for making meaning but for showing their happiness for being able to speak with native speaker.

5. The most difficult aspects the speakers face in speaking with native speaker are pronunciation (100%) and vocabulary (100%) followed by context of speaking (60%); grammar (40%); context of culture (40%) and knowledge of the topic (40%). However, 3 people (60%) of the samples disagree to say that grammar, context of culture and knowledge of the topic cause difficulties in speaking and 2 samples (40%) disagree that context of speaking may cause difficulties.

Acknowledgements

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The Effect of Certification on Workload and the Competence of Lecturer For Lecturer's Work In Kopertis Wilayah I Medan

Sofiyan

Abstract

This study aims to determine the effect of certification, workload and performance of the competence of lecturers in Kopertis Wilayah I Medan. The method used in this study is an explanatory survey method. The survey tries to link the variables and test variables studied. The sample used was 372 lecturers. The results showed that the certification criteria of the faculty fell into the range of answers from the low category to very high, but there are still weaknesses in academic qualifications. Lecturer workload on the criteria was to be categorized as an answer to the very low level, but there are still weaknesses in the opportunity to conduct research. Competence of lecturers at the criteria are those with low response to very high, but there are still weaknesses in the ability of self-control. There was a significant difference between the lecturers with certification and job satisfaction, workload and the performance of the lecturers in Kopertis Wilayah I Medan.

Keywords: Certification, workload, performance and competence of lecturers

Introduction

Act No. 20 of 2003 on National Education System states concerning the function of education is to develop national capacity and establish the character and dignity of civilization in order to educate people, to develop national education potential students to become a man of faith and fear Almighty God, noble, healthy, knowledgeable, capable, creative and become citizens of a democratic and responsible.

At the moment the problem of education is seriously being faced by Indonesia, which revolves around the issue of quality of education, the readiness of educators, facilities and employment. Decreased absorption of college graduates in the industry to be the principal problem that must be faced by universities to improve the quality of its graduates. This is experienced by universities under the auspices of the Kopertis Wilayah I Medan as container producing human resources knowledgeable and highly skilled. To anticipate problems deterioration of college graduates is the case today, require more college focusing on education to produce high-quality graduates. The management of universities in the process of teaching and learning should focus on the functions that transform the efforts of teachers (lecturers) and students towards learning.

Educational paradigm of the past described the efforts that more professors claimed role in the learning process, must now be changed. Good learning process depends on the performance of the good professor and also the role of students who are motivated as well. Performance lecturer in the learning process determine the quality of learning and ultimately can affect the quality of its graduates. However, the growing world economy in general and Indonesia in particular, which raise the cost of a better life in the lead role of a lecturer of the universities are not reliable because they are in order to increase revenue to meet their needs. The phenomenon that occurs at this time, the lecturer can not concentrate fully carry out their duties to improve the quality of learning in only one college.

The lecturers tend to only come to teach at the teaching course, because the time is spent teaching and working elsewhere. Performance lecturers declining for the implementation of learning in college major, a duty. The motivation for teaching and learning process of concentration better, have been reduced because the college can not increase the income of professors according to their needs. In accordance with the Decree of the Minister of State Coordinator for Development Supervision and Administrative Reform No. 38 / Kep / MK.WASPAN / 8/1999 Chapter I Article No. 1 1 that a person who is a lecturer on education and expertise is appointed by the organizers of Higher Education with the main task of teaching in the Universities.

The public interest to continue to higher education is increasingly rising, it is evident from the number of applicants has increased every year. Expectations of the college must be evidenced by the performance of lecturers who teach. To become a lecturer at the college through a variety of procedures, in addition to having a qualified education, also has the ability to transfer his knowledge and be able to develop their knowledge and Tridharma College which is the main task, namely education lecturers and teaching, research and community service. The success of a lecturer in the College of implementing Tridarma course depends on the determination, focus and seriousness of each lecturer in charge of the college who want to develop. This development was followed by the extent to which they can optimize their performance to the performance and productivity of each lecturer can be increased. This is shown by the assessment indicators measured through the works of research, education and teaching and community service. Therefore, a person's performance is highly dependent on the performance of its underlying all career development activities.

Performance is a lecturer of the College Tridarma measured by collecting numbers and credit assessed by the Assessment Team Lecturer in the Department of Higher Education, respectively. The high performance of the lecturers will be higher productivity, which increases the quality of the output of universities, it should be studied more in depth and can be traced more accurately so that eventually we can know how the correlation between the performance of faculty performance. As a professional educator, lecturer required to have (1) and academic qualifications (2) master the competencies of teaching agent. Academic qualification of lecturers and various aspects of performance (competence) as stipulated in the decree number 38 Menkowasbangpan 1999, is the defining element of the authority of a professor teaching in an education. Competence educators, defined as a set of knowledge, skills and

behaviors that must be owned, lived, ruled and created by an educator in carrying out their professional duties. Competencies include 1) pedagogic competence, 2) personal competence, 3) social competence, and 4) professional competence. Taken together, (a) the academic qualifications and performance, (b) the level of mastery of competencies, (c) a statement of the contributions themselves, and (d) the professional honesty, will determine the level of professionalism of educators. Professionalism and an educator teaching authority at every level of education and the position expressed by the academic certification of educators.

With its certification expected educator conscious effort conducted by an educator to improve the quality of implementation and the quality of learning, especially education in general. In accordance with his duties, an educator must consciously and continuously developing and disseminating science, technology and art which it is responsible in accordance with the areas of expertise, including the development of innovative learning and linguistic innovations.

From the above it can be concluded that the success of higher education is largely determined by the performance of lecturers. Faculty performance in the world of higher education is a priority, faculty assume the duties and responsibilities that are not light. In addition, he must make smart protégé sense, (sharpening intellectual quality). For the sake of college professors who have professional is key to the success of the learning process, faculty are professional people who are educated and well trained. Faculty not only mean getting a formal education, but also have to master the educational foundation.

This study aims to determine the effect of the implementation of the certification, the workload and competencies of faculty performance lecturer in Kopertis Wilayah I Medan.

Materials and Methods

The research methodology used is descriptive and verification, the research method used is descriptive survey and explanatory survey method. Type of investigation in this study is causalitas. This study included in the category of cross-sectional, the information of the entire population (respondents) were collected directly from the empirical to know the opinion of the entire population of the object under investigation is certified, workload, competence, job satisfaction, performance and quality of faculty graduates the unit of analysis professor of civil servants employed (DPK), and the foundation of tenured faculty in Kopertis Wilayah I Medan.

As revealed in the identification of problems, problem definition and formulation of the problem, that is the ultimate studied Certification (X1), faculty workload (X2), and Lecturer Competence (X3) as the independent variable; Lecturer Performance (Y) variable depdenden. In this study, the overall lecturers certified used as a sample for the purpose of obtaining more valid results. The number of respondents in this study were 372 respondents.

Based on the research paradigm and the hypothesis, then the method of analysis used to test the significance of the path analysis (path analysis). In the first step of the path that must be done first to translate the research hypotheses in the path diagram. Statistical methods to the analysis of the path

used to measure the relationship between the magnitude of the effect suggests several variables causes (exogenous) variable due to (endogenous).

Path diagram and structural equation of this study is shown in Figure 1 as follows:
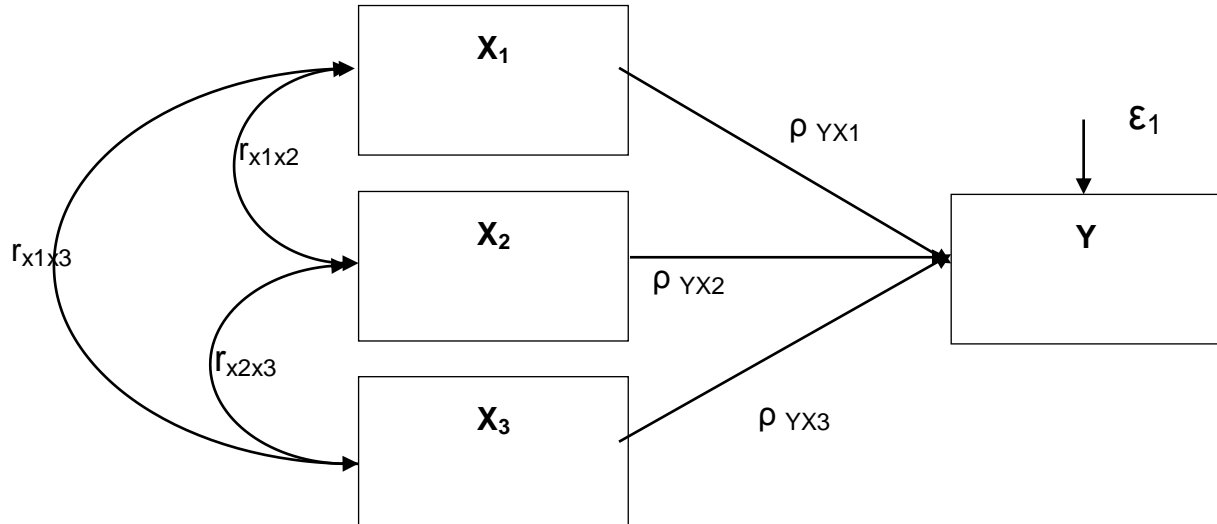
Figure 1. Sacred Paths Research

Specification:

X1   =   Certification

X2   =   Workload

X3   =   Competence Lecturers

Y   =   Performance Work Lecturer

I   =   Epsilonε

Hypothesis testing is done in two ways:

1.   Simultaneous Testing

F test (simultaneous test) is used to examine the relationship between the independent variable on the dependent variable. Criteria for decision-making:

a. H_o accepted or rejected H_1, if the F-count > = 0.05αF-table at 95% confidence level or

b. H_o rejected H_1 accepted or, if the F-count < = 0.05αF-table at a rate of 95% or

2.   Partial Test

T test (partial test) is used to determine the influence of each independent variable partial (individual) on the dependent variable. Criteria for decision-making:

a. H_o accepted or rejected H_1, if t count> = $0.05.\alpha$ t- table at 95% confidence level or

b. H_o rejected H_1 accepted or, if t count < = $0.05.\alpha$ t- table at 95% confidence level or

To examine the path coefficients, must first translate the hypothesis into a statistical hypothesis following criteria: The probability <5% H_a accepted, meaning that a significant path→ mean H_0 rejected, and coefficients. Probability value > acceptable means H_0→5%.

Lecturer Certification

In accordance with the concept of certification in the introduction, the certification program aims to assess the professionalism of the faculty / teaching staff, in order to:

1. Determine the feasibility of a lecturer / lecturer in performing their duties as agents of learning,
2. Creating a national education goals,
3. Improve the process and the quality of education, and
4. Increase the professionalism of lecturers.

Based on the concepts that have been explained in the introduction, lecturer certification is essentially a process of recognition of the professionalism of the lecturers as educators in the form of gift certificates (Directorate General of Higher Education, 2008).

Certification is done by lecturers portfolio consists of a number of components that must be completed by the faculty. Components of the portfolio is designed to be able to dig up evidence related to (the Directorate General of Higher Education, 2008):

1. ownership of academic qualifications and performance,
2. the ownership of the competencies measured by a perceptional,
3. a self-assessment and the other party (employer) contributions made to the faculty in the implementation and development of Tridarma, as well as,
4. honestly in recognizing the strengths and weaknesses of the continuous efforts to improve themselves.

Component portfolio for lecturers in the department covers various aspects of the work reflects the experience / achievements in professional duties as a lecturer in a certain time interval. This component is associated with the element of experience, work and achievements during the lecturer role as agents of learning (personal competence, pedagogic, professional, and social) (Directorate General of Higher Education, 2008).

Portfolio assessment is a recognition of the professionalism of the lecturers that experience can describe the ability of faculty to conduct its core functions, the ability to control the competence of lecturers, lecturers and contribute to the implementation and development of the main tasks of educational institutions.

In the implementation of the certification of teachers, an evaluation of the documents that describe the ability of faculty to conduct Tridarma, with evidence (empirical evidence), which is assessed by the CSA (Credit Score Assessment) College, lecturer in the ability of mastery of competencies as assessed by self-perceptional own, students, colleagues, and superiors, and the ability of lecturers contribute to the implementation and development of the Tri Dharma College will be achieved when the lecturer has the

comprehensive ability to innovate in the field of education. Research conducted by the lecturers should not be used to meet the credit score. Research must be based on issues that arise in the environment, including those appearing in class. Specialized in solving learning problems (arising out of the classroom), a lecturer should do so through a number of innovations. Lecturers are not just adopt or adapt the model specified, but be creative to create a model of its own in accordance with the environment in college.

Lecturer Workload

Lecturers are professional educators and scientists with the main task to transform, develop and disseminate science, technology, and the arts through education, research and community service. While Professor or Professor is a lecturer with the highest academic position at a unit of higher education and has a special obligation to write books and scientific papers as well as expand the idea spread to enlighten the public.

The task is to conduct educational tasks in the field of education and teaching can be:

1. Implementing lecture / tutorial and test as well as organizing educational activities in the laboratory, practice teaching, practice workshop / studio / laboratory / educational technology;
2. Students Guiding seminars;
3. Guiding KKN (corruption), the practice of real work (PKN), job training (PKL);
4. Guiding thesis research students, including guiding, reporting the results of research;
5. Testing on the final exam;
6. Build student activities in the field of academic and student affairs;
7. Developing a program of lectures;
8. Develop instructional materials;
9. Providing scientific papers;
10. Build student activities in the field of academic and student affairs.
11. Guiding Lecturers lower position;
12. Conducting data lecturer and transplantation.

The task is to conduct research tasks in the field of research and development of scientific work which may be:

1. Produce research work;
2. Translating / adapting scientific books;
3. Editing / edit scientific papers;
4. Make a plan and work technology;
5. Make a plan of artwork.

Task doing community service can be:

1. He has served on the board of management of government / state officials should be freed from the organic department;
2. Implement the development of education and research that can be used by the community;

3. Provide training / education / training in the community;

4. Provide services to the public or other activities that support the implementation of the general duty of the government and development;

5. Make / write community service work.

The task of supporting Tridarma college can be:

1. Being a member of a committee / body at the college;

2. Being a member of the committee / agency in government institutions;

3. Being a member of professional organizations;

4. Represents universities / institutions of government to sit in the committee between agencies;

5. Being a member of the national delegations to international meetings;

6. Participate actively in scientific meetings;

7. Receive honors / awards;

8. Write-down of high school textbooks;

9. Have achievement in the field of sports / arts / social.

Competence

Competence is a set of knowledge, skills, and behaviors that must be owned, appreciated, and controlled by lecturer professionalism in carrying out their duties. Competency lecturers will translated into 13 question items created using the indicators contained in the Book I (The Academic) Lecturer Certification issued by the Directorate General of Higher Education Ministry of National Education in 2008. The indicators are pedagogic competence, professional competence, social competence, and personal competence. Thus increasing competence, a strategy aimed at increased efficiency, effectiveness and responsiveness in order to improve performance, particularly useful for the purposes of meeting the needs of the organization and its employees. Wibowo (2007) defines competence as the ability to execute or perform a job or task based on the skills and competencies largely prepared for career development, but the determination of the level of competence needed to determine the effectiveness of the level of performance expected.

Competence must be created through the management of human resources effectively and efficiently. Management is based on three principles:

The first principle is the management of the service orientation. This principle is necessary to prevent the management of human resources as a factory that produces uniforms outputs, such as procedures, guidelines and forms relating to the management of human resources in the company. As a result, human resources management to be ineffective and inefficient, as well as competence that is not expected to be created. With service-oriented mismatch can be minimized or even eliminated or the fulfillment of the needs and desires of consumers.

The second principle is that the management gives a chance to human resources to participate actively in the company. The goal is to make the job more attractive so as to encourage employment of human

resources and to motivate them to get the job done more good again. Encouraging human resources to continuously improve the results of their work. Improvements can be achieved if the human resources continue to enhance its capabilities. That principle, be able to compare the officer clearly work with individuals who are not successful, as well as identify patterns of thought and behavior of employees who work.

The competency model that is currently carried out, according to the journal Exotic Setyowati competency-based human resource development: solutions to improve the performance of your organization, starting at the time of recruitment, selection, placement and career development of employees so that the development of employee competence is not an activity that is "instant". The system of recruitment and staffing based on competency should emphasize to business competencies identified several candidates such initiative, motivation and ability to work in teams. This can be done with the interview.

Performance Lecturer

The term is derived from the performance of the job performance / actual permance (performance or achievements that actually achieved by someone). So according to the language of performance can be interpreted as a performance appears to be a successful work in the form of a person. The success is also determined by the performance of the job and the person's ability in the field. The success of the work is also related to the satisfaction of one's work (Mangkunegara, 2000).

Performance does not mean the number of titles obtained lecturer but a success that saw one of the teaching and learning process. To achieve maximum performance, teachers should try to develop all its competence and also take advantage of the situation and create a school environment that is in accordance with the applicable rules.

Thus, the authors conclude that the performance is a person's ability to perform their duties resulting in a satisfactory outcome, in order to achieve organizational goals in a group unit. Thus, performance of lecturers in teaching and learning is a lecturer in the ability to perform his duties as a teacher who has the skills to educate their students in order to develop learners to achieve educational institutions.

In order to manage employee performance with the optimal management must understand the factors that affect the performance and productivity of its work. According Sutermeister (1969) factors affecting performance is the motivation, ability, knowledge, skills, education, experience, training, interests, attitudes, personality, physical conditions and individual needs ranging from biological needs, social needs and egoistic needs. Then again described by Noe, et al (2000) that the expertise, capabilities and others it is an important factor in the performance, then this factor is transformed into the goal through the behavior of its employees. Because employees can perform only if they have the knowledge, skills, abilities and other characteristics sufficient.

In general, the criteria used are: quality, quantity, time spent, the department held, attendance and tranquility in doing job. Which criteria are used is the difference between the work with one another. So

performance measurement depends on the type of job and what is produced from a company or institution concerned.

In institutions of higher education, faculty evaluation has three goals above. But more specifically, the purpose of the evaluation is a lecturer for: (1) Improve the quality of teaching, (2) Develop self-lecturer, (3) Improve student satisfaction towards teaching, (4) Improving job satisfaction lecturer, (5) the study program objectives / faculty / university, and (6) Increase the public's assessment of faculty / university.

Discussion

Lecturer Certification

Certification is measured by item 19 questions with 3 dimensions, namely the development, learning and qualifications. Here are the results of 19 research item questions to measure variables certification. Based on the calculation of the research results of the certification of the score variable is 23748. This score is the criteria are heading higher. If viewed from the average value of 3,359 and a standard deviation of 0.9431 is in the range from low to very high.

Based on the discussion of each item in question shows that the assessment of the certification is to show results with high scores 23748. Implementation of certification will improve the quality of faculty lecturers can be seen from the quality of the learning undertaken. For the administration of the certification of teachers should really be carried out in accordance with established standards.

Workload

The workload is measured by item 24 with a 5-dimensional queries, the Special Duties Professor, Task Support, Service society, research and education-training. Here are the results of 24 research item questions to measure variables faculty workload. How lecturer workload assessment is done by making statements faculty workload. Based on the calculation of the research results of the variable workload score is 29720. This score is the criteria are heading higher. If viewed from the average of the obtained results with a standard deviation of 3.3289 at 0.9762, up into the low range to very high.

Based on the discussion of each item in question shows that the assessment of the workload shows are heading higher with a score of 29720. This indicates that the workload is being run by the faculty is considered to be good, although there is still much to be improved. Workload granting certification to determine the lecturer. Lecturers who do not meet the work load in teaching is not entitled to receive certification. Giving workload higher against the lecturer, will improve the professionalism of the lecturers.

Competence Lecturers

Competence of lecturers by 19 items with 4-dimensional question, namely personal character, self-concept, skills, and knowledge. Here are the results of 19 research item questions to measure the variable competence of lecturers.

Based on the calculation of the research results of variable competence of lecturers score is a score of 23517. This is the criteria are heading higher. If viewed from the average value of 3.3272 with a standard deviation of 0.9326, then into low range to very high.

Based on the discussion of each item in question shows that the assessment of the competence of lecturers showed moderate to high with a score of 23517. This indicates that competence is being run by the faculty is considered to be quite good, although there is still much to be improved.

Performance Lecturer

Performance is measured based on the lecturer DP3 has 8 dimensions of fidelity, performance, responsibility, obedience, honesty, cooperation, initiative and leadership. Here is the result of faculty performance based DP3 has been done by the university. Based on the calculation of the research results performance lecturer average value of 4,324 with a standard deviation of 0.022, then into the high range.

Performance is a person's ability to perform their duties resulting in a satisfactory outcome, in order to achieve organizational goals in a group unit. Thus, performance of lecturers in teaching and learning is a lecturer in the ability to perform his duties as a teacher who has the skills to educate their students in order to develop learners to achieve educational institutions.

Based on the descriptive analysis shows that the performance of lecturers with high yield average values and standard deviations 4,324 0,022 up into the high category. This indicates that the performance has been relatively good lecturer, although there are still shortcomings that must be improved, namely the one concerning performance. Johan Sjarif in Umi Narimawati, (2005), stated that the key to improving the quality of higher education institutions is / leader should improve the quality of teachers, which will result in increased job satisfaction and commitment to next appear in the organization / institution. Grönroos in Umi Narimawati (2005) stated that in the tough competition, management's commitment to give satisfaction to the employees who ultimately have an impact on the performance of the lecturers. Improving the quality of faculty recruitment system started right, increasing the ability of lecturers, assessment of the system's performance capabilities and lecturers, as well as career advancement.

Effect of certification, Workload and Performance Competence of Lecturer

There is a close relationship between each variable with certification workload, this is because during this faculty who have received certification under the provisions of 12 credits must meet, such as occurs in variable workloads with competence where lecturers are required to have the ability to be able to carry the load work by following a training-related job, while the relationship with the certification of competence expected of lecturers who do not have the higher strata to strata may increase in accordance with the provisions to get the certification. So the indirect effect is greater than the direct effect, because of the workload of satisfaction.

The results showed that the statistical test Pearson product moment correlation shows that there is a strong relationship between the certification workload. This indicates that the certification is strongly

influenced by the faculty workload, This research was supported by Joanna Evayanty Johanis (2003) in Hamzah, et al, (2010) with explanatory research or explanation using cross sectional approach (cross-sectional). Data were obtained using a questionnaire of open and closed. The statistical test Pearson product moment correlation shows that there is a relationship between the work and the performance of professors. In order to improve the performance of full-time lecturers would need to be revisited in the education, motivation, compensation.

Performance lecturer both as professionals and as a structural force required in order to support the achievement of the goals of higher education. Theoretically, the performance of individual professors influenced by the ability (ability) and motivation (motivation) work. The ability of individuals to proxy for education (knowledge) and experience or employment (skill). Working time faculty can be seen as an implementation of job satisfaction lecturer. While the motivation to proxy through career opportunities, workload and salary and received incentive lecturer.

Certification of lecturers affect job satisfaction. This certification will be followed by the provision of incentives (salary / wages) to the larger faculty. Satisfaction with the salary / wage is far more important than the satisfaction of promotion, job satisfaction and satisfaction with supervision. This situation can be understood that the faculty wanted a system of salary / wages in accordance with expectations. When the organization does not provide benefits as deemed appropriate by the officials, there will be an increase in the perceived powerlessness (Conger and Kanungo, 1988). According to Robbins (1996) not everyone is chasing money.

Theoretically, it is expected that, if a person feels a high workload (weight), it is expected that would theoretically shorter tenure. This shows that the faculty workload can be measured by the number of units assigned credits per semester have an impact on the performance of the lecturers.

According to the theory that the high workload can lead to decreased performance lecturer. High workload will have implications for the emergence of stress, organizational commitment is low and will have a negative impact on performance (Rasch, 1998). Under conditions where job anxiety, the concentration of labor productivity will be lost and that the quality of work (performance) would be decreased (Giunipero, 1997).

The reason why the faculty workload has a positive effect on the performance of lecturers (contrary to theory) is due to faculty workload is measured by the number of units of credits, then faculty performance is measured based on the number of units of credit for promotion of lecturers. Allowing that the higher faculty workload, the higher the credit unit accounted for promotion of lecturers in the faculty performance. Therefore the methodology is the workload has a positive effect on the performance of the lecturers.

The performance of lecturers calculated in units of credit for promotion of lecturers are contributing lecturer workload is measured by the number of working hours lecturer. This will have implications for the

accelerated rise in class rank lecturer in structural positions. The higher faculty workload, the faster promotion / faculty group in the future, assuming ceteris paribus.

But on the other hand, if the workload increases, will have an impact on the increase in working hours. So it will have implications on the amount and quality of service of lecturers in their duties and responsibilities as a lecturer. Unless wages increased proportionally with the increase in the workload of lecturers. Therefore additional workload, on the other hand will increase to accelerate the rank among professors, but on the other hand will encourage faculty to work out the basic tasks and will have implications for the low quality of the lecturers in the server to perform tasks such as teaching lecturer, guide, test and duties other tasks.

Conclusion

Based on the analysis of the variables that affect the satisfaction based on the results of a survey of faculty Region I obtained through the approach path analysis concluded as follows:

1. The implementations of the certification lecturer in Region I are:
   a. That certification is a lecturer in the category of criteria answers with low to very high, but there are still weaknesses in the academic qualifications;
   b. That faculty workload on the criteria to be categorized as an answer to the very low height, but there are still weaknesses in the opportunity to conduct research
   c. That the lecturers are the criteria with low response to very high, but there are still weaknesses in the ability of self-control
2. The performance of the lecturer in Region I field in both categories, but still are weaknesses performance.
3. There is a positive influence and significance of the certification of the faculty of faculty performance.

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Idealism Islamic Education in Aceh (Efforts to Humanize Man: Between Dream and Reality)

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Abstact

Error that often occurs when designing education is partial and not integrated. Then it is possible ears educated man, maybe the human eye, possibly a human foot, perhaps the human hand, or maybe the human brain. Barely human touch, so do not be surprised as graduates produced product is a music expert or experts ball of the foot. Though education is education for "Insaniyatu al - Insan", ie humanizing. The essence and human nature put forward by al - Syaibani that man is composed of three elements are equally important; body, mind and spirit. All three must be developed in a balanced and integrated. Education so that it must be targeted to develop three elements proportionally. If this can be realized, then the core (nucleus) man of the educational process in an attempt to form a human being human can be realized, (Tafseer Ahmad, 2008). Precisely, the design of Islamic education in principle is the accumulation of ' Aqeedah, Shariah and Akhlaqul Karimah united in their entirety from inside and imprinted in a person. If the 'Aqeedah has encouraged the implementation of Shariah, it will be born the ideal Islamic education.

Keywords: Idealism Islamic education, human humanizing.

Introduction

There is an assumption that life is education and education is life.Where education is a matter of life and living. And the whole process of life and human life is a process of education. Islamic education then basically wanted to develop Islamic view of life, with the hope reflected in attitudes and life skills of Muslims. Islam was never distinguished between the religious sciences and general sciences (mundane) and dichotomi sighted or not about science. However, in the reality of history precisely given supremacy over the science of religion (al-'Ulum al-diniyah) as a highway to reach Allah (Muhaimin *et al*, 2004).

Ironic that the state of education in our beloved country today really heart breaking. From the aspect of Human Resources (HR), for example, generated by our education is far from expectations. Even more ironically, almost all major cities area even frequent fighting between students, free sex, drugs and other faulty behavior as being "part of life" students. Their characteristics are very chaotic, was not touched at all the values of Islam. It was there students who excel and though personalities, they are not necessarily comparable number of students who are "problematic".

On the other hand, the number of rows of unemployed college graduates were already on the verge of a very significant figure. If the number of unemployed intellectuals rows has reached the culmination point, the new social problems will flourish. The question arises, what is the main cause of the *bawdy - marutnya* education in this country, then the answer is authentic cause is a systemic nature, namely due to the implementation of the secular education system, the standards of success in the educational process is material and put the religion as a value absurt.

Phenomenal, almost all provinces in Indonesia, including Aceh province there are a number of high school students and junior high school did not pass the exam, with reference solely to the value of five (5) subjects, excluding religious subjects, though all the people of Indonesia must hold one of a legally recognized religion. This paper tries to expose the ideals of Islamic education in an effort to humanize humans. This can be formulated from the fragmentation of the history of the Muslims how to administer basic needs to the people (the right to study) by resting on the *'Aqeedah* and *Shari'ah*. Similarly, the normative sources that many provide an overview and concrete solutions.

Islamic Educational Objectives

Mekkah period, the education of the Prophet Muhammad PBUH who is the prototype that aims to foster personal Muslims to be strong-minded cadre and prepared to become an Islamic society, muballig and a good educator, (see : Ahmad Sukarno and Supardi: 1985). While the period of Medina, the Islamic education has developed and directed education-in addition to forming a personal cadre of the Islamic also aimed to foster humanitarian aspects in managing and safeguarding the welfare of the universe (Hanum Asrohah: 1999).

Implementation of Islamic education increasingly during the *Umayyad Dynasty* that laid the foundations for the advancement of education. So this period is called the " incubation period " or future intellectual development of Islam (Philip K. Hitty: 1974). Abuddin Nata in his book History of Islamic Education in Classical and Medieval Period, expressed as a review of the objectives of education above as principles: universal, balance and simplicity, clarity, realism and realization, and the principle of dynamism.

Further, since the Islamic education was a conscious effort, structured, programmed and systematically in order to form a human character, namely:

First, the Islamic personality, it is actually a consequence of a Muslim faith. In essence, a Muslim should have two fundamental aspects, namely the mindset (*'aqliyyah*) and patterns of life (*nafsiyyah*) which rests on the Islamic 'Aqeedah (see Sayni; papers: 2011).

To develop the personality of Islam, at least, there are three steps that must be taken, as exemplified Rasulullah Saw that is: 1) Imprinting, the *Islamic 'Aqeedah* to someone in a manner consistent with the category 'Aqeedah, namely as *' aqidah ' aqliyyah*; creed that emerged from the process of thought and depth. 2) Instilling an attitude consistent and committed and in people who already have the *Islamic 'Aqeedah*, that way of thinking and behaving remain on the foundation 'Aqeedah believes. 3) Developing Islamic personality that has been formed on a person to always ask him to fill his thoughts earnestly with *Tsaqafah* (knowledge) *Islamiyyah* and practice obedience to Allah SWT.

Second, master Tsaqafah Islam. Islam requires every Muslim to seek knowledge. Based on the dose obligations, according to al - Ghazali (1994), science is divided into two categories, namely: 1) Knowledge of *fardhu 'ain* (individual obligation) , meaning that every Muslim is obliged studied, namely the *Islamic tsaqafah* consisting of conceptions, ideas and the laws of Islam, Arabic, Sirah Prophet. 'Ulumul Quran, Tahfizh al-Quran, 'Ulumul hadith, usul fiqh, and others, (Ahmad Tafsir: 2007). 2) Science categorized *fardhu kifayah* (collective obligation); usually sciences that include science and technology and applied science - skill, such as biology, physics, medicine, agriculture, engineering, and others.

Third, the science of life; namely Science and Technology (Science and Technology). Master of science and technology is required that Muslims are able to achieve material progress so that it can perform its function as a vicegerent of God on earth well. Islam establishes mastery of science as *fardlu kifayah*, ie if these sciences are indispensable people, such as medicine, chemical, physics, aviation, biology, engineering, etc.

Fourth, have sufficient skills. Mastery of engineering sciences and practical exercises as well as skills and expertise is one of the goals of Islamic education that must be possessed of Muslims in order to carry out his duties as the *Caliph of Allah*. As the mastery of science and technology, Islam also makes acquisition of skills as *fardlu kifayah*, ie when they are most needed people skills, such as engineering industry, aviation, carpentry, and other.

Integrated Education

In order to generate human resources education graduates as expected, then it must be designed in an integrated education system. That is, education is not only concentrated on one aspect only. The education system must integrate all elements forming a superior education system. In this case, Sayni (2011), suggest there are at least 3 (three) things that should be of concern:

First, the synergy between schools, communities, and families. Integral education should involve three elements above . Therefore, the three elements above illustrates the factual conditions of education objective. Today the three elements work synergistically yet, in addition to each of these elements is also not functioning properly. The bad education of children at home gives a heavy burden to the school/college and add complexity problems in society such as the occurrence of student brawls, sex, drugs, and so on. At the same time, the situation of poor people who are clearly making the values that might have been successfully implanted in the family and school/college become less optimum.

Moreover, if the education received in school is also not good, then it was complete destruction of the three pillars of education.

Second, the curriculum is structured and programmed ranging from kindergarten to university (Hight Education) . Curriculum as mentioned above can be guaranteed for the interconnectedness of education all students at each hierarchicall. In addition to the charge of supporting the process of personality formation Islam that is continuously supplied from kindergarten to Hight Education, the charge *Tsaqafah Islam* and Science of Life (Science, expertise, and skills) is given in stages in accordance with the absorptive capacity and ability level of the students based on education levels respectively–each.

At the basic level or before the age of puberty (kindergarten and elementary), structuring the curriculum as much as possible is fundamental, common, integrated and equitable for all students who follow it. Caliph Umar ibn al-Khattab, the testament which was sent to the governor-governor, wrote, *"After that, teach your children to swim and ride a horse and tell them manners and good poetry"*. Caliph Hisham bin Abdul Malik bequeath to Sulaiman al - Kalb, the teacher of his son, *"Behold, my son is the light of my eyes. I trust you to teach him. Let you fear Allah, fulfill the mandate. First, I bequeath unto you, that ye may teach him the Koran, then memorize the Qoran to him.*

At the level of universities, foreign culture can be delivered as a whole. Socialism-communism or capitalism-secularism, for example, can be introduced to the Muslims after they understand Islam as a whole. Lessons ideology than Islam and other concepts presented is not intended to be implemented, but rather to explain and understand disability-blemish and incompatible with human nature.

Third, oriented to the formation of *Tsaqafah Islam*, Islamic personality and mastery of science. Three of the above is the target to be achieved. In the implementation, the three items above the orientation and guidelines for the implementation of education.

Education is the Responsibility of the State

Education is the responsibility of the State Islam is a system that gives the ultimate solution to the various problems facing mankind. Each of the solutions presented Islam is certainly in tune with human nature. In the context of education, Islam has determined that it is the state which is obliged to manage all aspects relating to the education system are implemented and to ensure that people's education can be obtained easily. Prophet said Imam (Khalifah) is the caretaker of the people and he will diminitai responsibility over the affairs of his people (Bukhari and Muslim).

Attention Prophet for education looks when he set the prisoners of *Badr* can be freely if they teach reading and writing to ten people of Medina. This is a ransom. In the view of Islam, it is the right of redemption goods *Baitul Mal* (Treasury). The ransom equal in value to the liberation of prisoners of war of Badr. That is, the Prophet has made the cost of education is equivalent in value to the goods ransom that should belong to the Baitul Mal. In other words, he gives wages to the teachers (the prisoners of war) with the property that should belong to the Baitul Mal. His policies can be interpreted, that the head of state is fully responsible for any needs of its people, including education.

Imam Ibn Hazm, in his book, *Al-Ahkam*, explained that the head of state *(Caliph)* is obliged to meet the educational facilities, the system and the people who are paid to educate the public. If we look at the history of the *Islamic Caliphate*, we will see so much attention to the caliphs of the education of its people. Similarly, concern for the fate of the educators. *Imam ad-Damsyiqi* have to tell a history of *al-Wadliyah bin Ata'* which states that in the city of Medina had three teachers who teach children, *Caliph Umar ibn al-Khattab* give salaries to them respectively by 15 dinars (1 dinar = 4.25 grams of gold).

The attention of the caliph not only focused on the salaries of teachers and schools, but also educational facilities such as libraries, auditoriums, observatories and others. At the time of the Islamic Caliphate, in the famous library is a library of Mosul was founded by *Ja'far ibn Muhammad* (d. 940 AD). This library is frequently visited by scholars, either for reading or copying. This library visitors get all the necessary tools for free, such as pen, ink, paper and others. Even the students who routinely studied in the library book loans are given regularly. A cleric Yaqut ar-Rumi praised the inspectors libraries in cities Mer Khurasa because they allow borrowing 200 books without warranty of any kind per person. This occurred during the Islamic Caliphate of the 10th century AD Even the Caliphs reward greatly to the author, the reward of gold weighing a book he wrote.

Is secular education system are damaged at this time will continue to maintain? Let us hasten to build Islamic education system for the next generation of *Rabbani* personality. The generation that is able to realize the prosperity and glory of civilization and human *tamaddun*. We are optimistic, there is still time and opportunity for education experts and the authorities to take the time to think clearly and deeply. To formulate a back model (system) education that will give birth to a superior human resources, not only in the aspect of thinking and mastery heights in science and technology, but also the generations that become the pillars upholding of life with a strong spiritual climate.

Conclusion

Many reasons for this optimism is built, there are at least some things; First, our country has enough reserves of wealth of its natural resources and only needs professional management and a mandate to follow the rules of justice according to Islam to be one of the sources of financing. Secondly, there is the availability of human resources that have the capability and honesty and objectivity to move forward and create changes in the education system better. Thirdly, the legal framework in the context of special autonomy in Aceh Province, can be used as a starting point for the birth of a market -based model of education on the values of Islam.

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Code-switching As a Resource in CLIL and Bilingual Classroom

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Abstract

Teaching content in foreign language and second language such as content and language integrated learning (CLIL) or bilingual teaching approach has become a trend in education world. Many countries have adopted this model of learning in their education system. There is a minimal level of language proficiency that the students should reach in order to be able to learn the content effectively. Therefore, code-switching is often occurred in their classroom. This paper would discuss both advantages and disadvantages of code-switching in classroom. Considering the advantages and disadvantages that may students obtain from applying code-switching in the classroom, it should be consider as a resource in the classroom.

Keywords: Code-switching, CLIL, bilingual classroom

Introduction

Currently, teaching content in foreign language and second language, for example, content and language integrated learning (CLIL) or bilingual teaching approach has become a trend in education world. Some countries such as Malaysia, Africa, and European countries have adopted this model of learning in their education system. There are some reasons behind adopting CLIL or bilingual teaching approach in their education system, for example, to improve cross countries (cross language) traffic, and as a respond to the important of English language as a dominant language in the world (Samala, 2009).

Cummins stated that there is a minimal level of language proficiency (threshold), that students should reach in order to be able to learn the task effectively (1981, cited in Lim & Presmeg, 2010). As students in bilingual or CLIL classroom do not learn the content of the lesson in their mother tongue, code-switching is often occurred in their classroom. The teacher in the classroom would switch classroom discourse from the target language to students first language when he finds that the students feel difficult to understand the concept of the lesson in the target language.

Code-switching in the classroom should not be considered as a failure to teach in the target language, but it should be considered as a resource in the classroom. This paper would discuss both advantages and disadvantages of code-switching in classroom.

Definition of Code-Switching

According to Baker, code-switching is a situation where an individual switched from one to another language in one utterance, and the switching is done deliberately (1993, cited in Lim & Presmeg, 2010). In general, Setati (1998) defined that code-switching is "the use of more than one language in a single speech act" (p. 34). She also added that "code-switching can involve a word, a phrase or a sentence. It can also involve several sentences" (p. 35).

Code-switching in the classroom occur when a teacher switches their instruction and classroom discourse from the target language to students main language. Moreover, Setati (1998) stated that the teacher could code-switch in their teaching in three ways, namely, for reformulation, content of activity, and translation.

Advantages of Code-Switching

There are several advantages of applying code-switching in classroom. Firstly, Adler (2001) and Setati (2005) said that the students will learn and understand better when they are taught in their main language (cited in Lim & Presmeg, 2010). Therefore, when students do not understand the lesson in the target language, code-switching from the target language to students' main language will help students to understand the lesson effectively.

Secondly, code-switch will enhance students' practice of the target language (Lim & Presmeg, 2010; Adler, 1998; and Setati 1998). As the teacher always attempt to repeat their instruction in the target language (Setati, 1998), the students will more familiar and learn the target language while they learn the content. In the case code-switching could have an additive effect on students' competency in content of the lesson, and students are competent in both their mother tongue and target language (Lim & Presmeg, 2010).

Thirdly, code-switching would improve students' confidence in their English skills. According to Lim & Presmeg (2010), students might be able to understand the lesson which taught in English, but they do not confident to express themselves in English. In addition, Arthur said that by using only target language in the classroom, it will reduce opportunities for students to talk (1994, cited in Setati & Adler, 2000). While, Mercer (1995) stated that, students need to talk in order to learn effectively, in other word, talking is considered as a social thinking tool (cited in Setati & Adler, 2000).

Fourthly, the research conducted by Pollard (2002) "affirms that code-switching is valuable strategy for students to convey their knowledge of subject matter". Therefore, the students should allowed to apply code-switching in bilingual classroom.

Sixthly, Algarín-Ruiz (2014) suggest that code-switching "can promote a positive environment in the classroom by allowing students learn new words, phrases or terms while feeling that their previous knowledge in their mother tongue is valuable and that it is a part of them that can help them succeed in a different environment".

Finally, based on the opinions that have been provided above, it can be concluded that by applying code-switching in the classroom, the students in the bilingual classroom in Aceh would be able to reach these advantages.

Disadvantages of Code-Switching

Besides the advantages that may teachers and students gained, there also some disadvantages of applying code-switching. First of all, Setati and Adler (2000) argued that "some researchers maintain that bi-/multilingualism has negative effects on language development, educational attainment, cognitive growth, and intelligence".

In addition, in a multilingual classroom, students who do not have the same mother tongue might feel neglected by the application of code-switching in their classroom (Cook, 2002, Sert 2005, both cited in Stephen-Kalong, 2008). Therefore, she suggested that, code-switching only can be applied effectively in the classroom where all students have the same main language.

According to Sert, Code-switching in teacher instruction might lead students to feel bored and lost their attention to the previous instruction in the target language (2005, cited in Stephen-Kalong, 2008). It happen because, the teachers often repeat their instructions in students main language.

Conclusions

Overall, considering a lot of benefits that teachers and students might obtain from applying code-switching in the classroom, it should be consider as a resource in the classroom. However, Code-switching only can be fully understood in the actual context in which it takes place.

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The Influence of The Professionalism Phases On Teacher's Performance

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Abstract

The study on teacher's professionalism phaseshas been conducted by Hargreaves (2000) which concluded thatteacher's professionalismcan be divided into 4 phases: 1) the pre-professional, 2) autonomous professional, 3) collegial professional and 4) post-professional. Each of these phases describes the level of professionalism that is closely related to the teachers' performance. This finding isinterested to be applied in Indonesia due to the Act no. 14 of 2005 on teachers and lecturer who are considered asprofessional teacher. The purpose of this study is to describe and analyze the phases of professional teacher as well as its influence on the teachers' performance (there are four hypotheses to be tested).This study was conducted on two vocational teachers in the field of Business and Management who consist of 159 teachers as populations.Theselected sample technique is simple random sample of 80 teachers (50% of 159). Data was collected by using questionnaire, both for the dependent variable and autonomous variables; while the data analysis technique was done by using multiple linear regressions that begins with the classical assumption.The results showed that the pre-professional phase, professional, autonomous, and post- professional have significant positive effect on the teachers' performance; whereas the professional phase collegial has a significant effect on the teachers' performance. This finding can be also the basis for rejecting the first and third hypothesis. On the other way around, it accepts the second and fourth hypothesis.From the findings of the study, it is recommended that for similar research should develop a more in-depth indicator of pre-professional and professional variables to examine in depth collegial both from a literature review and the findings of similar research.

Keywords: Pre-Professional, autonomous, collegial, post-professional, teacher's performance

Introduction

Various researches on teachers' professionalism havebeen performed widely as one of the problems in education. In some developed countries, this research has been done since several decades ago, in contrast to the developing countries. In general, the teachers' professionalism has increased from time to time in line with the development needs of education and has been a challenge for governments and educators to address these challenges and make improvements as good as possible. The government has and always answers the challenges in education development needs by issuing and improves education policy. This is evidenced by the issuance of Law No. 14 Year 2005 on Teachers and Lecturers by the Indonesian government that basically focuses on improving the professionalism of teachers.

Teachers' professionalism is how teachers think about their profession, why they should be professional, and how they as teachers should behave and apply their knowledge and skills in line with their profession. Many studies have found that increased professionalism will push up the award that will be obtained with adecent teacher professionalism (Ifanti and Fotopoulopou, 2011). It can be said that the professionalism and professional should be mutually complementary (Hargreaves, 2000), because when teachers try to improve the quality of teaching, they need motivation as well. Instead, they may not even be thought to increase their qualifications as long as they are able to teach what they have for the learners. However, professionalism is now experiencing deterioration and different from the professionalism that should be.

Teachers' Professional Phases

Teachers' professionalismshould not only be the obligation of the government, but also society in general. To examine this obligation, we must rethink in the very beginning when the formal training begins. At first, the formal education system is not well-organized and well-developed. Educators do not only should convey the knowledge and skills they have without considering things or other relevant characteristics. For example, class size, means of supporting learning, teaching methods, curriculum taught (Cuban, 1984; Curtis, 1988). It is much different when compared to the current educational system (post-modern) that is much more complex and dynamic. Therefore, the concept of the teachers' professionalism in practice is different in each era (development). Hargreaves (2000) has spawned a different concept of teacher professionalism and development in four eras, from pre-professional era to the post-professional era in countries with Anglophone culture.

The professionalism of the teacher profession would essentially be an impact on their professionalism. It can be seen from the Ministerial Regulation No. 18 Year 2007 on Certification for Teachers. It has been set in the regulation that the teaching certificate given to teachers through competency testing and portfolio assessment of teachers, professional allowance will also be given to those who passed. The higher the competence and more comprehensive portfolio of owned a teacher it is more likely to pass the test and get a teaching certificate. This means that teachers will flock to improve the quality of himself as an educator who in turn will increase the performance that is concerned.

Performance

Rue and Byars (1997: 385) stated that *"Performance refers to the degree of accomplishment of the tasks that make up an employee job. It reflecs how well an employee is fulfilling the requirements of the job ".* Meanwhile, Bernardian and Russel (1993) stated that *"performance is defined as the record of outcomes produced or a specific job function or activity during, a specific time period".*

Associated with the work of teachers teaching staff, then their performance is called as ateacher's performance, it is nothing other than the achievements of teachers in completing the work; Effendi (1997) stated that teacher performance is an outcome or level of success achieved by the worker or teacher in the field of work, according to certain criteria to apply for a particular job and evaluated by certain people. The performance of a teacher can be seen from the extent to which teachers carry out their duties in an orderly and responsible, the ability to mobilize and motivate students to learn and cooperation with other teachers.

Performance Measurements for Economics-Accounting Teacher

Based on Article 35 of the Law of the Republic of Indonesia Number 14 Year 2005 on Teachers and Lecturers, teachers' workload consists of making lesson plan, implementing the learning, assessing learning outcomes, guide and train students and carry out additional tasks.

In the Education Minister Decree No. 025/0/1995, it stated that the working standard of teachers' performance is the minimum mandatory for teacher in the learning process or guidance, working standard of teachers' performanceconsists of: preparation of learning programs which include: 1) creating Lessons material Analysis (AMP), 2) preparing Annual Program (Prota), 3) develop Semester programs (PROMES), 4) develop lesson Unit Program (SP), 5) prepare Lesson Plan (RP), 6) develop evaluation tools, and 7) Implementation of the learning program.

The selected measurement of teacher performance is directly related to the teacher which include: a. Compiling teaching program: 1) the annual program of curriculum implementation, 2) the semester program, 3) program unit of lessons, 4) lesson plan; b program. Presenting / implement teaching: 1) delivering the material, 2) using the teaching methods, 3) using the media / sources, 4) managing interactive learning; c. carry out an evaluation study: 1) analyze the results of the evaluation study, 2) report the results of the evaluation study, 3) implement the program improvement and enrichment.

Preliminary studies which have been done, there is a fact differently based on the concept of professionalism and teachers' performance, especially in Tulungagung and Blitar, East Java. This preliminary study is the subject of honorary teachers. Although part time teachers in the region do not receive appropriately in accordance with devotion, they tend to be more serious in their educationtasks.

In terms of completeness of the learning device, the part time teachers are more trying to complete and complement what kind of preparation they need before teaching, and more of the finish their workon time

and be more active in participating in trainings and discussions of education (though without the necessity and the motivation to do so).

Referring to the phases of the professional by Hargreaves (2000), it can be identified and mapped the evolution of education (based on the characteristics of educators) in other countries, especially Indonesia. This study is identified and mapped it in premises which in terms of the educators, especially against civil servant teachers in Tulungagung and Blitar and analyze the influence of these phases on teacher performance. If the honorary teacher can suppress their personal interests to gain a reward for their dedication and efforts in improving the quality of teaching, then what about the civil servant teachers? Therefore, this research emphasizes on how teachers perceive professional phases and their effects on teacher performance in Tulungagung and Blitar regions.

Research Problems

Based on the background and theory study above, the formulation of the problem is structured as follows: 1) how is the picture of professional phase and vocational high school teachers' performance in business and management inTulungagung and Blitar regions and 2) how does the perception of teachers about the professional phases on teachers' performance in Tulungagung and Blitar regions.

The Purposes of the Research

In particular, this study aims: 1) to describe the phases of professional teachers in Tulungagung and Blitar regions; 2) to analyze the influence of teachers' perceptions about the professional phases on teacher performance in Tulungagung and Blitar regions.

Benefits of the Research

Theoretical benefits of the results of this study is to support and implement the concept of the four teachers' professional era (four ages of professionalism and professional learning) by Hargreaves (2000) in Indonesia, which has teachers with different characteristics from countries with Anglophone cultures. The practical benefit are: a) for teachers, it will provide insight and guidance in improving the quality and qualifications as an educator; b) for schools, it will be useful to improve the system, especially in improving the quality of teaching and qualifications of educators; and c) for the government, it can be considered in evaluating the policies in the field of education.

Materials and Methods

This research uses a causal design with one dependent variable and four autonomousvariables; dependent variable (teacher performance) is collected through teacher's perception as a proxy, while the autonomous variable of teachers' professional phase is collected through questionnaire. The second type of variable are measured with a *Likerts* scale with 5 options, the framework of the relationship between the studys variables exist in the (figure 1). The subjects used in this study are teachers of vocational high school who are already civil servants in Tulungagung and Blitar regions. The number of civil servant

teachers in Tulungagung and Blitar regionsare 159 teachers. Then, simple random sample obtained 80 teachers (50% of 159).

The data analysis technique used in this study is multiple regression techniques to see the effect of autonomous variables on the dependent variable.
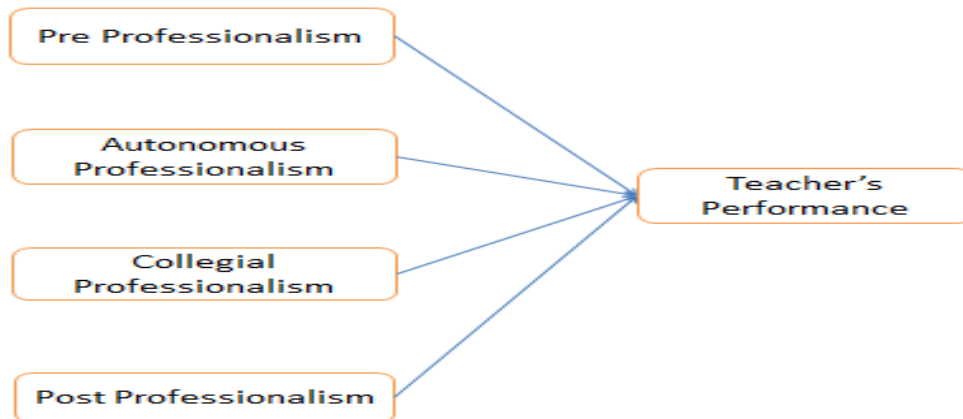
Figure 1. Theoritical Framework

Classical assumption is used to meet the feasible requirement and whether or not the data is analyzed using regression techniques. Conceptually, the multiple regression equation as is as follows:

Teachers' Performance = $\alpha + \beta_1$ Pre + β_2 autonomus + $\hat{a}_3$ collegial + β_4 Post + ε

Acceptance and rejection of the hypothesis is done by comparing the level of significance of the results of data analysis with an alpha level of 5%; that is to say when the results of the analysis found a significance level of ≤ 5%, then the hypotheses are accepted and when a significance level of> 5%, then the hypothesis is not accepted. The hypothesis which will be tested:

Hypothesis 1: pre-professional phase has no significant positive effect on the teachers' performance.
Hypothesis 2: autonomous professional phasehas no significant positive effect on the teachers' performance.
Hypothesis 3: professional collegial phase has no significant negative effect on the teachers' performance.
Hypothesis 4: post professional phase has no significant positive effect on the teachers' performance.

Results and Discussion

The related between Pre-Professional and Teachers' Performance

In the phase of pre-professional, learning is seen as something more modest, both in teaching practices and improving the quality of teaching. A good teacher is a teacher who devoted himself to his work, showing loyalty, and gain rewards through its services whatever the circumstances, although at this stage

the teacher is still an amateur. The teacher is seen as a person who is very enthusiastic, who understand the material of teaching in the classroom. Therefore, the teacher is seen as the party that has full control over his class (Hargreaves, 2000).

Simplicity in thelearning implementation in this phase either because of the facilities, and learning practices and the lack of government attention that will certainly have an impact on the limited teachers' concerned performance. Therefore, at this phase of the hypothesis to be tested is "pre-professional phases no significant positive effect on the teachers' performance". The results showed just the opposite that is the pre-professional phase of significant positive effect on the teachers' performance it can be seen from the results of the analysis of the amount of beta regression with 0.997 at the significance level of 4.8% (table 1).

Table1. Coefficientsᵃ

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	63.459	58.431		1.086	.281
Pre Professional	0.997	1.572	.451	.359	.048
Autonomous Professional	1.069	1.755	.398	.309	.044
Collegial Professional	0.079	1.703	.562	.408	.175
Post Professional	1.450	1.992	.437	.753	.050

a. Dependent Variable: Teachers' Performance

Rejection of the hypothesis 1 seems in line with the reasons given by (Christensen, et al. 1983) that the class size, means of supporting learning, teaching methods, to the curriculum being taught was very simple; but teachers feel there is a great responsibility on the learning success. The responsibility is implemented in the form of devotion willingly without any transactional element in all things, ateacher can be considered good when she is devoted with her works, loyal, achieving award at no matter condition she has though in this phase, a teacher is still considered as an amateur (Cuban, 1984). Teacher is considered as someone who is enthuastic who master the lesson in the classroom. Therefore, teacher is someone who has a full control inside the class.

The Related between Autonomous Professional and Teachers' Performance

The autonomous professional phase is characterized by a singularity learning challenge and tradition that there is no question that is the basis of the singularity. The principle of the teacher in this phase is that they have the authority to determine the appropriate teaching methods to the class that they have. Pedagogic aspect is contested and even not required. Teacher's authority and protection against interference are completely guaranteed. Teachers' professionalism is to help improve the status of teachers in the community and teachers as an educator at the university.

Independence which is owned by the teacher in designing and determining the various aspects of this study proves that there is a great sense of responsibility on the success of their lessons. Learning success is nothing but a reflection in the form of a good performance. Results of the analysis proved that the second hypothesis that says "professional autonomous phase has a significant positive effect" is accepted, it can be seen by the amount of beta 1069 with a significance level of 4.40% (table1 above).

The acceptance of the secondhypothesis is very reasonable with increasingly autonomous of a teacher, then, on him there is freedom to design a learning plan and its implementation in accordance with the conditions in facing the class. Teacher is the one who master and understand the situation, class size, and the ability of students so that underlie teachers in designing learning; this is in line with the opinion of (Cuban, 1984; Curtis, 1988), that independence will create innovation and creativity in preparing the learning process.

The Related between Professional Collegiality and the Teachers' Performance

In this phase, most of the teachers who are in the era of reform and change in education, increase their development and looseness role, with no awareness of their commitments and obligations which should have ended (Ponticell, 1995). Therefore, in promoting learning and professional preparation, teachers will probably increase collaboration and potential practical, but in the sequel, if it is increasingly disconnected from the world of education, this strategy will reduce the professionalism of teaching is based on science and gather the critical side of the teaching profession

Collaboration amongst teachers will create innovation and creation of a more in-depth in comparison with the phase of autonomous professionals; this is because every side has got critics from fellow educators. One with the others give inputs for the improvement of learning (Campbell, 1996.). Thus the mastery of the material and the better preparation of lesson will be better. However, from the results of the analysis, it found different things, that hypothesis 3 that say "professional collegial has a significant positive effect on the performance of the teacher" is not accepted. Rejection can be seen by the findings beta of 0.079 with a significance level of 17.50% (Table 1).

Related to these findings, Campbell (1996) says that the collegial professional phase does not include all teachers can collaborate with each other, because collaboration can create a high dependence in many aspects. Some teachers feel no need to show innovation and creativity; because of the result of the collaboration among teachers can produce a very good lesson preparation.

The Related between Post-Professional and Teachers' Performance

Professionalism in this phase is more a result of awareness of the social movement, not enlightenment of policy makers. Professionalism in this context becomes broader, more flexible and more democratic manner, including groups outside teaching than on its predecessor. Support technological progress is very rapid, so this phase is no exaggeration if it is called with phase-based professional advancement of technology and informatics (Whitty, 2006).

Teacher performance is more productive due to the support of technology is growing rapidly in all fields including education (Ozer and Beyciouglu, 2010). Learning implementation has been supported by the development of highly sophisticated information technology so that learning becomes boring, varied, adequate IT capability of the teacher as well as the ability of learners (Olson, et al 1999). Hence, the fourth hypothesis which says "post-professional phase has a significant positive impact on teacher performance" is proved to be true based on the analysis that shows Beta 1,450 with significance level of 5% (Table1).

Conclusions

The results showed that the phase of pre-professional, professional autonomous, and post-professional have a significant positive effect on the teachers' performance; whereas the professional collegial phase has no significant effect on the teachers' performance. The findings are also the basis for rejecting the first and third hypothesis; instead received the second and fourth hypothesis.

From the findings of the study, it is recommended that for similar research in order to develop a more in-depth indicator of pre-professional and professional variables to examine in depth collegial both from a literature review and the findings of similar research.

Acknowledgements

The findings of this study have implications for the need to consider innate / inherent factors as the main means for prospective teachers who perform well. Devotion and responsibility factors as a professional teacher should be fostered and nurtured since the education of future teachers, so that the level of professionalism that arise is not only because of the experience and technological progress, but because of ingrained in teacher education.

Methodological limitations have occurred on the results of this study in which is taking a simple random sample can't describe the level of representation among senior teacher and the junior teachers; senior and junior teachers distinction is very important because it is associated with the mastery of information technology for the sake of learning that is linked directly to the teachers' performance.

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The Effects of English Video Clips with Peer Support on Young Learners' Oral Reading Skill

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Abstract

The objective of the study is to investigate the effects of English video clips with and without peer support on young learners' oral reading production skill. This study is conducted to implement an innovative strategy to help young learners acquire, learn, and improve their oral reading skill automatically and spontaneously without mediation through their native language. The researchers conduct an experimental teaching and learning to improve young learners' oral reading production skill through English video clips with and without peer support in terms of phrasing, pausing, stress, intonation, and rate. Forty-four first year students of junior high school 8 Banda Aceh involve in the study. They selected randomly sampling technique. Each group consists of 22 students in the process of teaching and learning. Both groups are given the same teaching and learning materials. Teaching and learning materials were in the forms of video clips downloaded from youtube. Group one works with peer support based on their own choice of partners and group two works without peer support in the process of learning the language. The instrument of this study was a set of oral reading test. Pre and posttests were given to both groups. Tape recorder was used in the pre and posttest to record students' oral reading skill. The recording intended to mark students' skill objectively. The treatment will last for two months. To analyze the data, one way ANOVA was used. The results found that the peer support strategy significantly improved oral production in reading for phrasing, pausing, stressing, intonation, and rate. It can be concluded that English video clips with support was beneficial for young learners to improve their oral reading production.

Key words: English Viedo clips, peer support, and oral reading skill

Introduction

In the teaching and learning process, teachers tend to use the traditional methods. It is no wonder that the levels of English mastery among Indonesian students are still low (Kweldju, 2002). A report by English First English Proficiency Index (EPI, 2011) found that Indonesian was ranked 34th from 44 countries in terms of English Proficiency, indicating a very low mastery. In line with the EPI, the Progress in International Reading Literacy Study (PIRLS) conducted a research in term of reading literacy in 2006. The study revealed that out of a total of 45 countries surveyed, Indonesia ranked 42nd in the student literacy rate.

According to the PIRLS, Indonesian students scored on average of 405 in reading literacy. It is far below the mean international score of 500 (PIRLS, 2011). Based on the issues and the need to improve the mastery of English, the Indonesian government has introduced many policies to revamp the system of education in Indonesia (Departemen Pendidikan Nasional, Depdiknas, 2005). The human resources index should be improved through in creasing the quality of education, changing curriculum, teaching facilities, and providing opportunities for students to study abroad and so on. The curriculum of the English language is also changed where English is taught from primary school level (third up to sixth grade) together with other local contents (Sutardi, 2005). Another policy issued by the government is on the improvement of teachers' qualification (Depdiknas, 2010). Teachers who have not graduated from undergraduate level of education are sent to universities to study within one or two years in order to get their under graduate diploma. This regulationals or equires young teachers to take their professional teaching certificate during one year at university. The purpose of issuing this regulationis to produce professional English teachers (Depdiknas, 2010).

Many methods of teaching and learning have been used to improve English language skills (Krashen, 1982). Some of them are traditional method, communicative language teaching, and cooperative learning, etc. (Krashen, 1982; Corp, 1989). However, theme thods used by teacher to improve language performance are still in sufficient. The use of appropriate methods and approaches in teaching and learning English are theim portant things to consider. Nowadays, teaching and learning English language tends to use traditional method that focuses on direct teaching vocabulary, grammar, reading, listening, and conversational patterns. The correction is given whenever students make mistake (Kweldju, 2002). Based on the facts mentioned previously in relation to the level of students' skill in term of reading literacy, there searchers would like to implement an alternative strategy to improve their oral reading skill production through English video clips with peer support and without peer support. There fore, the problem of this study can be formulated as follow: Are there significanteffects of English video clips with and without peer support to improve young learners' oral reading skill production in terms of (a) phrasing, (b) pausing (c) stressing (d) intonation, and (e) rate?. The objective of this research is to investigate the effects of English video clips with and without peer support to improve young learners' oral reading skill production in terms of (a) phrasing, (b) pausing (c) stressing (d) intonation, and (e) rate. This research is important to be done to enable students to improve their oral reading skill production automatically and

spontan eously without mediation through their first or mother tongue. Students are expected to be abletoread oral reading sound like native speaker. Therefore, this research provides the best way so significant contribution to improve young learners' oral reading skills in then uances of native speaker. Thus, thelevel of younglearners' oral reading production or the quality of English proficiency is achieved as expected by the national education objectives. Also, this research provides the awareness of students that multimedia such English video clips are the best alternative strategy to improve English oral reading skill effectively.

This study is based first language learning theory as presented in Levelt's (1989) lexicon model of language acquisition and production. The model explains the acquisition of a language through the development of internal structures in the form of speech motor patterns, conceptual systems, articulatory motor systems and phonemization, takes the approach that language is a reconstruction or reproduction from learned phonological codes. Based on Levelt's model of developing oral production skill, the researchers apply this first language acquisition and learning theory to teach and to learn English as a foreign or second language. First language (L1) is acquired and learned relatively subconsciously for normal children (Krashen, 1982). They acquire and learn a language at home and in their wider environment subconsciously. It is essential to elaborate the definition of first language prior to discuss in more detail how first language (L1) is learned. First language (L1) is mother tongue of a child.

A child will acquire first language by listening to utterances or sounds exposed by parents and elder brother and sister within the family environment. In line with the statement, Fromkin et al. (2011) say that children do not learn a language simply by memorizing the sentences of the language. Rather, they acquire a system of grammatical rules of the sort naturally. No one teaches children the rules of the grammar. Their parents are no more aware of the phonological, morphological, syntactic, and semantic rules than are the children (Fromkin et al., 2011). In addition, the process of first language learning and acquiring is based on some language learning theories/approaches. The Universal Grammar or nativist approach presents that humans are biologically pre-programmed to learn (Chomsky, 1987). Language is acquired through an innate blueprint. Universal Grammar (UG) contains a set of specifications for permissible structures in any language. Children do not violate UG rules. The inputs social interaction in learning English language are paramount (Levelt's, 1989). In this case, multimedia such as English video clips can be the input.

Multimedia plays an important role nowadays in the education and training as well as the teaching and learning language (Yang, Chen, & Chang Jeng, 2010). It has gradually become to be a tool of media in order to improve and increase students' learning process. Computer, YouTube, video clips, pictures, CD-ROM, and internet improve students' language skills (listening, speaking, reading, and writing) significantly (Liu & Chu, 2010; Yang, Chen, & Chang Jeng, 2010). In addition, the application of multimedia in the teaching and learning language has long been considered as an effective media of learning. Many studies have indicated that utilizing the right combination of multimedia elements influenced the way learners learn. Also, it increases their performance and affects the learning

environments (ShahrinaMdNordin, 2010). It enables students to understand and master the language easily and smoothly (Chang & Lehman, 2002; Liu & Chu, 2010; Nguyen, 2008; Yang, Chen, & Chang Jeng, 2010). One of the advantages of using multimedia such video clips is the teacher and students can listen and watch repeatedly until students feel that they able to do as shown or spoken in the clips by native speakers. As a result, students can use the language for communication easily and precisely like or almost near native speaker. Learning through peer support may improve students' performance compared to learning without peer. Language development occurs as a result of interaction with others and in social context where learning take place (Gibbons, 2002). Peers support can also be related to the process of social interaction and constructivism in the teaching and learning a second or foreign language (Cazden, 2001).

Linguists and language teachers have conducted studies that related to the implementation of Peer Support strategies in language learning (Angelova, Gunawardena, & Volk, 2006; De Guerrero &Villamil, 2000; Emerson, Rees, & Mackay, 2005; Ertmer et al., 2007; Li, 2009; Reza, 2013). Li (2009) who conducted a study on peer interaction in an EFL classroom in Hong Kong to improve students' performance. The study found that student-student interaction, the learners jointly construct a scaffold that allows them to successfully complete the activity and co-construct their own system of making meaning through words in a second language. In addition, support in peer support may confine the development of ZPD, there appears to be a necessary role for an expert (e.g., the teacher) or a more capable peer who can manage the interaction well, model appropriate forms and monitor the learners' production in a proper way. As peer mediation is not always effective, expert mediation is required on occasions when peers find it difficult to push their ZPD. Meanwhile, social interaction can contribute to language learning and the extension of ZPD only when there are opportunities for students to offer assistance or digest prompts, under meticulous, proper use of scaffolding strategies and appropriate feedback from the teacher or peers (Li, 2009). This study focused on speaking to negotiate meaning and form with peer interaction.

Materials and Methods

Thequasi-experimental design with pre-test and post-test will be employed for this study. This design will be employed to investigate the effects of the independent variable on the dependent variables. The independent variable isthe English video clips with peer support activities and without peer support activities. The dependent variables isgains in oral reading production skill (phrasing, pausing, stressing, intonation, and rate. This design will employ two experimental groups namely, English video clips with peer and without peer support. Both groups are given pre- and post-testsfor oral reading skill. The data collection for oral reading production skills is conducted using audio tape recording. Scoring of the oral production skills is done by there searchers based on the recordings. The sample of the study consists of 44 first year of students SMPN8 Banda Aceh from the existing classes. Both classes used the English video clips as the learning materials. From the sample, 22 students assigned as the English video clips learning with peer support and 22 students assigned as the English video clips learning without peer

support. One class will employ peer support activities with pair group formed based on students' choice of partners. The other group worked individually without peer support.

The research instrument of this study consisted of test (pre-test and post-test). A short reading passage was given to the students as the pre-test prior to the treatment to both groups. They asked to read the passage loudly. After conducting the pre-test, the next step was to analyse the results of pre-test in order to enable the researcher to compare the pre and post-test after the treatment. At the end of the treatment, post-test was conducted to investigate if the treatment using English video clips learning with peer support and without peer support improves students' oral reading skill production or performances. The post-test covers a short reading passage to be given to the students. They were asked to read the passage loudly. Oral production (fluency test of reading) abilities tested orally and recorded in order to offer the researchers accurate reference to analyse the data. The data from pre and post-tests were analyzed by using inferential statistical methods involving one-way ANOVA.

Results and Discussion

Are there significant effects of English video clips with and without peer support to improve young learners' oral reading skill production in terms of (a) phrasing, (b) pausing (c) stressing (d) intonation, and (e) rate?.

Table 1 reports the means, standard deviations, and results of ANOVA of the pretest for oral production in reading both classes by treatment. Students in the peer and without support reported the same level of mean scores for all dimensions of oral production and results of the ANOVA tests reported no significant differences, i.e., that $p < 0.05$ for all the sub-factors. Thus, the pretest finding indicated that the peer support and without peer support are the same in reading for phrasing, pausing, stress, intonation, and rate.

Analyses by treatment methods found that the peer support strategy significantly improved oral production in reading for phrasing,pausing, stressing, intonation, and rate. This present studies is in line with many studies have been conducted to investigate the improvement of oral production skills in reading through peer support English video clips (Yang, Chen, & Chang Jeng, 2010; Liu & Chu, 2010; Shahrina Md Nordin, 2010; Gibbons, 2002). The use of English video clips also improves students reading oral production Angelova, Gunawardena, & Volk, 2006; De Guerrero &Villamil, 2000; Emerson, Rees, & Mackay, 2005; Ertmer et al., 2007; Li, 2009; Reza, 2013). The finding of this study contradicts a previous study by Grgurovic (2007) who conducted a research in terms of using multimedia with subtitle and peer interaction to improve language oral production skills. From the present findings it can be concluded that the English video clips with peer support was very beneficial young learners as indicated by significant improvements on reading oral production.

Table 1. Pretest Means, Standard Deviations, and results of ANOVA for Oral Production in Reading by Treatment

		N	Mean	Std. Deviation	ANOVA
Phrasing	Peer Support	22	6.72	2.58	$F_{(1,43)} = .299$
	W/O peer support	22	6.27	2.91	$p = .587$
Pausing	Peer Support	22	6.90	2.87	$F_{(1,43)} = .097$
	W/O peer support	22	6.63	2.92	$p = .757$
Stressing	Peer Support	22	7.09	2.74	$F_{(1,43)} = .181$
	W/O peer support	22	6.72	2.93	$p = .673$
Intonantion	Peer Support	22	7.18	3.00	$F_{(1,43)} = .264$
	W/O peer support	22	6.72	2.86	$p = .610$
Rate	Peer Support	22	7.45	2.90	$F_{(1,43)} = .166$
	W/O peer support	22	7.09	3.00	$p = .685$

Table 2 reports the means, standard deviations, and results of ANOVA of posttest for oral production in reading by treatment. Students in the peer-support reported higher mean scores for all dimensions of oral production and results of the ANOVA tests reported significant differences, i.e., that $p < .05$ for all the sub-factors. Thus, the finding indicated that the peer support significantly improved oral production in reading for phrasing,pausing, stressing, intonation, and rate.

Table 2. Posttest Means, Standard Deviations, and results of ANOVA for Oral Production in Reading by Treatment

		N	Mean	Std. Deviation	ANOVA
Phrasing	Peer Support	22	16.63	1.89	$F_{(1,43)} = 11.77$
	W/O peer support	22	15.00	1.19	$p = .001$
Pausing	Peer Support	22	17.27	1.80	$F_{(1,43)} = 12.78$
	W/O peer support	22	15.54	1.37	$p = .001$
Stressing	Peer Support	22	17.81	1.62	$F_{(1,43)} = 13.73$
	W/O peer support	22	15.81	1.94	$p = .001$
Intonantion	Peer Support	22	17.81	1.84	$F_{(1,43)} = 5.17$
	W/O peer support	22	16.54	1.87	$p = .028$
Rate	Peer Support	22	18.72	1.45	$F_{(1,43)} = 21.96$
	W/O peer support	22	16.27	1.98	$p = .000$

Conclusion

This study investigated the effects of English video clips with and without peer support to improve young learners' oral reading skill production in terms of (a) phrasing, (b) pausing (c) stressing (d) intonation, and (e) rate. The finding showed that English video clips with and without peer support group reported significantly better performance in all measures of oral production for reading. The finding also showed that the English video clips with peer support that employed the L1 theory reduced the use of code-switching strategies among the students and enabled them to develop oral production skill in English approaching the patterns of native speakers.

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Improving Students' Writing Skill By Using Movie

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Abstract

Teaching and learning English in the class by using movie can improve the writing skill of Chemical Engineering students in State Polytechnic of Lhokseumawe. In this study, the writer supplied the students with two movies; Nanny Mc Phee and Oliver Twist. Those movies were chosen because they have interesting characters and movie story and also they are full of moral values. The movies were displayed in play and pause mode. By using the watch-write-watch write method, the students were required to make some notes and short essays about the movies. The using of Movie Media had given the students to practice their writing skill based on what they have watched from the movies .Generally the students were able to make some lists and resumes of the movies but they are still difficult to write a short essay. The most common mistake students' writing are word order and using tenses. Orally, watching movie in learning English can improve students' speaking skill by repeating certain important dialogues in the movies and also can improve students' integrity to work individually without cheating.

Key words: Multimedia, teaching media, *writing*,

Introduction

Teaching English recently is more challenging than in the former. To help the students in improving their skill in English, teachers are required to supply the qualified teaching material. By this way, it is expected that the teachers are able to band, amaze and renew the teaching learning activities in the same time to guarantee the students learn well.

Many researches mentioned that using movie in teaching English to the ESL (English as the Second Language) class is the important part of curriculum. It is because the movie is capable to provide the native speaking in a real situation and in cultural context. Besides, it's also able to attract the students' interest and give the positive motivation for them (Kusumarasdyati, 2004).

One of the challenges in teaching English in State Polytechnic of Lhokseumawe is to improve students' skill in writing. Generally, the students cannot rewrite the detail sentences of each character from the

reading supplied in the class. Students are frequently having meaning distortion in writing activities. This condition is getting worse by the students habit that are lack interest of reading and think that reading is a boring activity. Ismaili (2013) said that in a class students think that is more fun facing the visualization rather than facing reading. Usually students quite often presume, connect, ask and interpret a problem from the reading or text visualization. By facing visualization, students will easily understand the character, detail, theme, story plot, conflict and symbolization (Watkins and Wilkins, 2011). This condition can become as advantages for the teacher to gain the students' interest in learning English. Movie as one of pleasing sources for fun and in the same time enriching the vocabularies. That's why many researches have been done regarding the using of famous movies as additional teaching material for English.

In this study, movies are used to improve students' skill in writing for the course English II for the second grade students in Chemical Engineering of Politeknik Negeri Lhokseumawe. For this research, two movies are supplied as the teaching materials, they were; Nanny McPhee and Oliver Twist. The movies were chosen because both of them have the interesting characters and story plot and also have the strong moral values.

The aims of this study are; (1) to elaborate and analyze the efficiency of using movie in improving students' competency and performance academically. (2) To examine whether the movie can attract and be useful for the students in order to stimulate their interest in reading. (3) To examine whether by watching movie can help the students in connecting between the learning skill and the purpose of language, especially in writing.

Materials and Method

Teaching learning activities by using movie were held by the following procedures. Two movies; Nanny Mc. Phee and Oliver Twist were displayed in the different session. There were 3 different classes with 61 students total were being the sample of this study. In this study, the watch- write-watch-write (W-R-W-R) method was used as suggested by Hibbing and Rankin-Erickson (2003). Movies were displayed in clip (*play and pause*). During watching, students were obligated to do *listening* and *responding*. When the clip of movies was stopped, students were required to describe the shown scene and also required to predict the upcoming scene. By using this play- pause way, students were asked to list the vocabularies and phrases based on what they had seen and listened. Handing the list, students also were challenged to create a game then students were also required to write about what they had seen from the clip/movie.

Result and Discussion

The movie chosen were Nanny Mc.Phee and Oliver Twist. Nanny Mc.Phee was a movie that told us about a family with single parent that have seven misbehave children thus the father was hopeless in facing them. Finally, a nanny came to their house and taught them to behave and obey their father and the olders around them including their maids. The Father himself also got the valuable lesson about how to deal and treat his children so they would listen to him. While Oliver Twist was a movie about a parentless children labored in improper place with very low salary. Oliver then joined the children in

London that were organized by the adult to be the pickpocket. They were also trained to survive in a difficult and dangerous situation.

At a glance, both movies supplied the excellent listening activities for the students, considering that none of the students are the native of English. But then, the movies were also interesting to be used a materials to improve students' writng skill.

For this requirement, students were tasked to make note and resume the movies content. These activities, although it was not completely attained as targeted, at least had given the positive progress to the students' skill in writing, especially for the beginners. The making note and resuming activities required the students to listen carefully the conversation from the movies. Students made the notes for every main point and important details, checked verbally, developed their notes and sometime needed to listen more than one time in order to write the resume of the movies. At the end, students were allowed to refer the available movie script and also allowed to have discussion with their friends so they could compare their own notes together. At this time, students were guided to improve their writing by correcting their mistakes.

From these activities, it was found that students were difficult to make note and resume in their first watching, but then their ability became better when they were given more chances to watch the movies. In the second display, most of the students showed the amazing progress in making notes and resume. Using movie had given the opportunity to the students in practicing their writing skill with the supplied material from the movies. The assignment to make notes can be an intensive effort so the teachers can show the students in what part they should improve their note. However, students faced some difficulties when they were asked to develop their note and resume tobe an essay.

Yet, students' ability in organizing sentences had risen significantly. Without using movie in English teaching and learning, students were generally only able to describe the objects or certain characters in one or two sentences. After watching movie, students were averagely able to describe an object or character in certain amount of words. The main mistakes in writing that still be found were generally in word order and inconsistent tenses.

Movie application as English teaching media also showed the increasing of students' skill in speaking. The students showed their progress in repeating some important dialogues in the movies with their own redaction. From the integrity view, the students also could be guide to work autonomously. Their chance to cheat could be minimized because the students had to describe about the movie based on their own opinion.

Conclusion

The activity of English teaching and learning in a class by using movie as the media can improve the writing skill of Chemical Engineering students of Politeknik Negeri Lhokseumawe.Using movie has given the opportunity to the students in practicing their writing skill relating to the movie they watched in the class. Generally, the students were able to make note and resume about the movie. However, the

students still faced the problems when they were asked to write an essay about the movie. The general mistake that still be found from the students' writing were word order and the inconsistency of tenses. Using movie application as English teaching media also showed the improving of students' speaking skill by repeating the dialogues from the movies. Finally, this activity also could improve students' integrity to work autonomously.

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Determinant Factors of the Performance of Study Program, Teacher Trainingand Education Faculty on Private Universities in Medan

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Abstract

This study aims to determine the effect of leadership style, work climate and workmotivation on the performance of the heads of the study programs. This study used survey method with causal techniques, with a population of 55 heads of the study programs of the Faculties of Teacher Training and Education in Medan. Sampleswere taken on the whole population. Path analysis techniquewas used on analyzing the data. The research proves that the style of leadership, work climate and work motivation to contribute to the performance of the head of the study program.

Keywords: performance, leadership style, working climate, work motivation

Introduction

University as one of the educational institutions becomes the foundation of the community in order to improve the quality of human resources. Public demand for higher education is not only limited ability to produce high quality graduates as measured by academic, but by proving that good accountability. In general, the desired demands of society to higher education include quality assurance, quality control, and quality improvement. Improving the quality of higher education including academic service quality and the quality of teaching is an effort that must be done continuously so that services to students as customer's institution of higher education can be provided optimally.

The current performance of several universities in Indonesia has not been so encouraging as societal expectations. It is caused by many factors, among which are related to the issue of leadership, work climate and work motivation of the academic community, including the performance of the head of the courses in the college environment.

Several studies on the performance described as follows. According to Schermerhorn et al. (2003), imposes limits that the performance is the quantity and quality of work produced or services provided by

the unit as a whole. Stoner (1996), said that the performance is a performance that can be demonstrated by an employee or an employee who is the result of work that can be achieved during a certain period of time in doing the work assigned to him, based on skills, experience, and determination based on the standard and size of the assessment which has been set. Meanwhile, according to Gibson and Donnelly (2009), the performance is the result of behavioral, cognitive, and psychological. Furthermore, Armstrong and Baron (1998), suggests that the performance is influenced by four factors were dominant, namely (1) the factors of leadership, which include quality, guidance and motivation, (2) personal factors which include motivation and commitment, skills and competences, (3) factor system that includes working facilities and a system of work, (4) situational factors that include the atmosphere of the working environment, internal and external elements. In this study the performance of limited significance as a behavior in accordance with the theory put forward by Colquitt (2009), the behavior of individuals based on a certain value in contributing to the achievement of organizational goals.

In addition to performance, leadership is a factor that can determine the success of an organization. According to Richard L. Daft (2005), leadership is influence relationship Among leaders and followers who intend real changes and outcomes that reflect Reviews their shared purposes. Furthermore Newstrom (2007) states that leadership affects the quality of work life, and subsequently the quality of working life affect performance, job satisfaction, and employee growth. In any organization is crucial leadership role reciprocation of an organization. This is in line with the opinion of Gibson et al. (2003) which says that the leader is an agent of change; a person whose actions can affect others, even beyond the effects of the actions of others. The leader must always seek to influence and motivate individuals to achieve several goals.

While Buhler (2001), states: to be effective, a leader overseeing self-managed teams cannot direct and control the team's effort. Instead, they must empower the team members so they can manage Reviews their own jobs. To be an effective leader, the leader must be able to support group work, encourage sustainable development, empowering members of the group, instilling confidence that the group members can complete a given job, developed a group identity, manage the conflict directly, and create change. Thus, the efforts of a leader effectively support group work toward a common goal. Stephen P Robbins (2008), suggests that leadership is a person attempts to affect people or other people that they have the will to do any work in order to achieve the goals of their organization or group. While Mullins (2005), states that there are many leader, the kind of power the leader, the characteristics of subordinates, the relationship between the leader and the group, the type and nature of the organization, the type of task that can be accomplished, technology, structure organization and management system, the type of problem and the nature of the decision of the leader, the nature and effect of the external environment, the social structure and culture of the organization, as well as the influence of national culture. From the opinion of several experts, as described previously, it can be synthesized that leadership style is the way the behavior of the leadership of the faculty (dean) is applied to influence, direct the activities of subordinates (chairman study program) to achieve the objectives of the study

program that can be measured through indicators: employment outcomes, standards of work, responsibility, and respect subordinates.

Working climate is one of the important variables that can affect the success of an organization Working climate is the atmosphere surrounding the organization concerned. In other words, the work climate is the atmosphere or the working atmosphere in an organization. According to Robbins (1991), organizational climate is a term that is used to load a series of behavioral variable that refers to values, beliefs, and principles that serve as a basis for an organization's management system. In further, Robbins explained that the organization has a minimum of five climate benefits. First, the benefits to the organization. In essence, organizational climate is a binder for employees. Second, the benefits of the development of the organization. Third, the benefits of the development of human resources. Fourth, the benefits to business development. In this case that a significant relationship between organizational climate with levels of organizational performance. Fifth, the benefit to the customer.

In addition, Schein (2004), states that the organizational climate is an archetype that is foundor developed by a particular group, such as studying counter measures problems adapted from the outside as well as the integration from within, which has been running quite well, is legally recognized. Therefore, it should be considered by the new members as the correct way to recognize, think and feel in relation to these issues. Working climate is not able to create job satisfaction and performance to employees tends to encourage them to run away from work and seek satisfaction from activities outside of work. Herzberg (2002) said that there are two factors that affect a person's work, namely intrinsic and extrinsic factors. Included in intrinsic factor is achievement, recognition, work, responsibility, and advancement. While included in the extrinsic factor is the interpersonal relationships between superiors and subordinates, engineering supervision, administrative policy, conditions of work, and personal life.

In addition to leadership and working climate, work motivation is one of the important variables to improve the performance of employees. Law and Globver (2000), said that the motivation is not da-pat defined individually, but have various notions that explain the desire, passion, drive, and the movement of individuals. While Ivancevich (2007), states that motivation is the attitudes and values that influence a person to act goal-oriented. It means that motivation to pay attention to the behavior or more specifically goal-directed behavior. The main reason why worker behavior is different is that the goals and needs also vary. Various factors, such as social, cultural, hereditary, and work affect behavior. Therefore, to understand the motivation of having to learn the needs of employees is increasing. While Gibson et al. (2003), stating that the theories of motivation may be classified as the satisfaction theory or the theory of the process. Satisfaction theories focus on factors within individual intensified, directing, keep and stop the behavior of the estuary will produce a good performance. Stephen P Robbins and Mary Coulter (2005) stated that motivation is "Refers to the processes that account for an individuals willingness to exert height levels of effort to reach organizational goals. Conditioned by the Efforts ability to satisfy some individual need. Although, in general". Further, he said "motivation Refers to the effort exerted toward any goal, we're referring to organizational goals Because our focus is on work-related behavior" Furthermore,

Robbins and Coulter said that there are three key elements of the definition, namely (1) the organization's efforts, (2) organizational objectives, and (3) the organization's needs.

According to Greenberg (2008), motivation is a series of processes that move, manage and maintain human behavior toward the achievement of objectives. While Newstrom (2007), states that motivation (work motivation) is a series of inner and outer strength that causes the workers chose the path of action and led to certain behaviors. Actions and this behavior are certainly to be realized in the form of achievement in order to achieve organizational goals. This is in line with the opinion of Colquit (2009), which states that motivation as a power circuit energetically from within and outside of the workers, started a business working relationship, and determine the direction (what are you going to do right now?), Intensity (how hard are you going to work on it?) and persistence (how long are you going to work on it?).Furthermore, it is explained that the modern man is not working solely out of fear, danger, directed, or merely want to get any reward.There are several reasons people work, the needs and demands of life, duties, and functions, encouragement of achievement, a sense of purpose, the atmosphere of a healthy working environment, and personal fulfillment.Based on the background as stated above, this study aims to examine the influence of leadership style, work climate and work motivation on the performance of the head of the study program FKIP on Private Universities in Medan.

Materials and Methods

The method was used survey method with causal techniques. As for the presence or absence of data, path analysis was used on analyzing the effect of one variable to another variable. This study was conducted in FKIP on private university in Medan. The study population was all the heads of the study program in FKIP on private university in Medan as many as 55 people. Samples were taken on the whole population.This research studied or analyzed the influence of one variable against another. There are four variables that were examined, namely (1) the leadership styles; (2) working environment, (3) motivation to work, and (4) the performance of the head of the study program. The instrument used in this study was a questionnaire. All instruments used for data collection piloted prior to 30 the head of study program FKIP on private university in Medan that are outside of Medan and then calibrated to see the validity of any existing statement.

Leadership style is the respondents' assessment of the way the behavior of the leadership of the faculty (dean) is applied to influence, direct the activities of subordinates to achieve the objectives of the study program is measured through questionnaires and filled by the chairman of the study program as respondents to the indicators: (a) the achievements of the work, (b) labor standards, (c) the responsibilities, and (d) respect.

Working climate is the respondents' assessment of the condition of the working environment or the working environment that supports employees in the performance of duties and work study programs are assessed through a questionnaire with indicators: (a) personal relationships, (b) reward and punishment, (c) facilities, (d) working conditions, and (e) policy.

Work motivation is chairman of the department of assessment of the motivation to Carry his duties in order to reach the work results in accordance with organizational objectives. Work motivation program chairman of the study was obtained through a questionnaire with indicators: (a) the encouragement to be responsible for the task, (b) the urge to overcome the problems in the work, and (c) the drive to achieve. Performance is an assessment of respondents to working achievement of the head of the study program is the result of the work accomplished in carrying out a duty that is measured through indicators: (a) professional development, (b) lead the delivery of education, research, and community service, (c) setting students, and (d) the budget and resources.

Data analysis was performed through two stages, namely descriptive and inferential. Descriptive data analysis was conducted to analyze the data that has been collected in order to obtain a picture of the characteristics of the spread of the value of each variable studied. Descriptive analysis is used in presenting the data; the central measure is the mean, mode, median, and range. The size of the deployment includes the variance and standard deviation. Presentation of data was using a distribution list and histogram. Inferential data analysis was conducted to test the hypothesis by using path analysis. All hypothesis testing is done by using α = 0.05. Before testing the hypothesis, first tested the normality of error estimated using the regression technique Lilliefors. Calculation of research data conducted by using Data Analysis program contained package Microsoft Excel and SPSS.

Results and Discussion

Statistical tests were conducted to examine the normality of distribution of errors in this study is Lilliefors test. The result of calculation shows the error estimates derived from normally distributed population. Further results of significance test of regression and linearity regression model showed significant and have relationship linearity significantly.Summary results of the analysis and statistical tests of the hypothesis can be seen in the following table.

Table 1. Summary results of the analysis and statistical tests of the hypothesis

No	Hypothesis	t-calculate	t-table	Decision
1	Leadership style direct influence positively to performance	2,602	2,000	Significant
2	Leadership style direct positive effect on work motivation	2,968	2,000	Significant
3	Direct influence positive work climate on performance	2,621	2,000	Significant
4	Direct influence positive work climate on work motivation	7,232	2,000	Significant
5	Motivation to work directly positive effect on performance	2,773	2,000	Significant

Hypothesis 1, which reads, positive leadership style direct effect on the performance of the head of the study program is significant. Based on empirical testing of the study found that leadership style is one of the variables that directly affect the performance of the variable head of study program. Leadership style

contributed 7.76% to the performance of the head of the study program; it means 7.76% variation changes the performance of the head of the study program is determined directly by the leadership style.

The results support the opinions expressed Armstrong and Baron, that the performance is influenced by four factors were dominant, namely (a) the factors of leadership, which include quality, guidance and motivation, (b) personal factors which include motivation and commitment, skills and competence, (c) factor system that includes working facilities and systems of work, (d) situational factors that include the atmosphere of the working environment, internal and external elements. Results of this study provide input that leadership style should be based on two perspectives, namely in terms of the process by which a leader must use its influence to reach organizational objectives, and in terms of the qualities of a leader must be able to characterize the attributes of a leader. Thus these findings further reinforce previously research results that prove that leadership style is a factor that significantly affect performance.

Hypothesis 2, which reads, positive leadership style direct effect on work motivation chairman of the study program is significant. Based on empirical testing of the study found that leadership style is one of the variables that directly affect work motivation variable head of study program. Leadership style contributed 4.82% of work motivation chairman of the study program, which means that 4.82% of the variation changes the performance of the head of the study program is determined directly by work motivation.

This study supports the results of the study Setiawan, Rifky Budi who found democratic leadership style, authoritarian leadership style, leadership style laissez-faire jointly affect the work motivation of employees at PT PLN (Persero) Regional Office of North Sumatra. Furthermore Warsit Smat, discovered simultaneously leadership styles (autocratic, democratic and laissez-faire) and significant positive effect on employee motivation in the regional office of the VI State Personnel Agency (BKN) field. Thus these findings further reinforce the results of previous studies that prove the leadership style is factors that significantly influence the work motivation.

Hypothesis 3, which reads, work climate positive direct effect on the performance of the head of the study program is significant. Based on empirical testing of this study found that the working climate is one of the variables that directly affect the performance of the variable head of study program. Work climate contributes 8.4% to the performance of the head of the study program, that is to say 8.4% variation changes the performance of the head of the study program is determined directly by the working climate.

The results are consistent with the findings of Dwiyanto. He found some contribution of organizational climate with the performance of employees in Kendal regency secretariat by 20.89%. Furthermore, the conclusion of research conducted Fiedler is that unpleasant situation combined with the leadership styles determine the effectiveness of the results to be achieved and will ultimately lead to satisfaction and performance. Good working climate is the atmosphere that can provide job satisfaction to the executive of the estuary would improve performance. Thus this study confirms previous research results that prove that leadership style is a factor which significantly influence job satisfaction.

Hypothesis 4, which reads, work climate positive direct effect on work motivation is significant. Based on empirical testing of this study found that the working climate is one of the variables that directly affect work motivation variable head of study program. Work climate contributed 5.97% to the chairman of the working climate study program, i.e. 5.97% of the variation changes in work motivation chairman of the study program is determined directly by the working climate.

This result is consistent findings Hermawan, who find there is the influence of organizational climate on work motivation structural officials in Kutai district. Further-more, Mohd. Nasir, Zaliza find a significant relationship between organizational climates with job motivation. Thus this study confirms previous research results that prove that the working climate is a factor which significantly influence the work motivation.

Hypothesis 5, which reads, motivation positive direct effect on the performance of the head of the study program is significant. Based on empirical testing of this study found that motivation is one of the variables that directly affect the performance of the variable head of study program. Work motivation contributes 11.3% to the performance of the head of the study program, meaning that 11.3% of the variation changes the performance of the head of the study program is determined directly by work motivation.

This is in line with the opinion of Armstrong and Baron who said that the performance is influenced by four dominant factors as mentioned above. Moreover, in line with what has been said Stoner that person's performance is influenced by internal factors and external factors. Internal factors that affect a person's performance among other talents, interests, motivation, and health. External factors that can affect performance include environmental, infrastructure and management. The results are consistent with the findings of Listianto, Toni who found there is significant influence work motivation on employee performance PDAM Surakarta. Furthermore Hernowo Narmodo and M. Farid Wajdi find the motivation and discipline to have a positive influence on employee performance BKD Wonogiri district. Results of this study indicate that pleasant working conditions certainly will be able to improve the performance of the people who are in the organization. Thus, this study confirms previous research results that prove that motivation is a factor that significantly affect performance.

Conclusion

There is positive effect on the performance of the head of the study program with leadership style of the Faculty leaders. This means that if the leadership style repaired, it will lead to increase the performance of the head of the study program. Leadership styles of faculty leaders also have a direct positive effect on work motivation. This means that if the leadership style repaired, it will lead to increase the motivation to work of the head of the study program. Furthermore, there is a positive direct effect on the performance of the head of the study program with working climate. This means that if the working environment is conducive, it will lead to increased performance of the head of the study program. Work climate also has a direct positive effect on work motivation. This means that if the working environment is conducive, it will lead to increase the motivation to work on the head of the study program. In addition to leadership style

and working climate, work motivation also has a direct positive impact on the performance of the head of the study program. This means that if employment increases the motivation, it will lead to increase the performance of the head of the study program.

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Teaching Vocabulary to The Second Year Students of SMP Negeri 10 Banda Aceh by Using Ball Toss Review Strategy

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Abstract

Vocabulary is one of the important factors in all language skills thus every student must master and learn it continually. However it is not easy for the students to study and improve their vocabulary so their vocabulary is still limited. There are some factors that make the students' vocabulary mastery very limited and one of them is method or technique that is used by teacher in teaching vocabulary to the students is not suitable or comfortable. The aim of this study is to find out if the second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy. This study is conducted by using quantitative research in case of experimental teaching. The population of this study is all students of the second year in academic year 2014/2015. Choosing class as experimental and control group is done randomly. The data gotten were analyzed by using t-test. The result of the study shows that the second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy. This can be proved from the result of this study where the result of t-score of post-test of the both group is 3.62. While the t-table for the degree of freedom 60-2 (58) is 1.67. So t-score is greater than the t-table (2.62 > 1.67).

Key Words: Vocabulary, ball toss review strategy

Introduction

Vocabulary is one of important aspects in language thus it is must be learnt and mastered by students. It is impossible for a student or everybody to master language skills without vocabulary mastery. Edward (2000) said "Vocabulary is one of the important factors in all language teaching, a student must

continually be learning words as they learn structure and as they practice sound system". In addition, vocabulary is word that has meaning and function (Bruce, 1991). Someone cannot improve his or her listening, speaking, reading, and writing without mastering it. Therefore, vocabulary is very important to support all of the skills in English.

Furthermore, Edward (2000) said that research in first and second language acquisition suggest that initial teaching priorities for language areas should be vocabulary, grammar, and pronunciation. Therefore, the English teacher has to be able to organize teaching and learning activities, they have to give materials by using a suitable technique and master the lesson effectively. Especially in learning vocabulary, teachers must make the students able to memorize such words in English language and group of new words. The statements above mean, vocabulary is important to teach and teachers must try to find the most effective way to teach it.

There are many problems of language teaching that can be identified as research subjects. We could discuss about methods, material selection, and others. In this research its identified that teaching technique for improving the students' vocabulary of SMP Negeri 10 Banda Aceh. In this research, the writer uses ball toss review strategy to improve the students' vocabulary. The school is chosen as location of this study because the students' vocabulary mastery of the school is still very limited. There are some factors that make the students' vocabulary mastery very limited, one of them is method or technique that is used by teacher in teaching vocabulary to the students is not suitable or comfortable. It makes their motivation low in learning and developing their vocabulary. This information was obtained when the preliminary study was conducted. Therefore she wants to develop the students' vocabulary mastery by using ball toss review strategy which is never used before.

Allen (1999) says that teaching vocabulary is teaching new labels for familiar concepts. For example, if our students already know the concept about fair/unfair, so we are teaching vocabulary with the words Ball toss review strategy is one of strategy that can be used in teaching vocabulary, it will help teacher in learning English. That strategy is a fun way to reinforce, practice and review vocabulary concept in content areas. Therefore the ball toss review strategy as strategy of teaching than can be applied for teaching vocabulary because it makes the students more fun. Thus, based on the discussion above, the writer assumes that using ball toss review strategy can improve the students' vocabulary. Based on the problem of the study thus the aim of this study is to find out if the second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy.

Materials and Methods

The method design in this study is *experimental quantitative research.* The population of this study is all students of the second year in academic year 2014/2015. The total population is 121 students who are composed of four classes; class VIII[1], class VIII[2], class VIII[3], and class VIII[4]. Furthermore, data sampling was takes from the second year students of at SMP Negeri 10 Banda Aceh in the academic year

2014/2015. Since there are four classes of the second year thus the sample of this study is the students who are taken two of the fourth class. In this case, the students of class VIII[1] are taken as control group and the students of class VIII[4] are taken as experimental group. Every group consists of 30 students thus the total sample is 60. Choosing class as experimental and control group is done randomly.

To carry out the data needed, was applied one technique which is considered appropriately, namely test. To support the data, the writer conducts an experimental teaching. In conducting experimental teaching, the writer conducts teaching and learning process for four meetings with allocated time 80 minutes for each meeting. In teaching vocabulary, the experimental class is conducted by applying ball toss review strategy and to find out their ability in mastering vocabulary. While the control is not given treatment. At the first meeting, the second meeting and the third meeting, the writer will teach them with applying ball toss review strategy. At the last meeting, the writer gave them test in order to find out their ability in mastering vocabulary after applying ball toss review strategy in teaching.

Next, the test is used in order to find out the students' ability in mastering vocabulary after applying the technique. So, the research would identify the effectiveness of ball toss review strategy used by the writer in improving their ability in mastering vocabulary. The test will be given to the both groups.

The data analyzed by using t-score formula. The t-score is one of the statistic tests that is used to compare the t-score and t-table that has the significant differences. If the t-score is smaller than t-table, it means the experiment is denied. But if the t-score is bigger than-table, it means the experiment is accepted. In this study, experimental group is the students who are taught by applying ball toss review strategy meanwhile control group is the students who are taught without using ball toss review strategy.

Result and Discussion

For the need of achieving the aim of this study, the writer intends to present some collected data which gotten through test. In teaching learning process, a test is needed to obtain result of teaching. Besides, it useful to find out how far the students understand the materials that have been taught by the teacher. The test should also help the teacher to as certain which part of the language programs enable they have been found difficulty by the class. Because of that, the writer gave the test to the students. The result of the test can be seen in the following table.

Table 1. The Test Score of Experiment Group

No	Students' Number	Score	X_1^2
1	347	70	4900
2	348	60	3600
3	349	65	4225
4	350	60	3600
5	351	70	4900
6	352	65	4225

No	Students' Number	Score	$X_1{}^2$
7	353	60	3600
8	354	70	4900
9	355	60	3600
10	356	55	3025
11	357	60	3600
12	358	40	1600
13	359	55	3025
14	360	70	4900
15	361	60	3600
16	362	65	4225
17	363	50	2500
18	364	60	3600
19	365	55	3025
20	366	60	3600
21	367	65	4225
22	368	65	4225
23	369	70	4900
24	370	75	5625
25	371	50	2500
26	372	65	4225
27	373	70	4900
28	374	65	4225
29	375	70	4900
30	376	60	3600
		1865	117575

$$\sum X_1 = 1865, \quad \sum X_2 = 117575, \, where \quad \bar{X} = \frac{\sum X_1}{n_1}$$

$$= \frac{1865}{30} = 62.17$$

$$S_1{}^2 \quad = \frac{n \sum X^2 - (\sum X)^2}{n(n-1)}$$

$$= \frac{30(117575) - (1865)^2}{30(30-1)} = \frac{3527250 - 3478225}{30(29)} = \frac{49025}{870} = 56.35$$

$$= \sqrt{56.35} = 7.51$$

Table 2. The Test Score of Control Group

No	Students' Number	Score	$X_2{}^2$
1	286	60	3600
2	287	70	4900
3	289	65	4225
4	290	60	3600
5	291	55	3025
6	292	60	3600
7	293	40	1600
8	294	45	2025
9	295	50	2500
10	296	60	3600
11	297	50	2500
12	298	70	4900
13	299	65	4225
14	300	45	2025
15	301	60	3600
16	302	50	2500
17	303	70	4900
18	304	75	5625
19	305	65	4225
20	306	60	3600
21	307	65	4225
22	308	70	4900
23	309	50	2500
24	310	70	4900
25	311	65	4225
26	312	50	2500
27	313	65	4225
28	314	70	4900
29	315	60	3600
30	315	50	2500
		1790	109250

$$\sum X_1 = 1790, \ \sum X_2 = 109250, where \ \ \bar{X} = \frac{\sum X_1}{n_1}$$

$$= \frac{1790}{30} = 59.67$$

$$S_1{}^2 = \frac{n\sum X^2 - (\sum X)^2}{n(n-1)}$$

$$= \frac{30(109250) - (1790)^2}{30(30-1)} = \frac{73400}{870} = 84.37$$

$$= \sqrt{84.37} = 9.19$$

Varian sample is;

$$S^2 = \frac{(n_1 - 1)S_1{}^2 + (n_2 - 1)S_2{}^2}{n_1 + n_2 - 2}$$

$$= \frac{(30-1)7.51 + (30-1)9.19}{30 + 30 - 2} = \frac{217.79 + 266.51}{58} = \frac{484.3}{58} = 8.35$$

$$= \sqrt{8.35} = 2.89$$

Next, the data were analyzed by using the following formula:

$$t = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$= \frac{62.17 - 59.67}{2.89\sqrt{\frac{1}{30} + \frac{1}{30}}}$$

$$= \frac{2.5}{2.89\sqrt{0.06}}$$

$$= \frac{2.5}{0.69}$$

$$= 3.62$$

From statistical analysis, it is found that the t-score of post-test of both groups is 7.02 The critical value of t-score for degree of freedom (30 +30 - 2= 58) is 1.67 at the level of significance 0.05. The result indicates that t-score (3.62) is bigger than t-table (1.67). This means that there is a significant difference between the two groups. The second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy.

After conducting the research, it can be seen clearly the result found in the field of research. The result of pre-test of the both groups shows there is no significant difference between two groups. It is logical because the students of experimental group has not been given treatment. Then, the writer applies using ball toss review strategy to experimental group while this strategy is not applied to control group. The result of study shows there is a significant difference between the two-groups. It is proved that the t-score of post-test is bigger than t-table.

Based on the evident fact, it is underlined that in this research, null hypothesis (Ho) is rejected and alternative hypothesis (Ha) is accepted. In other words, the hypothesis is accepted and well proved, as the writer has previously hypothesis that: The second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy.

Conclusion

Based on the result of study and its analysis, some conclusions can be drawn as follows:

1. Teaching vocabulary to the second year students of SMP Negeri 10 Banda Aceh make the students interested and motivated because their ability in mastering vocabularies increases.

2. The second year students of SMP Negeri 10 Banda Aceh who are taught vocabulary by using ball toss review strategy get higher score than those who are taught without using ball toss review strategy. It can be proved that the result of this study shows the t-score of post-test of the both group is 3.62 while t-table for the degree of freedom 60-2 (58) is 1.67. So t-score is bigger than t-table (3.62 > 1.67).

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The Identification and Clarification of the Animal Species of Invertebrata in the Rice Cultivation at Seumet Village Montasik District of Aceh Besar

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Abstract

The purpose of this research is to enable us to determine the animal species of invertebrata in the rice cultivation at Seumet village Montasik district of Aceh Besar regency. The research used Index Point of Abundance (IPA) method with formula: $H' = -\Sigma Pi \ln Pi$. The result from this research shows that the animal species of invertebrata in the rice cultivation Seumet village Montasik distrinct of Aceh regency are Componotus pennsyluanicus, Melanophus diferentialis, Tenodera sinensis, Phlaeoba fumosa, Oxya chinensis, Leptocorisa acuta, Pomacea canaliculat, Coccinellidae Sp, Ischura senegelensis, Anax Sp, Dysdercus cingulatus, Olios, Mycalesis horsfieldi. The level of invertebrata's animal species that were found in rice cultivation were between -2.395 and -2.730, which means the level of invertebrata's animal species at this area falls in medium category.

Key Words: Identification, clarification and studied media

Introduction

Identification is the first process to clarification the animal it also the basic of taxonomy activity. Pedigo (2013) said that: every live creature have their own characteristic. The characteristic needs to clarification the live creature. It purposed to make homogeneous to named the animal, until we know them exactly. The clarification make by grouped into any level that called taxonomy. Hayati (2011) said that identification is a job to search, gather, and knowing the characteristics of individual taxonomy that varied and include them into a taxonomy. Pracaya (2007) said that identification is a separated process, as a short identification is determine the similarities and difference among two element has same or not, to identification the animal need some of this requirement: a) The knowledge about characteristic and

taxonomy term. b) Knowledge about the railing book even from others resource. c) the experience that marked have been make the identification.

Beside that, we capable to understand any kind of live organism by clarification system. The clarification is grouped some varied of animal or plan into each group. The grouped is arranged like accordance with its level, there is from the smallest to the biggest level. The efforts to grouped it (clarification) in the system from one side is accordance with development of scientist which has given illustration of families relation in the development history between each other animal (Gembong, 1993).

The oldest clarification of animal will finding in the *Aristoteles*'s written that famous at 384-322 before Masehi. He had been the first scientist that learned nearly most of all academic field, including Zoology. There were so many systematic expert whose have given their ideas beside *Aristoteles,* finally *Karl Linnaeus (*1707:1778) created Binomial system (Bi= two, nomen= name of two name) or Linnaeus system that we used right now. The Binomial system is the way to write or named to organism using 2 (two) words. The category that used to sequence the clarifying by Linnaeus are *kingdom, phylum, class, order, family, genus and species* (Nurhayati, 2004).

The animal of invertebrata would be found inland waters or mainland, one of them is in the rice cultivation. The rice field is one of their habit that would we found animal species of invertebrata with their varied phylum, one of them usually find out there from *artrhopoda* phylum. Juliatono (2009) said there are generally finding 8 (eight) species of predator spider in rice field ecosystem, so that in the South East ASIA from his rice field ecosystem could to collection and identifying 342 spider species including 132 *genus* and 26 *family.*

Naturally the individual of organism in an ecosystem marked by inventory in the each same species community, ecosystem component and the superiority functional, the ecosystem stabilization depend on structure tropic network and interaction among communities component including herbivore (pest) carnivore (predator and parasite) (Untung,1996).

Materials and Methods

The research began from 2015 July until August at Seumet village Montasik district regency of Aceh Besar. In the rice field area of Seumet village, used *Index Point Of Abundance* (IPA) method, its determine the observation area to invertebrata's animal at rice field location and using Shannon-Wienner formula to count the index species variedfrom this community like below:

H = -$\sum$ Pi In Pi

H   = Varied Index

Pi   = Important Value

Note: H'< 1   = Both of varied and community are low

    1<H'<3 = The varied is low and the community is medium

     H'>3   = Both of varied and community are high

Results and Discussion

Based on research result in Seumet village Montasik district regency of Aceh Besar, there finding 2 (two) phylum, *Mollusca* and *Arthropoda*.

Table 1. Result of index species varied on Station I, II, III

NO	Spesies/ Nama Ilmiah	IPA 1	IPA 2	IPA 3	TOTAL
1	Turret Bumblebee / Lance *(Coccinellidae)*	4	1	3	8
2	Cotton Bumblebee *(Dysdercuscingulatus)*	5	0	4	9
3	Water Bumblebee (*Acilussulcatus*)	2	0	2	4
4	Padang Grasshopper *Melanophusdiferentialis*	3	1	1	5
5	Green Grasshopper *Oxyachinensis*	2	3	0	5
6	Thin Grasshopper *Artactomorphacrenulata*	5	8	0	13
7	Belalang Sembah *Tenodorasinensis*	0	5	2	7
8	Brown grasshopper *Philaeobafumosa*	0	3	0	3
9	Rice field Snail *Pilaampullaceal*	7	2	5	14
10	Around Snail	3	0	0	3
11	Black Snail *Neritamelanotragus*	1	0	0	1
12	Dragonfly *(AnaxSp)*	3	6	1	10
13	Capung Jarum Sawah *Ischurasenegalensis*	6	4	3	13
14	Brown butterfly	0	4	0	4
15	Yellow spider	4	1	0	5
16	Brown spider	2	1	1	4
17	Big ant black *Componotus Pennsyluanicus*	5	2	1	8
18	Cow Insect	5	3	1	9
19	Small animal (Umeu)	12	0	1	13
20	Insect with pungent smell *Leptocorizaacuta*	13	0	0	13
21	Caterpillar	1	3	0	4
22	Snail Egg	5	4	2	11
	TOTAL	88	51	27	166
	H'	-2.730	-2.505	-2.395	

Source: Field Survey 2015

By the research result in the rice cultivation of Seumet village, there are 4 (four) species animal from *Mollusca* phylum that consist of *Gastropoda* class, and also *Arthropoda* phylum that consist of *Insecta* and *Arachnida* class amount 18 species. There are any animal species that are not identifying from them.

Generally invertebrata's animal is actually be pest for rice. The main factor is because of predator enemy decrease for a half of rice pest animal. The research has been perform at station 1, 2 and 3 in different location. The data took twice in every point of location.the sample taken in the morning by any tool serves in every post began at 07.00 until 10.00 o'clock.

By the list over are looks index species varied (H') the research of invertebrata's animals species in the rice field of Seumet village, Montasik district regency of Aceh besar amount about -2,395 until -2,730, with low category. The result of station I H= -2.730, station II= -2.505, and stasiun III H = -2.395. The most of invertebrata's animal found is from *insecta* class in the first level. The total of insecta are very much amount 34 species, *gastropda* phylum *mollusca* class have 3 species and 1 of them is not identifying the name.
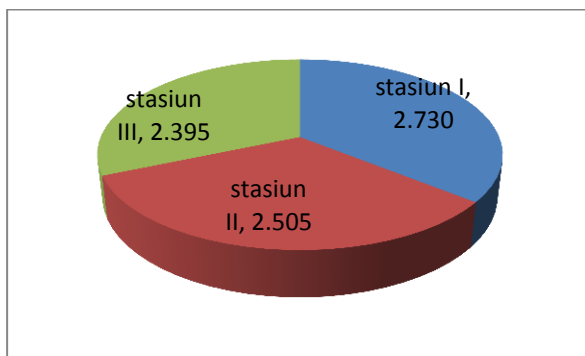
Figure 1. Varied index in every station

The main factor of insecta totals because of supplied food are enough for them, and than the temperature and weather around of the rice cultivation still so natural and get attack yet anymore. So, most of invertebrata's animal in the rice field of Seumet village, Montasik district, regency of Aceh besar are phylum *Mollusca* and *arthropoda* since research time, but there were so much of animal identifying yet anymore, so that its still unknown the name and the advantages or disadvantages of the animal for the environment.

Conclusion

The conclusion of the research result are:

1. The animal species of invertebrata generally found around of rice cultivation in the Seumet village, Montasik district regency of Aceh Besar amount 180 animals from two phylum, there are mollusca and atrhopoda phylum. The animals finding are: *Componotus pennsyluanicus, Melanophus diferentialis, Tenodera sinensis, Phlaeoba fumosa, Oxya chinensis, Leptocorisa acuta, Pomacea canaliculat, Coccinellidae Sp, Ischurasenegelensis, Anax Sp, Dysdercus cingulatus, Olios, Mycalesishorsfieldi.*

2. Among of invertebrata's animals finding the mostly one is phylum *Atrhropoda*, from insecta class.

3. The Index Species varied shows that variety level of invertebrata's animal that has found in the rice cultivation about -2,395 until -2,730, this matter shows us that variety level of invertebrata species in that place is medium category.

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Application of Learning Somatic, Audio, Visual, Intellectual (SAVI) Through Loss Programed Lecturer decline to School (PDS)

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Abstract

Program faculty assignment was followed by all the lecturer fields in courses Elementary School Teacher, I was one of the professors assigned to teach at the elementary school as a reference for the development of skills in understanding the real conditions of the Field Practice Teaching. The data analysis used qualitative techniques. the results of the application indicates that the application of learning somatic, audio, visual, intellectuality (SAVI) through reduction program lecturers to the school (PDS) to provide new innovations for existing teachers in schools, as well as the science of extracting useful for lecturers who do teaching practice in schools. SAVI learning methods can be a reference for learning in class. This is because the model of learning by using the SAVI method gives children the opportunity to be able to use all five senses to work to identify a vocabulary and try to adapt this learning with games adapted to children's physical activity with the aim to train children to think and solve problems, me as the Implementer recommends SAVI learning methods can be used by educators as a reference for implementing a more optimal learning, And also the material taught is limited because it involves things that contain something basic, (objects that can be touched , heard , felt, and physically present in the concrete) ,If applied to an element of learning the teacher should be a good model and perfect as key to the success of this method lies in the expertise of teachers in learning to improvise in order to prepare good.

Key Words: Lecturer decline to school, SAVI learning methods

Introduction

As an educator, learning is a situation which was to create a harmonious ethical will is embedded in the thinking and attitudes of learners; learning is a conscious plan to do that teacher education actors in

providing teaching and learning process. Learning is like the heart of the educational process, learning tend to produce graduates with good study results as well, and vice versa.

PGSD as courses that concentrate on educating elementary school age children and preparing prospective elementary school teachers who have the competence, the necessary existence of a commitment of the courses through a tangle of coordination lecturers at primary schools in order to create a synergy in realizing the vision and mission of PGSD as formal institutions that prepare elementary school teachers qualified candidates. Empirical data shows there is still a lecturer who teaches at PGSD not have a direct appreciation of the condition and *where about* of learning in elementary school, so this will create a constraint associated with efforts to achieve the prospective primary school teachers are expected. As an illustration, however lecturer PGSD eyes of his students would indirectly constitute a practical example when they are taught in elementary school. If the appreciation of the faculty of education at primary school atmosphere is not owned by a small possibility of the creation of prospective elementary school teachers who are competent and qualified to materialize.

Fulfillment appreciation to the faculty of education at the elementary school atmosphere through the assignment of lecturers to schools in Bireuen which has become the partner school Almuslim University apparently needs to be appreciated by all parties, both by the study program and the university PGSD Almuslim. With the implementation of this activity is expected to increase the qualification of primary school teachers, and for lecturers Prodi PGSD appreciation of the elements of school can become an integral part in the task as a daily activity of lecturer that will prepare candidates for primary schoolteachers.

1. That is the Purpose of Program Lecturer decline to School?
2. How Learning Implementation Results with SAVI method in elementary school?
3. What are the elements of Somatic Learning, Audio, Visual and Intellectual (SAVI) is applied to the program Lecturer decline to School?

Materials and Methods

SAVI stands Somatic, Auditory, visual and intellectual. Theories that support learning SAVI is Accelerated Learning, the theory of right brain / left; triune brain theory; choice of modalities (visual , auditory and kinesthetic); the theory of multiple intelligences; education (holistic) overall; learn by experience; learning with the symbol. SAVI is one of the methods proposed by DAVE MEIER in Accelerated Learning (AL) Accelerated Learning as a method which is based on research on the brain and learning. In this case a variety of methods and media and learning fully involved Learning SAVI *on recognition of* cognitive science modern states learn the most good is emotional, the whole body, all the senses, and with all the depth and breadth of personal, respecting individual learning styles other to realize that people learning different ways. Associating anything with the nonlinear nature of reality, creative and alive.

SAVI is one method proposed by Dave Meier in accelerated learning (AL) Accelerated Learning as a method which is based on research on the brain and learning. In this case a variety of methods and

media and learning fully engaged. AL method is applied are not rigid but varies depending on the subject and the learning itself. Besides the important things that should be underlined, AL is based on the principle of teaching is not implementing a system. So the AL is more concerned with the results, the method only as a means to achieve the learning objectives. In the meantime, AL concentrates learning in children, while teachers act as facilitators, organizers, conservator, and transmitters. To apply vocabulary mastery of early childhood in the English language, one of the methods that can be used is the learning method SAVI According to Meier (2000: 91) teaching methods SAVI is learning that combines physical movement with intellectual activity and the use of all the senses that can have great impact on learning. Physical movements applied in learning SAVI is an expression that must be done in learning English vocabulary and doing a physical movement that involves gross motor skills to be able to carry out the instructions of the teacher in English. Learning methods and encompasses four elements SAVI .That's are:

a. Somatic: Learn to move and do
b. Auditory: Learn to speak and listen
c. Visual: Learning by seeing and observing
d. Intellectual: Learning by solving problems and thinking.

SAVI and Learning Media

Feldman (2008) argued that: progress is the result of learning, lasting change on behavior based on experience or adaptation to the environment. And the students' learning environment is strongly influenced by the socialized way, According To Hurlock (2004) there are four factors that affect the child's ability to socialize, namely:

a. The opportunity to mix with people around from different backgrounds of age and culture, many and varied experience in dealing with people in the environment, it will be the more things that can be learned, to be a provision in improving skills socialization.
b. The interest and motivation to mingle more enjoyable experience gained through association and social activities, interests and motivation to get along will also be growing. This situation gives a greater opportunity to improve socialization skills. Provision to improve the social skills.
c. The existence of the guidance and teaching of others, which is usually a "model". However this socialization skills can develop in a way "cobasalah" (trial and error) experienced by the child, through the experience of hanging out or to "mimic" the behavior other people in the mix, but it will be more effective if there is guidance and teaching are deliberately given by people who can be used as a "model" good for the kids to hang out.
d. The existence of good communication skills possessed child.

Active Learning with Application of SAVI is also supported by an understanding that learning cannot stand alone but also the use of media used to support the nature of a child's learning is, with the motion, audio,

visual and merging audio and visual can bring learning Intellectual, According to the WinaSanjaya (2010) in his book Learning Strategies Oriented Education Processing Standards classify various learning media by their nature are as follows:

a. Audio media, is media that can only be heard alone or media that only have sound elements, such as radio and voice recording,

b. Visual Media, the media can only be viewed, not an element of sound. Visual media can facilitate understanding and strengthen memory. Visual can also cultivate students' interest and can provide the relationship between the contents of the subject matter in the real world,

c. Audiovisual media, the type of media besides sound contains elements also draw a picture that can be seen

Results and Discussion

After the application of SAVI Methods it's done in 4 meetings 2 meetings in high class for class 4th and 6th and then proceed Grade 2 each have a different case finding;

Implementation Of SAVI	The Difficulties	Pictures Of Implementation
Implementation at sixth Graduate (Kelas 6 SD)	1. Students are not familiar with the situation of learning by doing direct practice 2. Pronunciation of students not look good because when pronouncing always done together so that students who are difficult to pronounce the vocabulary is not visible shortcomings 3. Students are not flexible in expressing the spoken vocabulary that can be analyzed here likelihood happens that teachers rarely demonstrate the material being taught by gesture or invite students to cheerful in learning	
Implementation at Fourth Grade (Kelas 4 SD)	1. Classes are taught so that students have diverse character lecturer little difficulty when directing students to form a group. 2. Students are not accustomed to hearing apersepsi that begins with a	

	song so it took a little longer so that all students can digest and follow it. 3. Active learning that has been given by the teacher is a child out answers on the board so that when students get questions in the form of listening to them too difficult to concentrate.	

Cases that have been presented on the results of the lecturers teaching practice in schools is not a new hall that is too worried because I think as a professor who teaches in the class has a suggested settlement to the school to do that;

    a. Learning SAVI it begins with a willingness to collaborate with teachers and the principal class guardian,

    b. SAVI Learning involves elements of Active Creative Effective and Fun is not easy but it is also not difficult if the teacher can be more trouble to prepare the material that is interesting to students as apersepsi that begins with the singing but the rhythm of the update (not outdated),

    c. Especially in learning foreign languages such as English students should be more attention to their ability in four aspects there are some students can stand out in their ability to speak and write, and there are seemingly less in speaking and writing.

Conclusion

When talking about the impact means we are talking about the effect seen in the class after the implementation of learning methods SAVI, in primary schools (SD 2 Juli) Introduction Methods SAVI is still relatively new to them, at the level of the sixth grade only new students are introduced to creative learning and active as well as fun, and the conclusion that the adoption of SAVI in primary schools (SD 2 Juli) is helping children to learn in a fun and with the assignment of professors to school teachers can see concrete examples of how to align planning, learning, and assessment for children, not only through the exercise in writing but oral and behavior of students was also influential , such as the implementation is done on a class 4 using visual and audio media see the new students in learning and this makes them interested and happy.

Application of SAVI method proposed by Dave Meier (2000) Accelerated learning (AL) Accelerated Learning as a method which is based on research on the brain and learning. In this case the four elements of Learning was, SAVI can group in four stages:

1. Preparation phase (preliminary activities)

At this stage the teacher aroused the interest of students, provide a positive feeling about the learning experience that will come, and put them in a situation of optimal learning in this stage the teacher can

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start by using the navigation body with the aim to explore movement with the alignment of the brain through the game who trains children think.

Specifically include things:

    a. Providing a positive suggestion

    b. A statement that benefits students

    c. Provide clear and meaningful goals

    d. Arouse curiosity with the game

    e. Create physical and emotional environment that is positive.

    f. Create a sense of great passion to follow novelties

    g. Soothes the fear of failure in children

    h. Removing barriers and distrust child

    i. Stimulate the curiosity of students.

    j. Invites learners fully involved since the beginning.

    2. The delivery stage (core activities)

At this stage, teachers should help students find learning new material by means of dancing, fun, relevant, engaging the senses, and is suitable for all learning styles it involves Auditory, Visual and Intellectual. The things that teachers can do:

    a. Trials of collaborative and knowledge sharing

    b. Observations on the object being studied

    c. The involvement of the entire brain, the whole body with the introduction of the material

    d. Interactive presentation

    e. Pictures and objects intact in its recognition

    f. a variety of ways to suit the child's condition

    g. Exercise to find something to play in physical activity

    h. The learning experience in the real world contextual

    i. Training solve the problem by answering questions about the material that is introduced

    j. The activity of problem solving

    k. Reflection and articulation of individual

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Design Research: Sex Education Learning by Using Islamic Roles for Early Childhood

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Abstract

Sex education using Islamic role is very important given from an early age children, it aims to provide an understanding of body parts, sexual identity, sexual function, and to give guidance tools using Islamic role in protecting and maintaining intimate organs. It is therefore obviously appropriate to teach them about privacy around the parts of their body. In this research we tried to design a sex education teaching material (also teaching media) using Islamic role for the teachers and parents. We used a design research as a means to achieve the goal of the research. This type of research was conducted in three steps: (1) *preparing for the experiment, (2) experimenting in the classroom, and (3) conducting retrospective analyses*. This research involved 30 kindergarten children of TK B1 & B2 of TK Khairani, Aceh, and one teacher of that school. Based on the findings from the researcha sex educational design created in the form of learning trajectory or concept maps that can beused by teachers in teaching sex education to early pre-school aged children.

Key words: Design research, sex education, Islamic roles, early childhood.

Introduction

The period of early childhoodis often called the golden age because it is important tobe educated appropriately qualified to becomea human future.Family and Institutions of Early Childhood Education is an important factor in optimizing the children growth and development of their physical, mental, social emotional and spiritual. Here, children can acquire the knowledge and understanding ofhis worldso that children early age get a variety of skills that are not only physical skills, but also mental skills.

Along with increasing of various learning as a form of optimization of growth and development, young children also required recognition and understanding of sex education. Provide sex education to early childhood arguably not easy. Many parents and teachers still feel embarrassed and stiff to talk about sex

with their children. Even some of them still think that talking about sex is taboo. Where as provide sex education for young children is very important because it gives an understanding of the functions of the sexual apparatus and a natural instinctnascent, guidancein sarana protecting and maintaining the sex organs, as well as provide understanding and behavior of healthy relations hips. Through proper sex education is expected early age children can protect them selves and avoid sexual harassment (Chomaria, 2012).

The phenomenon of sexual a buse that often happens in Indonesia especially in Aceh, creates a fear for all parties, especially parents in keeping the development of the child. Lembaga Bantuan Hukum (Legal Aid Institute/LBH) of Children,Banda Aceh recorded at least13 children who are victims of sexual violence in Aceh through out 2013 (regional.kompas.com/read/2014/04/22). That cases area small part ofthe events that occurred, there are still a lot of sexual abuseare never reported because of shame or fear to be revealed.

However, the other real problem is the lack of a frame work standard or appropriated media both parents and teachers in teaching sex education to children. More over, how to explain it and selecting the right words is still being debate. Therefore, this study tries to design a sex education teaching material to early childhood that includes guide/learning stages and appropriate media using Islamic roles/nuances.

Materials and Methods

In this research, design research was chosen to acquire the research questions and to achieve the research goals. According to Akker et al (2006), Design research may becharacterized as:

1. Interventionist: the research aims at designing an intervention in the real world;
2. Iterative: the research incorporates a cyclic approach of design, evaluation, and revision;
3. Process oriented: the focus is on understanding and improving interventions;
4. Utility oriented: the merit of a design is measured, in part, by its practicality for users in real contexts; and
5. Theory oriented: the design is (at least partly) based upon theoretical propositions, and field testing of the design contributes to theory building.

The basic research methodology that will be discussed is: (a) research methodology; (b) research subjects; (c) hypothetical learning trajectory and local instruction theory; (d) data collection, and (e) data analysis including reliability and validity, that are:

The first phase starts with the arrange the learning goals, combined with anticipatory thought experiments in which one envisions how the teachinglearning process can be realized in this classroom. This first step results in the explicitformulation of a conjectured local instruction theory that is made up of three components: (a) learning goals for students, (b) planned instructional activities and the tool that will be used, and (c) a conjectured learning process in which one anticipate show student's thinking and

understanding could evolve when the instructional activities are used in the classroom. (Gravemeijer, 2004).

Then, pilot experiment (*firsly experimental research*) need to be done as a bridge between the initial design phase and stage of experiment teaching. The purpose of the pilot experiment is to examine the ability of students and the adjustment beginning with the HLT.

Teaching Experiment

In teaching experiment, instructional activities are tried, revised, and designed on a daily basis during the teaching experiment (Gravemeijer, 2004). The teaching experiment aimed at collecting data for answering the research questions. While the teaching and learning process occurs, the teacher investigates whereas the students do the activities.

In this phase, all data during experiment are analyzed. Hypothetical Learning Trajectory is compared with students' actual learning. Overall, the phases that will be passed in this study can be resumed in the followingdiagram:
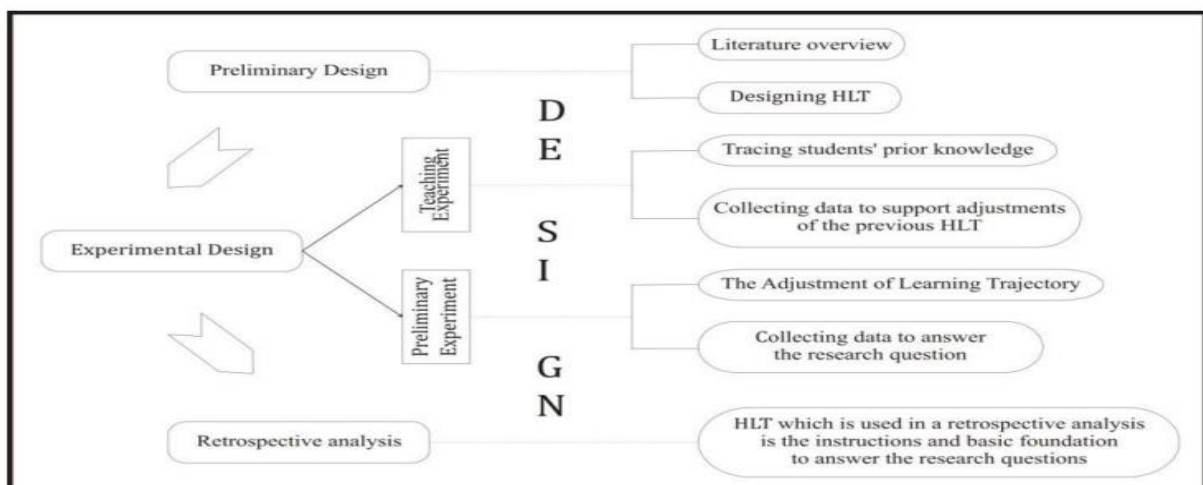
Research Subject

Around 30 kindergarten students of TK B1 & B2 in TK Khairani and a teacher *were involved in this research*. The students were about 4 to 6 years old.

Hypothetical learning trajectory and local instruction theory

Conjectures of what will be going on in the classroom situation within implementation of the instructional designs are so called Hypothetical Learning Trajectory (HLT) (Mariana, 2008). According to Gravemeijer (Wijaya, 2008), in designing an instructional activity, a teacher should hypothesize and consider students' reaction to each stage of the learning trajectories toward the learning goals. This hypothesize is elaborated in a day-to-day basis of a planning for instructional activities that is called as hypothetical learning trajectory. A hypothetical learning trajectory consists of learning goals for students, planned instructional activities, and a hypothesized learning process (Gravemeijer (2004).

Local instruction theory

Local instruction theory is defined as a theory that provides a description of the envisioned learning oute for a specific topic, a set of instructional activities and means to support it (Gravemeijer, 2004; Wijaya, 2008). From the local instruction theory, a teacher could design a hypothetical learning trajectory for a lesson by choosing instructional activities and making conjectured learning process of the students.

For seks education learning in this research, we try to conducted a local intructional theory about it from the literaure and the curricula in a learning trajectory below:
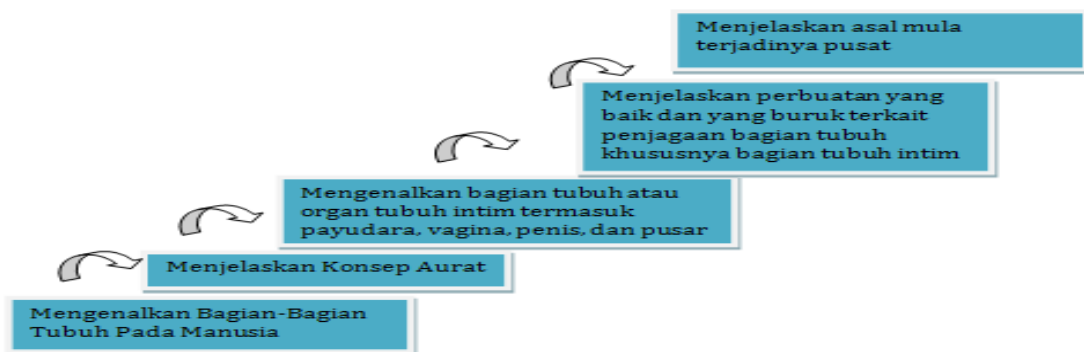
Goal

The purpose ofthis research is to help teachers and parents in teaching or giving information about sex education using Islamicr ole to children in early age. Assistance provided can be form the stage of the sex education learning, or the use of appropriated word can be use by teaching or parent, so that the knowledge can be conveyed properly to the children. The products resulting from this research is the valid Local instruction theory that is supported with learning material and appropriate media.

Learning Activities in HLT

The First Activity:In this activity the teacher invites students to discuss about the parts of the human body, especially the senses and functions as well as other parts of the body(eg hands, feet, stomach, knee, etc.). In this case the teachers also in still the concept of nakedness (aurat) to be guarded by men and women. Teacher started learning by displaying two posters containing pictures of each boy and girl (figure 1). On the poster the teacher wrote the names of body parts that will be introduced to the students. The teacher explained that the poster referred to part of the body. Activity were followed by questioning and answering about the good and the bad clothes (which can coverthe nakedness) of boys and girls. The teacher explains that the genitalia are the body parts that should not bed is closed to others and must be maintained. If it is seen by others, God (Allah) will be angry (we would sin).

The purpose of this activityis the student can recognize and know the parts of human body in both men and women and defines the boundaries of genitaliain males and females.
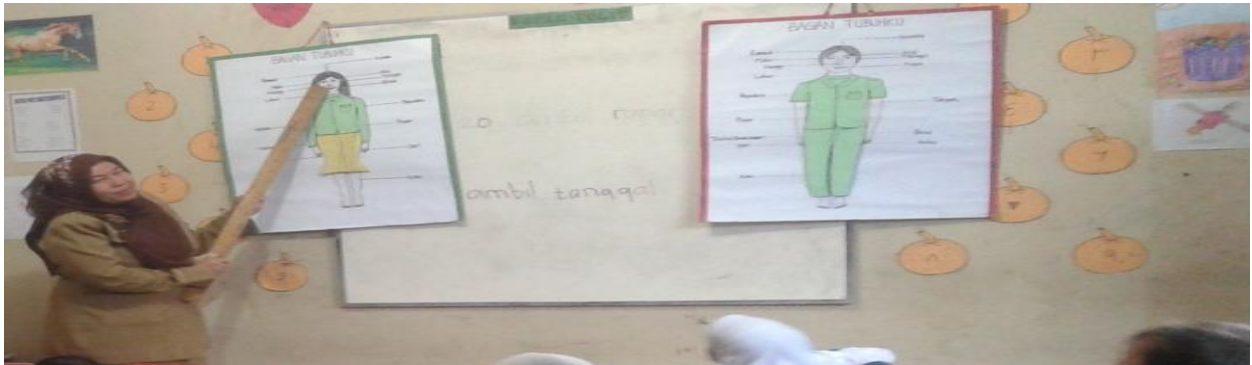
Figure 1. Introduction of sex educationin theinitial design

Second activity: In this activity the teacher invites students to see the differences in body shapes of men and women. In addition, in this activity the teacher introduces the term of body parts like breasts, navel, and gen it als (penis and vagina) to students. at this meeting, teachers also use the poster (figure 2)but with different desaign that boys have used clothes and trousers, while girl has been wearing the Islamic head scarf/wear (long skirt and using veils).

The purpose of this activityis the student can mention the difference of two objects (shape of male and female body) physically. in addition,through this activity,children will also be able to introduce the gender differences between men and women as well as the functions and the scientific name of the gen it als.

The third activity, In this activity the teacher explains that children should keep the parts of the body in clothes (breast and gen it als) and must keep it from some one else than a parent (especially the mother). Teachers do aquestion and answer session with the students about the actions good and bad in keeping the members of the body, for example: Can you show your part of the body that are covered with to your

friends?, If there are foreigner swho want to hold your vagina or penis, would you allow it?. Teacher also explained that children have to shout out loud.if there are people who hold their penis or vagina. The purpose og this activity is students can distinguish the right and the wrong thing related the body parts in particular keeping the gen it als.

The fourth activity: In this activity the teacher tells the origin of the human being, if the baby was born from the mother's abdomen and eating food eaten by the mother. Teachers lead students to look at other organs, namely navel. The teacher explained to students that the function of the navel Is as a food distributor from mother to baby. The teacher explains to students the origin of the navel, when the pregnant mother and the baby is in the mother's stomach, the food eatenby the mother will be channeled to the baby through the umbilical cord. When the baby is born, the umbilical cord will be cutby adoctor, so that why in baby stomathc there is a hole. The purpose og this activity: that students can find out the origin of the human navel.

Conjecture of students thinking

Thinking and understanding of students insex education is different, besides the students still looks sheepishin mentioning thein timate parts that will be introduced by the teacher, but in every activity the researchers tried to guide the student in accordance with a design that has been designed. For example: when the teacher introduced the members of the body thatc overed by shirt or pants, it is expected that students can mention the terms tha they understand likenenen (for breast), pepek (for vagina), birds (for venis), etc., so that eventually the teacher can introduces scientific terms in accordance with the age of children.

Results and Discussion

Based on the analysis of the pilot experiment then there area few changes to the initial learning trajectory (LIT). For example, in the activity of introducing the navel, the teacher can also explain the occurrence of pregnant naturally with a simple language. This is done because the pilot experiment, there is student who mocked that his friend was pregnant because her stomachlook big.Therefore, spontaneously teacher explained that "the origin of the pregnancy because the mother and father had to make the wedding party (duduk pengantin) and has invited people to homes. If children have not been great (adult) and have not held awedding party then it should not get pregnant, it's a sin". Here is we can see the learning trajectory revised (figure 4) based on the resultsof reflection (restrospeksi analysis) at pilot experiment stage.So the initial trajectory learning becomes like the following picture:

The results of which are designed in alearning trajectory (figure 4) is then test edin Experiment teaching. Some of the activities that change is in third activity based on the results obtained during the pilot experiment. In that activities,there was a student sasked,

Students   : whether she was pregnant, because her stomach look big?,

Aska   : (crying)

So that the purpose ofthe third activity eventually became students may know theorigin of the human naveland Pregnancy. In this activity the teacher tells theorigin of thenavelandand pregnancy. By the time the mother is pregnant, the baby is in the mother's stomach and fed through the navel ofhis mother. While pregnancy is the condition oft he mother when the baby is in the mother's stomach. At the time the baby is inthe mother's stomach, then themother's stomach will be great, so you cando not hit the mother's stomach, because the baby will be sick. If there are children whose have big stomach, it was not because there was a baby but because you are healthy. The women can get pregnant if she has been great and has been married (duduk pengantin), already also make party at home so that people willcome to your house. So if the kids are not big and not married (duduk ngantin) so it cannot become pregnant.

Menjelaskan perbuatan yang baik dan yang buruk terkait penjagaan bagian tubuh khususnya bagian tubuh intim

Menjelaskan asal mula terjadinya pusat dan kehamilan

Mengenalkan bagian tubuh atau organ tubuh intim termasuk payudara, vagina, penis, dan pusar

Menjelaskan Konsep Aurat

Mengenalkan Bagian-Bagian Tubuh Pada Manusia
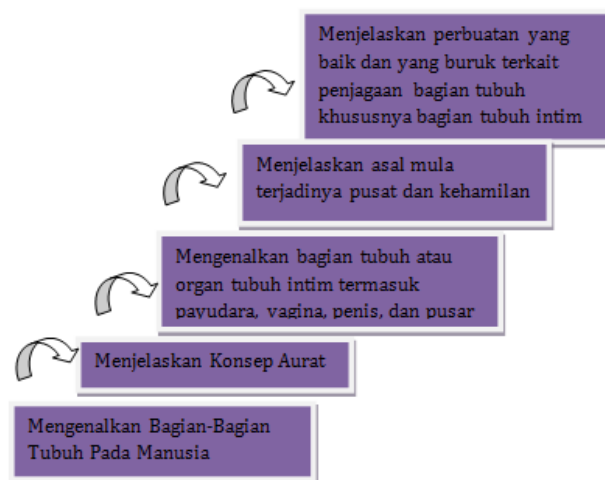
Conclusions

Design teaching of sex education using Islamic role that had been developed consisting of a learning trajectory sex education that includes 5 stages of learning. The five stages are introducing parts of humans body, explains the concept of nakedness (aurat), introducing intimateparts of body including breast, vagina, penis, and navel; Explaining the origin of the navel and pregnancy, Explaining about the good and the bad deeds of keeping parts of the body especially the intimate body parts.

Local instruction theory produced is departing from the learning trajectory or a concept map that begins by understanding the concept of gen italia. Moving on from the concept of nakedness, the design was developed to introduce the gen it also, anus, naveland the early formation of a pregnancy. So from the results is expected that students can keep them selves from sexual disorders which threaten.

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Teaching Materials Design Problem Solving Based on open-ended Problems in Learning Math to Develop Reasoning Ability in Primary Teacher Education Students

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Abstract

Problem solving becomes an important focus in the learning of mathematics. In each competency standard, there is one basic competency that leads students to be able to use mathematical concepts to solve problems. In many cases, students often feel that an algebraic approach is the only approach that can be used to solve a problem. On the other hand, many elementary school mathematics textbooks also tend to emphasize the role of the traditional story problems to develop problem solving ability. Story problems are only used as a part of the end of the chapter, but they are not always present along the learning process. Based on these problems it could be understood that designing a teaching material which includes the questions to build capabilities based on open-ended problem solving and reasoning skills that students could develop is something very urgent for Almuslim University's PGSD Students. This research aims to produce teaching materials based on open-ended problem solving in mathematics to improve the reasoning ability of Almuslim University's PGSD Students. To achieve these objectives, implementing methods of research and development should be planned in two years. The results obtained so far in the first year are designed and tested teaching materials based on open-ended problem solving to develop mathematical reasoning skills in Almuslim University's PGSD Students. This study thus recommends the teaching materials based on open-ended problem solving must be reapplied in the learning process of mathematics at the Almuslim University PGSD study program. It aims to look at the effectiveness of the learning process and to increase PGSD students' reasoning skills.

Keywords: Teaching materials based Open Ended Problem solving, mathematical reasoning ability.

Introduction

From year to year, problem solving emerged as one of the main concerns at the level of school mathematics. The National Council of Supervisors of Mathematics (NSCM) states that "learning to solve the problem is the main reason for studying mathematics" (NSCM, Position Paper on Basic Mathematics, 1977 in Wahyudin, 2010). The phrase is not changed much in the years behind it, and instead has become a subject which is getting stronger. The National Council of Teachers of Mathematics (NCTM) states explicitly that "Problem solving is not just the goal of learning mathematics, but is also a major tool to do" (NCTM, 2000). Problem solving as a central focus of the mathematics curriculum not only the ability to solve problems is the reason for studying mathematics, but also provides a context in which concepts and skills can be learned (Wahyudin, 2010). In addition, problem solving is a vehicle to build the skills of high-level thinking.

In many cases, the students seem to feel that the problem can only be solved in one way only, specifically for the type of problem that is being taught (eg a matter of displacement, age, about the mix, and so on). Students often feel that an algebraic approach is the only approach that will work. This is groundless presumably because the mathematics learning processes for these students were only taught the approach to solve story problems and the like. In fact, there are a number of teachers who teach mathematics in elementary jump over the material that will be taught when in the learning process met with problems solving (Bodily, 2012). This indicates that the learning problem solving almost rarely never even touched a teacher in the learning process in elementary school.

Based on experience during teaching advanced math courses in Primary School Teacher Education (PGSD), advanced program whose participants are elementary school teachers, showed that they are not familiar with the problem-solving model. This fact is also supported by research Tiurlina (in Supriya, 2009) that the understanding of the concept of student PGSD still weak and below 50%. PGSD student character based on observations Supriya (2009) was the first, PGSD students tend to please the problems regularly shaped so that when given the problems that are not routine they tend to be difficult. Second, in general PGSD students' ability in solving mathematical problems can be categorized as medium and low, rarely high-ability students. Third, the atmosphere of teaching and learning activities PGSD students tend to be lack active.

Factors questions presented in mathematics text books today so factors other than the ability of teachers. Most of the questions in the text book are only related training (practice related) on the topic of a chapter count. If students only doing what the latter is taught to them, then they will be able to answer the invitation correct 60-80% from about text books, even though without reading because (Wahyudin, 2010). Many elementary school mathematics text books also tend to emphasize the role of the traditional story problems to develop problem solving skills. Some general weakness in Wahyudin (2010) contained in elementary mathematics text books, among others: 1) Problems story is only used as a part of the end of the chapter, is not always present along the learning; 2) Problems story seems intended only to master the concepts being studied in a particular unit, did not integrate topics from various units and subjects; 3)

Problems stories tend to focus on one specific interpretation regarding an operation, such as the only reduction or only take the division and thus narrows the student's perspective on how the operations can be interpreted in various ways; 4) About the story written conditioned so that students look for key words to interpret what to do rather than focusing searching for clues in the context of the action takes place; and 5) Questions about the story that is too simplistic applications to be demonstrated.

All the above observation suggests that we must revisit the ways teachers teach elementary school math problem solving to students in the classroom, if the teacher intends to build the development of students' thinking in mathematics. A story problem that can be resolved by simply applying the operations that are currently being studied is actually not a problem. About the story that contains information that is necessary for the solution is not really a challenge. About the story that leads students to copy the procedure outlined at the beginning of the page do not test the student's ability to solve problems. It is no exaggeration if the problem solving ability of students in Indonesia is low.

The low problem-solving ability can be seen from a report in The Trends in International Mathematics and Science Study (TIMSS) in 2011 that the mathematics achievement of students Indonesia was ranked 38th out of 42 countries with an average score of 386 (Pure, 2013). The TIMSS assessment frameworks include contains dimension and cognitive dimension. Cognitive dimension consists of four domains, namely: know the facts and procedures, using concepts, solving routine problems and using reasoning. Further results of the study The Programme for International Student Assessment (PISA) 2009 states that students' mathematical abilities Indonesia was ranked 61st out of 65 countries with an average score of 371 (Tjalla in Murni, 2013). The ability of the students appear to be low in terms of finding algorithms, interpret the data, and using the steps in solving problems.

From the description above would be understood that designing a teaching materials that are contained within the questions open-ended problems to develop students' problem solving ability and improve mathematical reasoning skills PGSD students as a potential elementary school teacher is something very urgent. It is intended that the prospective teachers have adequate provisions regarding the understanding of problem solving when it will be taught in elementary school. The emphasis of teaching materials based problem solving is the open ended, as this approach promises an opportunity for students to investigate various strategies in a way that he believes in accordance with the ability to elaborate the problems.

Several studies relating to the design of teaching materials open ended, among others, reported by Emilya, et al (2010), Sulianto (2009), and Anwar, et al (2014). In the study Emilya, et al (2010) has produced a product about the open-ended loop material for class VIII SMP valid and practical. Valid validator drawn from the results of the assessment, in which all states are good validator based content, construct, and language. In addition the validity of open-ended questions is illustrated after the validation analysis item on the small group of students. Practical drawn from the test results of a small group in which most students can complete the open-ended questions were given. (2) prototype about the open-ended being developed have the potential effect positively on the reasoning of students, it is seen with

the emergence of various solutions the students' answers, and the first test of students categorized and excellent totaled 29 students, while in the second test good and very good student, totaling 26 students.

Some activities in problem solving activities proposed in the design of teaching materials include: open-ended problems (short open-ended problems); application problems of everyday life (applied real-life problems); and investigation of mathematics (mathematical investigations). The teaching materials produced will be used as a recommendation in mathematics for PGSD students at the Almuslim University

Materials and Methods

In line with the objectives to beachieved in this study, namely to produce teaching materials problem solving in mathematics to develop the skills of mathematical reasoning PGSD students at Almuslim University and then apply them in the learning processof mathematics in PGSD students at Almuslim University, this study used methods Research and Development/R&D (Sugiyono, 2010).

verall work will be completed in two stages (two years), with details of activitiesin the first year will be implemented in six phases namely; 1) collecting information onthe processof learning mathematics in the aspect ofproblem solvingis done inlectures PGSD Almuslim University, 2) Design ofteaching materials problem solving based on open-ended, 3) Validation of the designaims to assess the design ofteaching materials by presenting some experts(matter experts and specialists media) to identify the weaknesses and strengths of the teaching materials are designed, 4) Improved design validation results, 5) trialof teaching materials problem solving based on open-ended both trialsin limited or wide, and 6) Revision of teaching materials based test try a limited basis and broad.

Results and Discussion

Preliminary Study and Design Subjects

Based on field studies obtained the data that the lecturer in lectures related to mathematics often give problems solving, but still weak students to understand and solve the problems of the problem solving. Students still lacking in understanding the meaning given problem so difficult to find solutions to problems. Lecturers should explain in advance the purpose in question or a statement given in the questions presented. Based on the questions and answers with students, it is also due for at school rarely get questions/problem solving type, more on procedural matters or which typically exist in school text books. Further more, students are still focused that any given problem has only one answer/ solution, is not convinced that there are questions that have more than one answer. The next student recognition that when they would resolve a problem/math problems, they tend to think that the algebraic approach is a solution to resolve the matter.

The data obtained and collected at the stage of preliminary studies are used as draft design problem solving teaching materials based on open-ended. In the preparation of teaching materials, the team compiled material that will be the focus of the material in the form of teaching materials lattice design

teaching materials based on open-ended problem solving. This is to facilitate researchers to provide restrictions on the teaching materials to be produced. In this instructional materials, researchers raised four areas, namely the problem of numbers, flat wake, wake up space, and measurement. Furthermore, the draft has been designed teaching materials handed over to a team of experts as a validator to check the validity, depth, feasibility, and some other assessment components so that this teaching material deserves to be tested. The components of the assessment by experts in Annex teaching material assessment instruments based on open-ended problem solving.

After receiving the returnof teaching materials that have been inspected expert team to revise the teaching materials and perform calculations on the quality of teaching materials based on the assessment sheet materials, eitherby amaterial or media expert. From the calculation ofthe quality of teaching materials based on open-ended problem solving based on expert assessment of material, obtained an averagerange ofquality scores in both categories, only two sub-chapters are getting enough category that chapter wake up flat material and geometry.

The completeresults ofthe calculation ofthe quality of teaching materials by material experts and media specialists in An nexquality of teaching materials based on open-ended problem solving. The summary can be seen in Table 1 and Table 2 below.

Table1. Calculation of Instructional Materials Quality-Based Problem Solving Open Ended By Expert Content

No	Material	Teaching Material	Percentage Ideal (P)	Category Subjects
1	Number	Teaching Material1	80%	Good
		Teaching Material 2	80.8%	Good
		Teaching Material 3	82.1%	Good
		Teaching Material 4	73.8%	Good
		Teaching Material 5	83.8%	Good
		Teaching Material 6	80.4%	Good
2	Two-dimentional figure	Teaching Material 1	70.0%	Enough
		Teaching Material 2	76.7%	Good
		Teaching Material 3	73.3%	Good
		Teaching Material 4	77.9%	Good
3	Geometry	Teaching Material 1	62.9%	Enough
		Teaching Material 2	77.5%	Good
		Teaching Material 3	82.5%	Good
		Teaching Material 4	80.4%	Good
4	Measurement	Teaching Material 1	80.4%	Good
		Teaching Material 2	77.1%	Good

Table 2. Calculation of Instructional Materials Quality-Based Problem Solving Open Ended By Expert Media

No	Aspects of Instructional Materials	Percentage Ideals (P)	Category Subjects
1	Size of teaching materials	70%	Enough
2	The cover design	75%	Good
3	Content design teaching materials	73%	Good
4	Business like	73.3%	Good
5	Communicative	80%	Good
6	Dialogue and Interactive	80%	Good
7	Conformity with the development of learners	70%	Enough
8	Compliance with the rules of language	70%	Enough
9	The use of terms, symbols, oricons	80%	Good

Based on Table 1 and Table 2 above can be understood that the design of teaching materials based on open-ended problem solving that has been generated can betestedin the learning processof mathematics at the Almuslim University PGSD study program. The emphasis of the experts is when in the process of testing the teaching materials that will actually see the students' ability to respond to any given problem. If the problem is too high with the ability of students, then the matter should not be maintained in this teaching material, but replaced by other issues or revised in accordance with the level of student ability.

Table 3. Results Limited Testing Data

Activity	N	Average	Deviation Standard	t_{count}	df	t_{tabel}	Sig.	H_0
Trials 1	35	7.66	5.145	6.908	68	1.995	0.000	Rejected
Trials 2	35	19.94	9.178					
Trials 2	35	19.94	9.178	7.086	68	1.995	0.000	Rejected
Trials 3	35	38.26	12.229					
Trials1	35	7.66	5.145	13.645	68	1.995	0.000	Rejected
Trials 3	35	38.26	12.229					

Instructional MaterialsTestingStudy Stage

Teaching materialstestingcarried outin two steps, namely:

1.   Limited Testing

Limited testing done on one unit of the course the number of 35 students. This test is done by testing the test three times, the first trial was held on14 March to 4 April 2015 and the first test held on 6 April 2015,

trial 2 was held on7 to 11 April 2015 and a second test conducted on 13 April 2015, and the third trial was held on 15 to 18 April 2015 and the third test is done directly on the last day execution limited trial on April 18, 2015. Table 3 shows that the average value of two larger trials and differs significantly from the value of test 1 (7.66>19.94; and 6.908 t_{count}>t table1.995). The average value of 3 larger trials and differs significantly from the value oftest 2 (38.26>19.94; and 7, 086t_{count}>t_{table}1.995). The average value of 3 larger trials and differs significantly from the value of test 1 (38.26>7.66; and t_{COUNT}13.645> t_{table}1.995). The conclusion isthatthe hypothesized model of proveneffective based on limited testing.

2. *Wider Testing*

Wider testing carried out on three units in PGSD Studies Program, the unit 2-A, 2-B and 2-C by using an experimental model design one group pretest-posttest. Each unit is tested over three times, the trials 4, 5 trials, and trials 6 as the sustainability of limited trials that have been carried out. Prior to testing materials, for each unit are given a pretest. Each unit is given the treatment of learning by using teaching materials based on open-ended problem solving revised results of testing on limited test. Trial wider done three times testing the test, the test 4 held on 21 April to 22 June 2015 and the first test conducted on June 24, 2015 for the third unit, test 5 held on 27 June to 2 July 2015 and tests The second was held immediately on July 2, 2015, and the trial of six held on 6 to 8 July 2015 and the third test carried out on July 9, 2015. Teaching materials are said to be effective when the value testing to 5 is greater than 4, and 6 trials is greater than 5. Trials pretest results for the three groups of the same, so that its significance was tested only posttest results. Furthermore, the test results on all three units can be shown consecutively in Tables 4, 5, 6 below.

Table 4. Data results from Pilot Broader at Unit 2-A

Activity	N	Average	Deviation Standard	t_{count}	df	t_{tabel}	Sig.	H_0
Trials4	40	12.25	5.527	26.529	39	2.023	0.000	Rejected
Trials 5	40	27.50	5.306					
Trials5	40	27.50	5.306	15.600	39	2.023	0.000	Rejected
Trials 6	40	50.33	10.847					
Trials4	40	12.25	5.527	35.710	39	2.023	0.000	Rejected
Trials 6	40	50.33	10.847					

The average value of 5 larger trials and differs significantly from the value of the test 4 (12.25>27.50, and 26.529t_{count}>t_{table}2.023). The average value of 6 larger trials and differs significantly from the value of test 5 (50.33>27.50; and 15,600t_{count}>t_{table}2.023). The average value of 6 larger trials and differs significantly from the value ofthe test 4 (50.33>12.25, and 35.710t_{count}>t_{table}2.023). The conclusion was that effective teaching materials on the unit 2 A, as eachtested produce valuetends to be higher.

Table 5. Data Results from Pilot Broader At Unit 2-**B**

Activity	N	Average	Deviation Standard	T_{counnt}	df	t_{tabel}	Sig.	H_0
Trials 4	40	13.00	4.867	25	39	2.023	0.000	Rejected
Trials 5	40	29.03	4.891					
Trials 5	40	29.03	4.891	19.411	39	2.023	0.000	Rejected
Trials 6	40	53.63	9.679					
Trials4	40	13.00	4.867	33.127	39	2.023	0.000	Rejected
Trials 6	40	53.63	9.679					

Based on Table 5 above shows that the average value of 5 larger trials and differs significantly from the value of the test 4 (13.00> 29.03; and 25,000 t_{count}> t_{table} 2.023). The average value of 6 larger trials and differs significantly from the value of test 5 (53.63> 29.03, and 19.411 t_{count}> t_{table} 2.023). The average value of 6 larger trials and differs significantly from the value of the test 4 (53.63> 13.00, and 33.127 t_{count}> t_{table} 2.023). The conclusion was that effective teaching materials on the unit 2B, because each tested produce value tends to be higher.

Table 6. Data results from Pilot Broader A t Unit 2-**C**

Activity	N	Average	Deviation Standard	t_{count}	df	t_{tabel}	Sig.	H_0
Trials 4	38	13,.58	4.847	23.690	37	2.026	0.000	Rejected
Trials 5	38	28.26	5.049					
Trials 5	38	28.26	5.049	16.082	37	2.026	0.000	Rejected
Trials 6	38	50.42	9.585					
Trials 4	38	13.58	4.847	34.411	37	2.026	0.000	Rejected
Trials 6	38	50.42	9.585					

Based on Table 6 above shows that the average value of 5 larger trials and differs significantly from the value of the test4 (13.58>28.26, and 23.690t_{count}>t_{table}2.026). The average value of 6 larger trials and differs significantly from the value of test 5 (50.42>28.26, and 16.082t_{count}>t_{table}2.026). The average value of 6 larger trials and differs significantly from the value of the test4 (50.42>13.58, and 34.411t_{count}>t_{table}2.026). The conclusion was that effective teaching materials on the unit 2C, because each tested produce valuetends to be higher.

Conclusion

a. In the process of mathematical lecture, the lecturer had tried to facilitate students to provide open ended questions although not optimal.

b. Has obtained a draft design of teaching materials based on open-ended problem solving in mathematics to develop reasoning skills PGSD students. The design of the teaching materials will be evaluated and refined again. As for the design of appropriate teaching materials carried out by students of PGSD Almuslim University is (1) conduct a preliminary study of the lecture and learning in elementary school that occurred during this time; (2) design gratings teaching materials which includes the indicators to be achieved by students based on preliminary studies; (3) describes these indicators in the form of questions based on open-ended problem solving taking into account the ability of students based on field studies; (4) Instructional materials have been validated by two experts, namely matter experts and media specialists; (5) revise teaching materials in accordance with the advice of the validator; (6) teaching materials have been tested on a limited basis and wider; and (7) the questions at the time of trial solved by the students in groups numbering 3-4 students and the results are presented.

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Improving Students' Speaking Skill Through Pro Power One Software As Media (A Classroom Action Research At First Semester Of English Department In Almuslim Universiy)

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Absract

Many students had difficulty in understanding speaking material.They seemed to be discouraged to participate actively in the classroom speaking activities through which their chance topractice speaking English was ample. This condition was found to be due tothe fact that the studentswere not knowledgeable about the speaking materials, resulting in their low interest to learn how to speakbecause the speaking materialswere not familiar to them. The purposes of the research are; to know how Pro Power One Software media improve students' speaking ability, to describe the students' respond in implementing Pro Power One Software in teaching. In this research the qualitative and quantitative data were combined by using tests, observation checklists, questionnaires and field notes as instrument to find the result of teaching and learning process in the classroom. Based on the research findings, it was analyzed thescore of each cycle. The first cycle the researcher found the score of test was about 62.7and the second cycle found about 75.5. The observation checklists for teacher in cycle one about 63% and the cycle two was 91.3%. It means that the teacher's performance in cycle two could increase the score in the first cycle. Beside that, the observation checklists for students in cycle one was 51% and the cycle two increased into 81%. It means that the students' performance in cycle two also increased than cycle one. Based on the data findings, the researcher concluded that Pro Power One Software media could improve students' speaking ability and the students had good respond to Pro Power One Software media during teaching and learning process. The researcher found the score of questionaires about 4.59 or belonged to "Strongly Agree". Pro Power One Software media made all students active and it was a fun in learning speaking in the classroom.

Key words: Speaking, Asking and giving opinions, Pro Power One Software as media.

Introduction

Speaking is one of the processes of building and sharing meaning through the use of verbal and non-verbal symbols, in a variety of contexts. Speaking is very important to the people however its important, for many years teaching speaking has been undervalued and English language teachers has continued to teach speaking just a repetition of drills or memorization of dialogues.

Speaking is an important aspect in language learning. By speaking, we can convey information and ideas, and maintain social relationship by communicating with others. In addition, a large percentage of the world's language learners study English in order to be able to communicate fluently. Some people often think that the ability to speak a language is the product of language learning. They assumed that speaking is a crucial part of language learning process. Many language learners regard speaking ability as the measure of knowing a language. That is why the main purpose of language learning is to develop proficiency in speaking and communicative efficiency. They regard speaking as the most important skill they can acquire and asses their progress in terms of their accomplishments in spoken communication.

Furthermore, the objective of teaching speaking at higher education or university as stated in Directorate General of Higher Education (2008) is aimed at training the students to be able to interpret the content of various oral texts and respond to them in interactive and interesting activities. Then, the students are expected to be able to speak effectively in various contexts to convey information, thought and feeling as well as to build social relationship.In conducting the curriculum, some English lecturers who implement the curriculum frequently view changes as an extra work. In addition, some English lecturers usually also feel reluctant to learn new teaching methods or techniques and competencies as an attempt to increase their abilities. It has also been found that English lecturers tend to reject pedagogical strategies or teaching methods that are different from what they are using. They are reluctant to change or modify their current instructional strategies and understandings of classroom practice.

Based on teaching practice in the universityl, the reseacher found several problems in teaching speaking. The problems faced by the teacher; were (1) The teacher difficult to find the effective and interesting technique or media in teaching speaking. (2) The teacher still used old method when teaching learning process. (3) The teacher did not give inspirations for students and motivate them to study English in speaking class. (4) The classroom activities tended to be teacher-centered. The researcher also found some problems faced by students in speaking ability, such as; (1) The students did not invite to participate actively in speaking class activities to increase their chance of using English. (2) The students still did not capable to understand the material of speaking. (3) The students did not interest to learn speaking material because speaking material not common for them and based on their main speaking is difficult. (4) The students were seen to be passive in the teaching-learning process.

Based on the problems above, the reseacher choose a suitable media to improve students competent in speaking skills. There are several media for English teaching that can help the teacher to build or create a situation where language is used actively. To gain success in teaching speaking skill, the researcher

suggests the use Pro Power One Software as one of the media to boost students' speaking skills in class. Activities in Pro Power One Software typically involve students in real or realistic communication, where the successful achievement of the communicative task they are performing is at least as important as the accuracy of their language use.

In order to create an efficient or good atmosphere of teaching and learning speaking in the classroom, the teachers are required to be creative and have initiative to find out some ways that can enable students to speak English well. Therefore, it is important for the teacher to apply Pro Power One Software in teaching speaking. Pro Power One Software is helping to enhance the educational process for students and teachers alike. It has been shown to improve core pronunciation and speaking skills for students of all abilities, including those with physical or language-based learning disabilities, as well as English Language Learners. It is also widely used in computer applications courses to familiarize students with emerging interfaces. Pro Power One Software is a video clip that can act as a model and motivator to help students practice speaking English.

Pro Power One Software has advantages in teaching speaking, it can improve speaking ability, provides a practical idea which has been exploited in speaking lessons and the students can learners with the integration of simple technology devices. The researcher believes Pro Power One Software can solve the problem faced in the speaking class activities and make students more interested to communicate in English. Students should use the opportunity to express their opinions, feelings, and attain information on dealing with real situation. The writer has chosen the Pro Power One Software as communicative language teaching. Pro Power One Software was applied by some researchers, such as: First was applied by Fatimah Puteh "Evaluating Speaking Segment of Pro Power I Software (2009)". The result of the reserach show that Pro Power One Sofware improve students speaking ability and has contribute to increase students motivation in speaking.

The second was applied by Tran Huong Quynh, "The Pro Power One Software Experience for Better Speaking (2009)". The result of the research show this media can increase the learning outcomes and efficiently exploit the power of the equipment in teaching speaking skills. By this media, the students easily to know the better prounoun of the words from Pro Power One Software Media. The last was applied by Chin Luan Phan Van, "Using Software to Improve first-year English majors' Speaking: an action research at Hong Duc University (2010)". The result of this research, such as: (1) Pro Power One Software is effective in teaching first-year English majors' Speaking. (2) By using Pro Power One Software, most of the students reduce their common mistake when their speak English.The reseacher interest to investigate this technique is effective or not in teaching speaking for the students because most of the students are less ability in speaking. In doing this research, the researcher offers one effective media in teaching speaking namely Pro Power One Software. This research is done as an effort to help the students improve their speaking. Finally, the researcher thinks that this research is considered important to be done soon or else the problems will get worse.

Materials and Methods

This research is a classroom action research (CAR), which is intended to give contribution to the improvement of teachers' knowledge, style, technique and method in the classroom, and insight the behavior both teacher and students in applying pro power one software as media which is located at Jalan Almuslim Matangglumpangdua Bireuen. It used action research design in order to answer the research problems. In addition, the primary aimed in the research in increasing the quality of teaching and learning especially in speaking class. This study tries to describe the implementation of media in improving teacher ways of teaching speaking. This CAR employs a collaborative research design. The researcher and his collaborative classroom teacher directly conducted the study. To scope with the classroom's problem in the teaching speaking, the researcher applied the pro power one software during the learning process. Here, the researcher acted as the practitioner who teaches students with the proposed.

Results and Discussion

Student's Score Improvement

The last analysis that the researcher made was analysis the students' score in speaking test to the students through Pro Power One Software media. The researcher measured the students' speaking score based on the students result test of the cycle 2.

Based on the data had been collected in cycle 2 by researcher from improving the students' speaking ability by using Pro Power One Software media which is focused on *Asking and Giving Opinions* material, it was found that two students got 85 score, two students got 83 score, one student got 80 score, one student got 79 score, one student got 77 score, seventeen students got 75 score, two students got 74 score, four students got 73 score, four students got 72 score and two students got 71 score.

All scores that had been organized above was belonged to level "Good". It meant is the teaching and learning process in cycle 2 was definitely successful and reached the criteria of success. The test of cycle 2 was also done to find the mean score of the students' ability in mastering speaking skill by implemeted the Pro Power One Software media.

Based on the test of the cycle 2, the reseacher found the result of the teaching learning process. The researcher determine the mean score of the students test was 75,5. The level of catagorized was pointed to level "Good". It can be concluded that the students' achievemet in speaking skill especially by implementing Pro Power One Software media had been increasing the students' speaking ability especially in *Asking and Giving Opinions* material. Reflecting to the creteria of success the result of test of cycle 2 had the significant improvement to the criteria of success. The researcher analyzed all of the score by using a formula that was introduced by Winarsunu (2002) : $\bar{x} = \frac{\sum fx}{N}$

Where $\bar{x}$ = Mean Score

$\sum$fx   = Total Score all of Students

N   = The Number of Samples

$$\bar{x} = \frac{\sum \text{fx}}{N} = \frac{2717}{36} = 75.5$$

Students' Response

The researcher used questionnaire to know the respond of students. The reason for choosing questionnaire were (a) to know the students' responds and motivation to the teaching learning process during implementing Pro Power One Software media, (b) it can collect the information from a large number of students. Based on the result of questionnaire which were distributed to students after cycle was fully perfect, the researcher found the result that the students felt happy and motivated during teaching learning process and were not burdened them when they were start studying speaking. The reasercher desinged the questionnaire which consisted of 15 quetions and the questionnaires in Bahasa Indonesia in order to make the students could be able to understand the question easily.

Table 1. The Summary of the Evaluation of Students Percerption based on   Sugiyono

No	Evaluation	Symbol	Score
1	Strongly Agree	SA	5
2	Agree	AG	4
3	Undecided	UN	3
4	Dissagree	DA	2
5	Strongly Disagree	SD	1

The reseacher analyzed the students' responds and motivation toward the implementation of Pro Power One Software media in speaking class could be seen in the table below:

Table 2. The Result of Questionnaire

No	Variable measure	Questionaire number	Total score	Mean score
1	Studying happily	1,3,7,8,12	852	4.73
2	Easy to comprehend	4,14,15	494	4.57
3	Become motivated in studying	2,9,10,11,13	826	4.59
4	Working together with friends	5,6	321	4.46
	Mean score			4.59

Based on the table above, the researcher found the result of the questionnaire of the students' respond and perceptions of the implementation in teaching speaking through Pro Power One Software media in the classroom. The mean score of each variable can be interpreted as followed:

1. Studying happily: 4.73. Criteria: Strongly Agree
2. Easy to comprehend: 4.57. Criteria: Strongly Agree

3. Become motivated in studying: 4.59. Criteria: Strongly Agree

4. Working together with friends: 4.46. Criteria: Strongly Agree

Generally, the mean score of the students' respond toward the implementation of speaking class was 4.59 or belongs to criteria "Strongly Agree". This means that students responded positively toward the implementation of Pro Power One Software media.

Conclusions

Based on the research that had been done in SMP Negeri 1 Peusangan, The researcher concluded that teaching and learning process of the research:

1. Teaching and learning process through Pro Power One Software media improved the students' speaking ability. The result of students' test in cycle two was 75.5, it was bigger than the result of cycle one about 62.7. The result had improve and reached the criteria of success.

2. The students' respond toward the application of Pro Power One Software media was very high. The result of questionaires was 4.59 or belonged to "Strongly Agree" criteria. The result of qestionaires reached criteria of success.

3. The result of observation checklist of the teacher in implementing Pro Power One Software media in teaching speaking was 91.3%. It was bigger than the fisrt cycle about 63%. The result had improve and reached the criteria of success.

4. The result of observation checklist of the students in implementing Pro Power One Software media in teaching speaking was 81%. It was bigger than the fisrt cycle about 51%. The result had improve and reached the criteria of success.

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Using Series Picture Technique With Peer Support as an Alternative To Improve Student's Learning Outcomes In Reading Skill

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Abstract

The study aims to improve students' learning outcomes in reading skill for students of SMKN 4 at Peunayong - Banda Aceh. Specially research objectives are to find out is the using of series picture technique as an alternative can improved the students' learning outcomes and to find out the students' perception toward the implementation of series picture technique in the process of teaching reading skill at the third year students of SMKN 4 Peunayong - Banda Aceh. This study also examined students' learning outcomes among low performing first graders who read personally and groups (peer support) which challenging in reading aloud. It characterized the nature of students' learning outcomes in reading aloud and describes the using of series picture technique intervention on their reading comprehension. This research method using the experimental research for trying to implement this technique for students of English reading skill. The technique can be implemented conceptually and operationally. This research was conducted in the city of Banda Aceh. Samples for determining of the classes is more than four classes of the nineth year students, but the researcher choosed two classes of the first grade students to be the sample of this experiment. The sample of classes could not be randomly. The two classes would be as the sample of this research. There are consists 20 students of each class, but as one experimental group. Both of these experimental groups would be discussed with the same technique of series picture. For one experimental group the samples consist 20 students that prepared for personally test , while in another experimental class samples were 20 students also that prepared for group test by using peer support. Accordingly, the total samples were 40 students of SMKN 4 Peunayong - Banda Aceh.

Keywords: Series Picture Technique, learning outcomes, peer support, reading skill

Introduction

Reading is one of the four skills needs to be mastered, one of receptive skills, is assumed as the important skill to be achieved. Generally, reading is encouraged for the matter of text comprehension. Some other ways of reading, however, may have which are missing in reading for comprehension and yet important (Yoshimura, 2009). Reading consists of two related processes between word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language.

In the era of science, research indicates that many students lack of prior knowledge and reading strategies to generate interferences, thus the students comprehend science text poorly. I t is also found that students lack the specific reading strategies to generate interference that aid in the understanding of science texts (Best et.al, 2005). Many students, in fact, in SMKN 4 Peunayong- Banda Aceh found difficulties in reading skill. The phenomenon was observed by the writer on June 9, 2013 sharing with English teacher of the school. The students tent to be passive in reading class activities. They are reluctant to participate in activities provided by the teachers through the materials prepared. Reading is viewed as something scary, difficult and boring for them. They do not interest to read the text. They do not know how to read well because they seldom practice to read. The students do not know how to use a good intonation. They have difficulty in starting to read because they do not know how good spell it. They do not have motivation in doing the task since reading activities are not interested for them. Consequently, they seem to fell unmotivated in studying reading. Besides, another teacher also adds that most of the students have low proficiency that leads to obtain score below the minimum completion standard (KKM). This is proved by the result of assessment of the second grade students who only pass 20% from 50% of them above 70 point of KKM.

Considering this facts, that is necessary to implement a different way of teaching reading. The visualization of series picture technique in learning activities can gives positive influences for students in learning English. Uses of series picture technique with peer support can improve young learner in reading aloud. The series pictures is an illustration that contain pictures, it is one of easy medias that can be use in foreign language teaching, it can help students memorize something, will help the attention of students to be more focused, and it can create inspirations until student can write something in a composition. A picture is an illustration of picture that can be used as two dimensional, representation of person, place, or thing (Rivai and Sudjana, 1991).

Concerning the problem above, the research was conducted to an experimental research at SMKN 4 Peunayong Banda Aceh with use of series picture technique as an alternative can improve the students' learning outcomes in reading aloud at the first grade students of SMKN 4 Peunayong Banda Aceh.

Materials and Methods

In this section will discuss briefly about theory related to reading aloud, peer support, narrative text, and series pictures, reading aloud, narrative text, and picture series technique.

Two types of data collection were used :

1. Questionaire for students

2. Reading fluency Rubric

1. Data are collected through students questionaire which investigates their attitude towards picture series technique based teaching and learning . The questionaire are designed in the form of a 4 – point Likert scale ranging from "Strongly Disagree " to "Strongly Agree". The questionaire were distributed to the 40 students.

2. Reading fluency Rubric was given at the end of the reading section.

   This study is primarily concerned in contributing to the quality of the process of student's performance through the used of technique, particularly using picture series with peer support to improve students' reading aloud. For the purposes of this study, both of these classes would be as an experimental class. A class of 20 students was subject to the experiment with peer support and the remaining twenty students also without peer support (personally). And reading fluency rubric is result by the teacher in the last session.

Research Design

This study used a quasi experimental research. Quasi experiment is defined as experiments that do not have random assignment, but do involve manipulation of the independent variable. As theoretical and observational experience accumulated across these setting and topics, more sources of bias were identify and more method were developed to cope with them (Dehue, 2000). Quasi experimental design of pretest, treatment, and post test was conducted within the context of SMKN 4 required picture series.

The research used two classes in this study. Both of these classes would be as an experimental class and treated by picture series in teaching reading aloud. There are consists 40 students of two classes as one experimental group. Both of these groups would be discussed with the same technique of picture series . For one experimental group the samples consist 20 students that prepared for personally test, while in another experimental class samples were 20 students also that prepared for group test by using peer support. Accordingly, the total samples were 40 students of SMKN 4 Peunayong - Banda Aceh. In conducting this research, there would be six meetings with 90 minutes each. In the first meeting, both of these classes were given the pre test. At the second, third, fourth until six meetings, both of experimental groups were used of picture series technique. The researcher prepared material related to the syllabus for the first grade students of SMKN 4 Peunayong - Banda Aceh. Both of these groups were given by the same material in same technique.

This study is conducted at SMKN 4 Peunayong - Banda Aceh. It is located at Peunayong – Banda Aceh. The status of school is Nautical School. The students are mostly Acehnese. There are twelve classes of the whole grades (grades X, XI, XII,) in which each grade of 3-5 classes.

The target population of the study is all of first grade students of SMK Negeri 4 Peunayong – Banda Aceh. There are three classes of the first graders (X TSM I, X TSM 2, and X TKR). Each class consists of 14-20 students. So the total number of the first grade students is 54 students.

There are more than two classes of the first grade students, furthermore was choosed two classes of the first grade students to be the sample of this experiment. The sample class could not be randomly. The two classed assigned as the experimental group (EG). The researcher prepared two classes of them as the sample of this research. There are consists of 40 students of two classes as one experimental group. The two groups would be discuss by using technique of picture series with peer support and without peer support (personally). For experimental class of X TSM I the samples were 20 students, while in another experimental class of TKR samples were 20 students also.Accordingly, the total samples of X TSM I and X TKR were 40 students of SMKN 4 Peunayong - Banda Aceh.

Research Instrument

To gather the data, the instrument will be used is test (pre-test and post- test) and questionnaire. This instrument is designed to answer the research questions.

Result and Discussion

The finding reviewed in this study showed significant differences between both of experimental group with peer support or without peer support (personally) of students on integrated skill using picture series incorporated in the teaching material. We might conclude that motivational factors associated with technique of picture series helped to increase the efficiency of the teaching and learning process.

1. What are the teacher's attitudes towards the using picture series technique with peer support on developments of the students' language competence and performance in academic setting?

The general impression of the teachers is that picture series have a positive effect on students ' language learning process. They believe that using picture series combined with the reader with peer support helped students to become active participants in the classroom activities. Teacher claim that picture series technique can enhance the communicative competence , they improve learner's interaction each other in class and provide students with more opportunities to use English. They also claim that might be very time consuming . Almost all teachers receive positive feedback from students when they involved picture series with peer support along with the reading aloud activities and as a result students were participating in the classroom .

2. What are students' perception towards using picture series technique with peer support ?   Using picture series technique in the classroom with peer support was very pleasant experience for the students. They claim that they enjoyed the assigned activities in the classroom. Students were more motivated to see the series picture and read the story about the kind of empires' life, and at the of story they got the moral value. They impressed that story also provide a relaxed atmoshphere. Students claimed that read aloud by using picture series with peer support can improve their collaborative with their friend and increase their pronounciation and vocabulary.And gives them more chances to practice

English. Most of students said that they have learned new words approximately 2-5 mainly because those words that have been repeated many times.According to them, the practice oral production skill in reading aloud with some criteria (phrasing, stressing, pausing, intonation and rate are) are facilitates in learning reading skill. and it helped them to understand clearly the content of picture series technique. And they convinced that by using picture series technique can improve their learning outcomes in reading skill. From the students questionaire we might conclude that:

- Students'answer show that they are interested in learning English if the teacher uses English picture series as teaching materials
- They were neutral regarding the question do they think that their picture series preferences will affect their learning and do they think English captions are good in learning English.This may be very reasonable anwer having in mind that they didn't have too much exposure to the picture series based teaching in order to be able to measure their achievements and be able to give more concrete answer.
- Students agree that picture series are usefull in Learning English and that they have learned some English in practice reading of fairytale story. They mostly learned words that were repeated many times.

3.Can using picture series be engaging and helpful for students to develop their reading skills?

The questionaire's result show that student can learn more effectively when their attention is focused on the task, therefore they are focused more on the language they use than on the grammatical form.The classroom atmosphere is comfortable, cooperative, and there is a lot of interaction among students. As a result students score better result at all skill of some criteria in assesment of reading aloud (phrasing, stressing, pausing, intonation and rate.) by reading flency rubric. In addition, different types of tasks stimulated dfferent pattern of interaction. As in reading, good listeners make good use of chunks to understand what they hear (Hawkins et al., 1991). From the student's responses to the questions concerning the development of reading skills in the questionaires revealed that students gave positive responses.Students responded positevely to the picture series instruction and indicated that the advantages of using picture series technique to teach reading increased learning interests and motivation.Students claimed that it provides the chance for learning interaction in conversation. Picture series helped improve reading aloud, listening, and speaking ability.

Students of experimental group using reading aloud by using picture series technique with peer support scored much better results from the experimental group without peer support (personally) After they observed a text of fairytale with using picture series, they were more motivated to read aloud the text. They are very antusias and enjoyed in work in pair. They were able to discuss and instruct their friend to repaired how to pronounce weel . While read aloud activities, students acquire and use new words. Learning new vocabulary help students become more fluent because the more words they know, the easier it to express themselves. All these processes encourage students to develop critical thinking skills.

In Peer support classes words and expressions are studied in isolation from a meaningful context. interaction and cooperative are studied in peer support. On the other hand , students can access, view, and repeat texts that are richly contextualized by good features of accompanying visual and textual information. Another important benefit of picture series that students are able to recognized core vocabulary and the rules and patterns of words used to communicate.

Conclusion

- Picture series technique with Peer support strategy was proven as an effective strategy to improve the students' reading skill of SMKN 4 Peunayong – Banda Aceh especially for the first year students on the academic year 2015-2016. The effectiveness of picture series technique with peer support was obvious that it helped the students in reading aloud.

- Students had got some improvement in reading aloud also supported by the result of the questionaire in which the majority of students responded that the implementation of picture series with peer support strategy was helpfull to improve the students' learning outcomes their reading aloud.

- More importantly it was found out that the effect of using picture series with peer support was very good for improving the student's learning outcomes in reading skill .

- Picture series technique with Peer support strategy was proven as an alternative to improve the students' learning outcomes in reading skill of SMKN 4 Peunayong – Banda Aceh

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Improving Students' Ability in Writing Procedure Text through Broken Triangle / Square / Heart Model (*A Classroom Action research at SMA 2 Peusangan)*

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Abstract

This research was conducted in response to the fact that in real conditions most of the students could not put their ideas nto a good writing. They seemed to have difficulties in initiating ideas to begin with, in arranging sentences into paragraphs; in general the students were found to have low motivation to write. In conducting this research the researcher used Classroom Action Research method. The data were analyzed through descriptive, qualitative and quantitative methods. This research was conducted at SMA N 2 Peusangan, Bireuen regency. The research subject was the first year students of group X/1. In the first cycle, the action was deemedunsuccessful as the results did not meet the criteria of success specified. The short coming in this cycle was that the students failed to meet the designated time in doing the activity of writing procedure text. It was found thata number of the students were still unmotivated and confused in writing procedure text. The second cycle was then carried out by improving the short coming in the first cycle. After the researcher did all steps of action research (cycle 1 and cycle 2) the students' mean score increased from 64 in the first cycle to 72 in the second cycle, which was deemed as significant enough. Furthermore, the result of questionnaire shows that 82% of the students proved to be motivated to learn how to write a procedure text. Thus it could be concluded that using broken triangle/square/heart model could improve students' ability to write procedure text; they were highly motivated as well.

Key words: Writing procedure text, and Broken Triangle/Square/Heart model.

Introduction

Writing is one of the important skills in teaching English. It has occupied a place in most English language course. The students need to learn writing in English, for occupational or academic purposes. To write well, students must have good capabilities in writing process and aspects of writing. The students have to

be able to organize the ideas, to construct the sentences, to use punctuations and spelling well. Besides, they have to be able to arrange their ideas into cohesive and coherent paragraphs and texts. The purpose of writing is to develop or help people to communicate with others indirectly. When the students write they compose meaning, they put facts and ideas together and make something new.

Based on the School-Based Curriculum (KTSP) the students of SMAN 2 Peusangan should be able to write many types of text such as, narration, description and procedure. Narration tells 'what happened'. Description tells how something looks, feels or sounds. While procedure is writing that tells how something is done. The researcher was interested in writing procedure text because this text can increase knowledge about how something is done in steps. Based on School-Based Curriculum (KTSP) at SMAN 2 Peusangan, procedure text is learnt by the first grade students. In fact, the students gain values outside the criteria of the school curriculum, the final results of the class English lesson to be achieved by students in accordance with the Minimum Completeness Criteria at SMA N 2 Peusangan is 65, but the students only got a value below the average that were 45, 50, 60, only 40% of the students who got value above 65. It is also due to the value of affection given by the subject teacher.

In fact, in real conditions most of the students could not write well. The researcher was interested to improve students' ability in writing procedure text at SMA N 2 Peusangan because the researcher found there were some problems that faced by the students in learning writing such as the students had difficulties in finding some ideas, students were not able to write a good paragraph, the students had low motivation in writing.

The researcher also found the problem of the teacher that was the teacher did not have an interesting learning model to improve students' ability in writing. The English teachers must have responsibility as they are demanded to have leaning model in order to solve the problem faced by the students in learning process. Teachers must be able to arrange their assignments effectively, they are demanded to motivate the students in order to learn well.

To enable the students to be skillful in producing a writing process, the teacher should make good preparation and great planning to make students easier in mastering writing. It should be suitable to their ages and levels. It will make them interesting to write or able to express their idea widely. Therefore, the researcher tried to find a learning model to solve some problems in writing procedure text and to help teacher in improving students' ability to get better score. One of the models that can be used by the teachers to motivate the students in learning process is Broken Triangle/Square/Heart. Broken triangle/square/heart model is a model that often called puzzle; the students arrange the separated materials become a concept unity arranged in triangle/square/heart. Generally used in the materials that contains in options form, such as procedure text.

Based on the explanation above, the purposes of the research are: 1) to know the broken triangle/square/heart model can improve students' ability in writing procedure text; 2) to know the broken triangle/square/heart model can motivate the students in learning procedure text.

Materials and Methods

The research was a Classroom Action Research. The researcher could improve the quality of teaching and the ability of students in learning by finding the appropriate technique in writing skill. There are some steps in Classroom Action Research; planning the action, implementing, observing, analysis and reflection (Kemmis and Taggart, 1988).
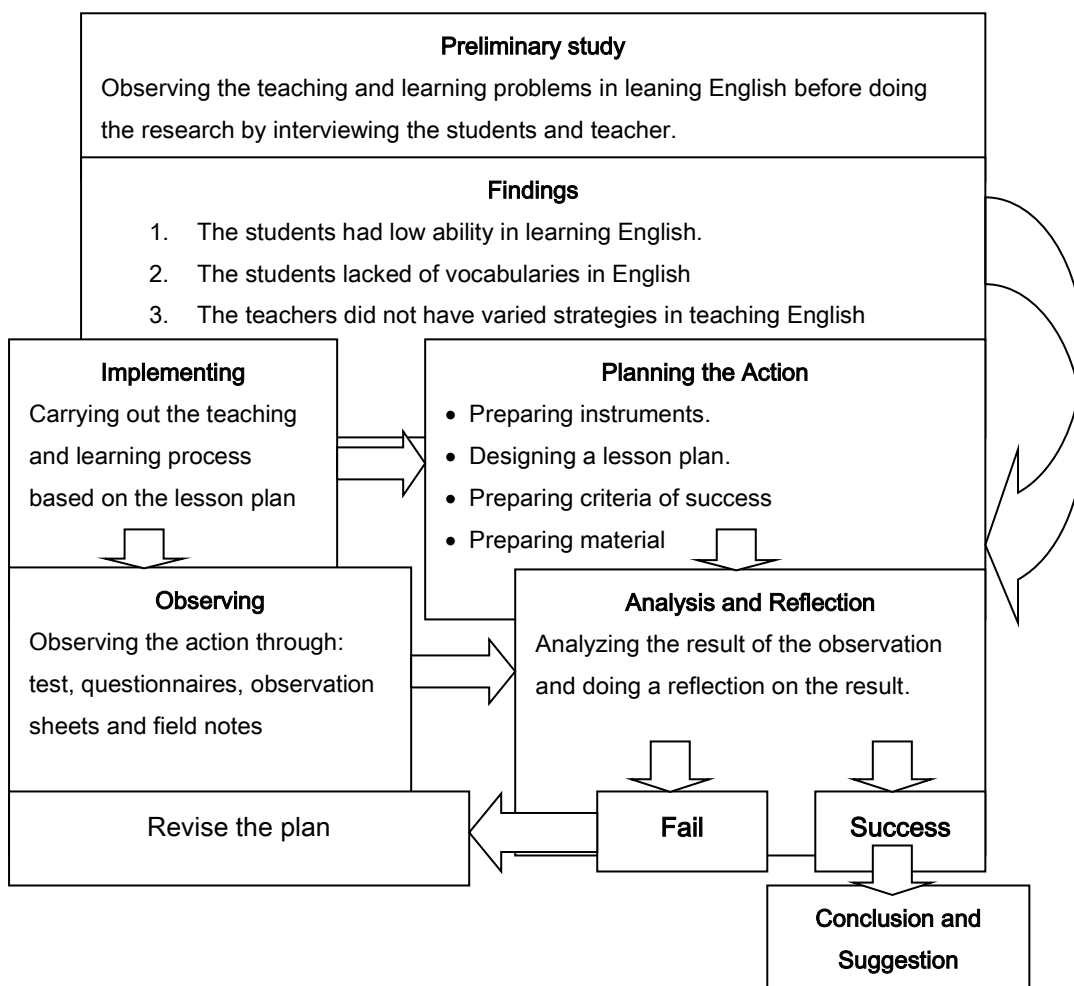
Figure 1. Classroom Action Research Model adapted from Kemmis & Tagart 1992)

There were two kinds of data collected and analyzed in this research namely qualitative and quantitative data. Qualitative data is form of students' score and it is analyzed descriptively for example collecting data from questionnaire, observation forms, and field notes. On the contrary, quantitative data is displayed by using formula, for example searching for the students' mean score, percentage of successful learning, and the researcher used the formula $\bar{x}=\frac{\Sigma fx}{N}$ introduced by Winarsunu (2002:88).

Where:

$\bar{x}$　　　= Mean score

Σfx　　= Total score of all the students

The observations of data were analyzed according to qualitative data procedure. Meanwhile, to know the students' response and their improvement on writing activities, the researcher used the procedure of qualitative data with scoring rubric of writing. In assessing the students' writing test, the researcher used writing scoring rubric formulated by Brown (1991).

Result and Discussion

Cycle 1

The analysis of teaching and learning process was done based on the information obtained from the observation checklists for the teacher and the students and field notes. The information was about the students' and the teacher's activities in the class in learning process applied through broken triangle/square/heart model in writing procedure text.

Based on the observation conducted by the researcher or during the process of teaching and learning on the first cycle, it was found that some of the students were still had the difficulties in finding the ideas and organized them became a good and coherence sentences. Some of the students just led their friends to finish the task without caring about the result when they worked in groups.

In fact, the learning model applied by the researcher could motivate them in writing procedure text. When the teaching and learning process, the students got some improvements like working hard to find out the ideas and arrange it become a good paragraph of procedure text. It mean that the students had tried to give the best in writing procedure text but it was not good enough to be considered that the teaching and learning process was success. The teacher should continue to the second cycle to get expected result. Based on the data found at the first cycle calculated through the formula, the average score of the students test in writing was 64, the score 64 was categorized in the level "good" (50-75).

After analyzing the result in cycle 1, some findings were got. With the result of the analysis in teaching and learning process, there were some processes that have not achieved yet. The teacher had to change some ways in order to get best achievement. Firstly, the teacher had to give introduction clearly in the beginning of the stage, taught them how to find out the ideas and organized them well in writing a procedure text. Secondly, the teacher asked the students to do not let one or two students who worked when they worked in group, but they had to work together in finishing the task. Thirdly, the teacher could prepared the students well by setting the time in each phase until the students had deadline to finish the task and did not take long time in it. So, the teacher revised the plan and continued it in cycle 2.

Cycle 2

Based on analyzing the result in cycle 2, some new findings were got. With the result of the analysis of teaching and learning process, there were some processes that have achieved by the teacher; the teacher had changed some ways in order to get best achievement. Firstly, the students become active in writing procedure text, worked well in group to arrange the broken cards given so that they could get the key words in writing the text. Secondly, students got the average score was 72 in the final test, it meant

that the students' ability in writing procedure text had improved. Thirdly, the result of observation forms also showed better development.

The main points of this section in this cycle was the students' score in writing procedure text had improved became 72, it indicated the students' ability in writing procedure text also reached the good achievement and the students was not only motivated to write but also happy in doing the activities.

Reflection was done to determine whether the second cycle was successes or not. The researcher made reflection on the criteria of success of second cycle. In criteria of success, the researcher did assessment about teacher's and students' activities, students' motivation and students' score in writing procedure text through broken triangle/square/heart model. The researcher did reflection through observation checklist form, field note, test and questionnaire.

Based on the analysis and reflection form above, the researcher concluded that the researcher started the research through two cycles and the second cycle had been already reach the criteria of success and this research was successfully. The questionnaires data in the second cycle shown 82% students were motivated in writing procedure It is mean that the broken triangle/square/heart model improve the students ability in learning writing procedure text.

Conclusion

1. Both the first and the second cycle in six metings, the students' means score on writing procedure text had improved from 64 (level 3/ good) in first cycle, and become 72 (level 4/ good) in the second cycle. It meant that, the finding of the research showed that the broken triangle/square/heart model could improve the students' ability and motivated them in writing procedure text.

2. After analyzing the data had been collected in this research, it was found that 82% students were motivated in writing procedure text through broken triangle/square/heart model, so the researcher concluded that the broken triangle/square/heart model was the appropriate model that can be used to improve and motivate the students in writing procedure text.

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Improving Students' Writing Skill By Using T-Card Method (A Collaborative Classroom Action Research At The Second Year Students Of SMAN 3 Bireuen)

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Abstract

This research told about *Improving Students' Writing skill by Using T-Card Method (A Collaborative Classroom Action Research at the Second Year Students of SMAN 3 Bireuen).* Difficulties in improving their writing skill, such as; first, limited vocabularies is also be a main problem because they will stuck on making sentences or paragraph when the vocabulary in their store house is very less. Students need variety of vocabularies to make they are easy in writing. The third one is the method that used by the teacher. This research was a collaborative classroom action research that was done in two cycles. The research subject was the second year students of class III of SMAN 3 Bireuen. The sample of this research was 20 students. The data was collected through the field note, writing test, students' observation checklist, the teacher's observation checklist, and questionnaire. The data was analyzed through the descriptive qualitative research. The research was conducted into two cycles, the procedures of action research: planning, implementing, observing, and reflecting. The first cycle consisted of three meetings, and the second cycle consisted of two meetings. After the researcher was done all the steps of action research (cycle I and cycle II) the students' means score increased from 63 in cycle I and became 77 in cycle II. The finding of the research also showed that T-Card method can improve the students' mastery on writing skill especially report text, it was showed from the result of students' mastery on writing test in each cycle which the action implemented.

Key Words: Writing, T-card method.

Introduction

Writing is the ability of expressing ideas, facts, feelings, experiences, and thought in written form. Difficulties in improving their writing skill, such as; first, limited vocabularies is also be a main problem

because they will stuck on making sentences or paragraph when the vocabulary in their store house is very less. Students need variety of vocabularies to make they are easy in writing. The third one is the method that used by the teacher. Feeling bored and sleepy will always be there with the students when writing turn is on. The fourth, the students still lack in skill writing especially in writing report text. And the last, the students are not motivate in learning writing. So do the students, teacher also happen to have a problem. The first is the model or technique that is used by teacher still monotonous. The second, the material that given by the teacher not up to date. And the last, the teacher did not use new strategy in teaching learning process.

Based on the problems the researcher facing above, T-Card method is a way to precede and improve their writing skill. Through T-Card method the students asked to make a good report text. The students SMAN 3 Bireuen is dedicted on how to make a good sentences or paragraphs. ThroughT-Card method, the researcher wants to express the existency of students SMAN 3 Bireuen in learning writing and make a good report text.T-Card is one of the smart solution strategies because through this method students also asked to play a game and automatically learning model T - CARD has brought a cheerful atmosphere for students. Now memorable english students is challenging and interesting.

Materials and Methods

The research design used in this research was Classroom Action Research (CAR), which was a collaborative Classroom Action Research through the implementation of T-Card Method in order to improve the writing skill of students and to improve the teacher quality in teaching process. In conducting the research, the researcher worked together with teacher to solve the students problem in writing subject in teaching and learning process in the classroom. According to Asrori (2008:45), collaborative classroom action research is kind of a classroom action research that involves some people like the principal, teacher, lecture simultaneously. It aims to improve teaching practically quality, contribute teaching theoretical development or educational and teacher career progression.

This research was conducted at the second year students of SMAN 3 Bireuen. In this research, the researcher intends to improve students' skill in writing by using T-Card method. In doing this study, the researcher follow the action research procedure introduced by Kemmis and McTaggart (1998:78). The steps of classroom action research were consisted of planning, implementing, observing and reflecting action.

Rubric score of writing skill

Compenent of writing	Level	Score	Scale and descriptor
	4	18 – 24	The content is relevant to the topic and easyto understand.
Content	3	12 – 17	The content is almost complete, relevant to the topic.
	2	6 – 11	The content is relevant to the topic, but is not quite easy to understand.

	1	0 – 5	The content is not quite relevant to the topic.
	4	15 – 20	Ideas clearly stated, well organized.
	3	10 – 14	Ideas clearly stated, but are not quite well organized.
Organization	2	5 – 9	Ideas are almost clearly stated, to logical sequencing.
	1	0 – 4	Ideas confused and are not well organized.
	4	15 – 20	One paragraph to another is very coherence.
	3	10 – 14	One paragraph to another is quite coherence.
Discourse	2	5 – 9	One paragraph to another is almost coherence.
	1	0 – 4	One paragraph to another is not coherence.
	4	19 – 12	The combining the words in a sentence is very well.
	3	6 – 8	The combining the words in a sentence is quite well.
Syntax	2	3 – 5	The combining the words in a sentence is almost well.
	1	0 – 2	The combining the words in a sentence is not well.
	4	9 – 12	Uses many variation words.
	3	6 – 8	Uses some variation words.
Vocabulary	2	3 - 5	Uses little variation words.
	1	0 -2	No variation of words.
	4	9 – 12	Almost no inaccuracies in spelling.
	3	6- 8	Some inccuracies in spelling.
Mechanics	2	3 - 5	Low standard in spelling.
	1	0 – 2	Many inaccuracies in spelling.

Adapted from Brown (1991)

Categories:

Level 4 = 76 – 100 = Excellent

Level 3 = 50 – 75 = Good

Level 2 = 26 – 49 =Fair

Level 1 = 0 – 25   = Poor

The collecting data in this research analyzed by using the formula. Mean score is used to find the average score of the students mastery.

Winarsunu (2003) gives the following formula below:

$$\bar{x} = \frac{\sum fx}{N}$$

Where:

$\bar{x}$ = Mean score

$\sum fx$ = Total score of all students

N = Number of students

Result and Discussion

Analysis of the Teaching and Learning Process

Analysis of the Researcher's Performance in Teaching Writing through T-Card Method of the Cycle 1.

The observation was about the teacher teaching process during implementing the action could be analized based on teacher activities, motivations, and confidences.

First meeting, the techer greeted the students, checked the attandance list, and motivated them. The teacher explained to the students about report text and gave the students an example of report text. And teacher also elaborated to the students the way to learn through T-Card method. The steps, and the way of teacher measured their work. In the second meeting students continued to learn the material about report text through T-Card method and finally the teacher asked the students to present their writing and do some correction if there are some mistakes happened. And for the last meeting teacher gave an exercise for the students in order to knows the the understanding of the students about the lesson. Meanwhile the teacher also collected the score for the reseacher perfomance in teaching process. The average percentage for cycle one was 53 % or fair categories.

Analysis of the Students' Activities in Learning Writing through T-card Method of Cycle 1

Meanwhile the teacher collected the data for the students performance in learning process in cycle 1. The researcher did every step in implementing T-Card method. In the first meeting the students tried to understand about report text and T-card method. The students also read the example that given by the researcher. The students also start to write a good paragraph based on example and expalanation by the researcher by using T-Card method. In second meeting students continued their work and presented it in front of the class. And finally in the third meeting the students did their test in order to know their achievement in teaching writing. The average percentage for cycle one was 51 % fair categories. The completed data for the researcher average score in performance. And the average score for the test in cycle one was 63 good categories.

Analysis of Learning Result

After the researcher described the data above and tabulated by using the formula, the average score of the students test in the cycle I was 63. It is mean that the average score of the students test still low and did not meet the criteria yet. So, the researcher should be continuing to the next cycle.

The Application of the Cycle II

In this activity, firstly the researcher greeted the students and asked about their condition. Then the researcher checked the students attendance list and motivated them. After that, the researcher started teaching and learning process according to lesson plan that had been prepared before. Then wisely the researcher asked to the students whether they remembered the material that had been given last week and together the students say "*yess mam*". but even students said that they were remembered the material but the researcher reviewed a little bit about the material about report text.

In the last activity, the teacher corrected the mistakes done by the students during the writing activity and then teacher and students closed the class by praying together.

In the second meeting, the researcher asked to the students to answer the test. The researcher explained to the students why they still need to answer the test. The researcher and the collaborator gave the students question sheets, and the researcher explained about the test. The students were ready to answer the test carefully. The students looked very serious, and the class was very quiet during that time. The researcher just walked the class to monitor the students' activity.

After completed the second test for 30 minutes, the researcher and the collaborator directly checked the result of the second test. After finished, the researcher announced that the score of the students in cycle II is better than in cycle I, the students screaming and jumped in the class. The students looked very happy and satisfied about the result. To complete the data of the research the teacher asked the students to filled in the questionnaires in five minute. Finally, the researcher asked permission to the students and said thank you for their good cooperation with the research as long as teaching and learning activity done for five meetings.

Analysis of the Teaching and Learning Process

Analysis of the Researcher's Performance in Teaching Writing through T-Card Method of the Cycle 2

The data for the teacher performance while implementing T-card method in teaching writing in the classroom were collected in observation checklist forms. The observation of the teacher was about how to improve students ability in writing by using T-Card method. The observation was about the teacher teaching and learning process during implementing the action could be analized based on teacher activitiess, motivation, and confidence. The researcher designed the observation checklist for the teacher for the second cycle for every meeting.

First meeting , the techer greeted the students, checked the attandance list, and motivated them. The teacher explained to the students that today they are going to do the same activitiy like in the previous one. Teacher did not necessary to explain anymore the definition and step of report text and T-Card method itself. Teaching and learning process just directly did by started with new example and then passed the students tittles and picuteres and ordered them to write one good paragraph based on the tittle and and picture they got.

And for the last meeting teacher gave an exercise for the students in order to know the understanding of the students about the lesson. Meanwhile the teacher also collected the score for the reseacher perfomance in teaching process. The average score for cycle two was 75 or good categories.

Analysis of the Student's Performance in Learning Writing through T-card Method of Cycle 2

In the first meeting of the second cycle the students tried to remember about report text and T-card method. The students also start to write a good paragraph based on example and expalanation by the researcher by using T-Card method. And finally in the third meeting the students did their test in order to

know their achievement in teaching writing. The average percentage for cycle two was 75 % orgood categories. The completed data for the students average score in performance (see appendix 4). And the students average score in test was 77 or excellent categories.The students' motivation in submitting they response werevery good also. Based on the questionnaire distributed in the second meeting, most of the students felt very happy learning english writing through T-card method and most of them felt that their understanding on the used of writing was increased.

Data analysis on the result of learning was focused on the students' comprehension on mastering writing. The researcher analyzed the students' comprehension on mastering writing by using T-Card method based on the formula above. The result of the students' progress in improving English writing were collected and analyzed qualitatively and descriptively by the researcher. From the result of the measurement on the students' ability on mastering writing in cycle II was gradually increased, one student got ninety, three students got eighty five, four students got eighty, seven students got seventy five, and five students got seventy. No one got below than seventy. The mean score of the students' mastery on writing was increase from 63 in cycle I and became 77 in the cycle II. It means that, the target criteria that is the average of the students' writing mastery is greater or equal 80% based on measurement of through the T-Card method had been attained. Therefore, it was not continued to the next cycle.

Conclusion

Based on the research, the researcher draws the following conclusions:

1. The research was conducted in two cycles. In the first cycle the action had not been successful and did not meet the criteria of success specified, so that, the researcher continued to the second cycle by improving students' writing skill through the implementation of T-Card method in the previous cycle. The first cycle consisted of three meetings, and the second cycles consisted of two meetings. After the researcher did all steps of action research (cycle I and cycle II) the students' means score increased from 63 in cycle I and became 77in cycle II.

2. Based on the result of teacher observation performance in improving students' writing skill through the implementation of T-Card method in the first cycle, it could be concluded the teacher's average score was about 53 % and it was categorized as fair and in the second cycle of the teacher observation performance in teaching and learning process was about 75 % and it was categorized of good.

3. Based on the result of students' observation activitiy in improving their writing skill by using T-Card method in the first cycle it could be concluded the teachers average score was about 51 % and it was fair categorized and in the second cycle of the students observation activity was about 75 % and it was good categorized.

4. Based on the result of questionaire's percentage about the students improvement and respond toward the implementation of T-Card method in learning writing skill was about 3.73.

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Leadership Style Consultative Principal Teachers in Improving Performance in Banda Aceh

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Abstract

Leadership style of principal is one of determinants factor in improving teacher performance and education success in the school. This research aims to describe the leadership of principal toward improving of teacher performance which is reflected on their responsibilities, discipline and commitment as the performance indicator. It uses qualitative descriptive method. The techniques of collecting data are observation, interview and study of documentation. The subjects of this research are principal and teachers. This research concludes that: (1) in improving teacher responsibilities, the principal of Junior High School in Banda Aceh maintains togetherness and socializes vision and mission of the school through Discretionary leadership style, than socializes the regulation through Consultative leadership style in which this is the ability of influencing another people to work together in order to achieve the purposes by means of the planning of principal after having suggests from teachers, (2) The Principal of Junior High School Banda Aceh in improving teacher disciplines such time keeping to come to school with a schedule that has been setand agreed upon using Discretionary leader ship style which is the abilityto influence others tobe willingto worktogether toachieve thegoals setbyway ofa varietyof activitiesthatwill be donemuch more by sub ordinates, (3) The Principal of Junior High School in Banda Aceh in improving teacher commitment is being fair in distributing the duties or welfare which is directed to the regulation and program through Discretionary leadership style which has the ability to influence another to work together in achieving goals set by various activities which is much more given to the subordinate.

Keywords: Leadership styles, Discretionary, consultative, Participative, and Teacher Performance

Introduction

Globalization era is the era of advancement of science and technology that has led us to the competition in various fields, which requires the people of Indonesia to establish itself in the improvement of the

quality and superior human resources, capable, competitive, mastering the science, technology, and having a high work ethic.

In Indonesia, the school must carry out the duties and functions of his sincerity to achieve national goals as was set in Law No. 20 Year 2003 on National Education System and an explanation in Chapter II Article 3 that: "National Education serves to develop the ability and character development and a dignified civilization in order to achieve the life of the nation, aims at developing the potential of students to be religious and devoted to God Almighty, noble, healthy, independent and become democratic and accountable citizens".

To succeed achieving these goals, the principal has a very important role in coordinating, directing, and aligning the available educational resources. The principal leadership is one factor that can encourage school to be able in realizing the vision, mission, goals and the objectives through the program of the school carried out in a planned and phased.

The Regulation of the Minister of National Education No. 13/2007 on standards principals is principals should have the competence on Permendiknas version, those are (1) personal competence (2) managerial competence (3) entrepreneurial competence (4) supervision competence (5) social competence. The principal's role as a leader is expected to realize the functions and processes of leadership in the overall school education. School educational success is determined by his ability to influence, mobilize and motivate individuals (teachers) are involved in the educational goals that have been set.

The school principal is a leader who should be able to provide a positive influence on the attitudes and behavior of subordinates. In this case the target is the teachers who are expected to enhance the work after receiving the influence of his superiors. Leadership style is a pattern of behavior that is applied consistently through the leadership of others through behavior that is shown when the leader to influence others, as perceived by others. Style is not about how leaders' opinion, but about their own behavior in leading but how the perceptions of others, especially the perception of subordinates about leadership behavior (Hersey and Blanchard, 1992).

Winardi (2000) argues that leadership is "an ability that is inherent in a person who leads and depends on a variety of internal and external factors". Leadership is a series of planning activities such as the ability to influence others role in certain circumstances to be willing to work together. Tilaar (1992) argues that: "leadership is the activity of influencing people in order to work together to achieve the desired goal". Furthermore, Lipham (1984: 66) sees leadership as follows: "*Leadership is the behavior of an individual that initiates a new structure in interaction within a social system by changing the goals, objectives, configurations, procedures, inputs, processes, or output of the system.*"

Leadership is the behavior of individuals in social interactions with the system to achieve a goal. Either this goal is achieved or not depends on the leadership of a leader. This is consistent with the views and Chermier Fiedler (1974: 107) that defines the behavior of leadership as follows:

"With the leadership behavior which is meant in general are some specific actions, in which the leader was involved with directing and coordination the members of work group. Participation in these actions can be structured working relationship in the face or criticize members of the group, and shows the consideration to the feelings and welfare of their members. Leadership here comes to work together so that problems arises in group can be identified quickly; "General leadership provides a foundation of understanding of leadership specifically in the field of education. Many opinions about leadership, Daryanto (2005) points out: Educational Leadership is the entire effort to influence the activities of personnel in the educational and environment in certain situations through cooperation that will work with a full sense of responsibility and sincerity to achieve educational goals that have been set.

In the context of educational leadership, a leader who understood all those responsible for process improvement is at the amount levels of educational institutions. Thus the existence of such personnel is important in a school. Ouzs and Posner (1993: 94) explains "*there is no leadership witout someone obeying*". This means that the school's leadership will not run without the role of supporting personnel. A leader is no exception with managerial leadership in organizations, in achieving a goal, it does not work alone.

Materials and Method

This study used a qualitative approach using descriptive methods. Qualitative approach by using descriptive method which is used to study the problems and gain deeper meaning of the Principal Leadership Styles in Improving Teacher Performance in Junior High Schools in Banda Aceh. The qualitative approach is used in this study because the researchers intends to develop the concept of thinking to an understanding of the pattern contained in the Principal Leadership Styles in Improving Teacher Performance in Junior High Schools in Banda Aceh. While, the subjects of this research are the principal and teachers.

According to Moleong (2005), design of research activities are directing through three stages: pra field work phase, field work phase, and the phase of the data analysis. The design of the research were being undertaken by researchers, there are several stages: draft, select the field, take care of permits, track field where research, fuctions the information, and sets up the equipment.

Instrument of this research is the researcher himself, because the research uses a qualitative approach, the researcher is the main instrument which is said by Nasution (1998) as an indication of human researchers that:

1. Researchers as a sensitive tool and can react to stimuli from the environment that should be significantly measurable.
2. Researchers as a tool that can adapt to all aspects of the situation and may collect a variety of data at once,
3. Each situation is a whole. There is not an instrument in the form of tests or questionnaires that can capture the whole situation, except humans.

4. A situation that involves human interaction can not be having only by the knowledge. To understand it, we need to feel it, go into based on our appreciation.

5. Researcher as the instrument can immediately analyze and interpret the data obtained.

6. Only human as an instrument that can draw conclusions based on data whic was collected at one time and use it immediately.

Principal Leadership Styles in Improving Teacher Performance in Secondary Schools in Banda Aceh. The researcher tested the credibility. According to. Sugiyono (2007) validity and reliability test of the data in qualitative research include testing the credibility of the data from qualitative research among other things:

1. Extension of observation. Researchers returned to the field observation/research sites. It means that the relationship of researchers with participants/speakers more familiar, open, trust each other so that there is not more hidden information is hidden.

2. Increasing persistence in research. Researchers checked again whether the data that has been found false or true. Researchers also can provide an accurate and systematic description of the data.

3. Triangulation. Checking the data from various sources in various ways and at various times.

4. Negative case analysis. Researchers are looking for different data or even contrary to the data that has been discovered. If there is no more different or contrary data to the findings, it means that the data was found credibly.

5. Member check. The process of checking the data obtained by the researcher to the data providers. Member check purposes to determine the extent of the data obtained based on what the data provider given.

Technique of Collecting Data

Because of the research uses descriptive qualitative approach, the researcher is included as the main instrument of research. In this case Nasution (2001) states about human characteristics (researcher) as a key instrument of research, namely: (1) researchers as a means of sensitive and can react to any stimulus from the environment which must be expected to significantly; (2) The researcher as instrument and adjust to all aspects of the situation and may collect a variety of data at once; (3) any situation a whole. There is not an instrument in the form of tests and questionnaires that can capture the whole situation except humans; (4) a situation involving human interaction can not be understood by mere knowledge. (5) The researcher as an instrument can immediately analyze and interpret the data obtained; (6) only human beings as instruments that can draw conclusions based on data collected there is a time and immediately use it as feedback to obtain the affirmation, change, improvement and rejection.

The data collection techniques used by Nana (2008), as follows:

1. The bservation is collecting data to make observations run on the ongoing activities. Moleong (2005) states that recording the primary data source through interviews or participated observation is the result of the combining efforts of the activities of seeing, hearing, and questioning.

2. The Interview is data collection which is conducted orally face to face meeting individually which aims to explore and obtain the data or information that is more profound and relevant to the issues under research.

3. Study of documentation is collecting data by taking and analyzing documents, such as written documents, images and electronic.

Technique of Analysis Data

The process of data analysis in qualitative research was conducted continuously from beginning to the end, both in the field and outside the field. Analysis of field data includes recording, coding and temporary interpretation to the various information obtained at multiple stages of research. The Data analysis was performed by following procedure as suggested by Nasution (2002), consist of:

1. Data reduction is making abstraction of all data obtained from the field in accordance with the focus of research.

2. Organizing and processing data in accordance with the purpose of the research, namely the Principal Leadership Styles in Improving Teacher Performance in Junior High Schools in Banda Aceh, both with regard to the planning, implementation, and results.

3. The interpretation of data in accordance with the purpose of research is to assemble the elements of research data and provides meaning based on view of research to reach a conclusion in accordance with the overall research objectives and sustainable.

Data verification is done to test or to check the conclusions drawn in comparing with the theories that are relevant whether it is appropriate or not in achieving research goals. All the activities of data analysis was conducted on an ongoing basis and are interconnected from the beginning to the end of goal. To get the validity of the data obtained also needs to check back in order to produce a research.

Result and Discussion

Principal leadership style of Junior High School of Banda Aceh in Improving Teacher Responsibility

The principal has the appropriate strategy in order to increase the responsibility to the educational staff in performing various tasks and functions. The Efforts are conducted to improve the teacher's responsibility by creating a harmonious situation and cooperation between teachers, trying to give the equipment needed by the teachers in performing their duties, giving rewards and punishment".

The principal of Junior High School of Banda Aceh in improving teachers' responsibilities applies harmonious situation and cooperative relationships in a school, and those are considered very important, in my application to create an open atmosphere, it means every teachers are given the right in order to express their opinions and desires of development in the school and if there is a problem it will be solved together, and also involves teachers in the various activities. It also gives an explanation of the goals to be achieved by the school.

The principal of Junior High School Banda Aceh in increasing responsibility in improving teacher performance provides an overview of the objectives and targets that must be achieved by the school teachers in order to achieve the goals is a shared responsibility, is also expected with an understanding of the of goal and targets that should be achieved that can grow motivation within the teachers themselves in order to make every efforts to increase the school-development and enhance their performances.

The Junior high school principals of Banda Aceh gives award to the teachers who have successfully completed the duties well, the appreciation that I give is not a material but a mental support in order to continue to develop their potential, by giving praise and chance in order to have higher positions. The principal of Junior High School of Banda Aceh does not give award in the shape of nominal by wishes the teachers in carrying out their duties completely sincere in his heart and is not solely in order to acquire and pursue an award, and the principal wonders that if the material reward is not given anymore, the teachers will work bad and will not make any improvement.

Penalties are given to teachers who are not disciplined and do not obey the regulation of teachers, as for the steps that I employ is to give a warning, and if it cannot be warned, the next step is to give punishment by reducing teaching hours, and the final step is proposed to move the teacher from this school.

Forms of motivation and coaching responsibilities which is given by principals to teachers, they stated that: The principal provides motivation and guidance to teachers to increase responsibility by giving freedom to the teachers to state their opinions to have school improvement, so if the teacher has desires should be claimed, and the most memorable for me in any occasion or meeting, he always notices and inquires about the completeness of the need for teachers in teaching. If there are something less, he seeks in order to fulfill and also always gives rewards.

From the interviews with teachers in Junior High School of Banda Aceh, the teachers also said that they are empowered to select and assign the work in accordance with their respective expertise in order to increase their responsibilities, even they are required to follow the routine activities of the subjects, if if there is a problem in the learning process, the principal and deputy will make the meeting, in the meeting among teachers, they are given the opportunity in order to give an opinion, suggestion, criticism, any others which are related to the learning process.

Responsibility for carrying out the task is motivation among work and duty and school programs that have been established earlier, the responsibility to perform the task can be seen from the use of time, materials, facilities and infrastructure in the process of teaching and learning in every activity and the ability of teachers to plan the instruction, ability of teachers to implement the learning process and the ability to evaluate teaching assessment.

According to the principal of Junior High School of Banda Aceh states that the execution of tasks can be categorized fairly good. Teacher always try to carry out the task with the certain time, it is in accordance

with the opinion of a teacher at a state school of Banda Aceh that, we are personally in educating students in accordance with the duties which are the responsibility and our outhority either curricular or extracurricular task.

According to the principal, responsibility to the learning outcomes is the main responsibilities of the various activities which is carried out in accordance with the work program, the results of the task execution. Usually, teachers has already implemented learning activities well, although there are some teachers performing their duties unoptimal. Those statement are also supported by the results of interviews with teachers and they tell that teaching and carring out other tasks is our responsibility to all activities that exist in SMP Banda Aceh.

Based on the observation, interviews and documentations of the principal's leadership style that is often raised to improve the teacher's responsibility are discretionary leadership style and instructive leadership style.

Principal leadership style in Improving Teacher Discipline in the Junior High School of Banda Aceh.

Fostering discipline on the performance of teachers is one of the fostering activities to assist teachers in performing the job effectively. To obtain data about the principal leadership style in improving teacher discipline in terms of fostering the discipline of teachers, principal stated that:

As a school principal, development to teachers that i have done the first time was about coaching discipline. It means to perform education activities effectively and efficiently, then all education personnel should have a high discipline in all areas. The next step is to provide guidance which relates to the professional competence and capabilities of teachers.

The principal Junior High School in Banda Aceh Provides direct guidance in developing and improving discipline teachers. In every meetings/conferences, I always remind about the importance of discipline and follow the regulations that had been made together. In the daily activities as a principal, he tries as hard as possible to improve self-discipline in order to be imitated by the teachers.

The real form of the example that has been done and given by the principal to the teacher discipline, in the daily activities at school, the principal is always on time. Its means that I always try to carrying out the program setting and try to keep it in accordance with the schedule. Carrying out discipline is very important for all, through the discipline of principals, hopefully it can be achieved the effective and efficient goals and also can improve the productivity of the school.

Some strategies has been implemented by the principal in fostering the discipline of teachers, those are:

    a. Helping educators to develop patterns of their behavior

    b. Assist teachers in improving on standards of behavior

    c. Carry out all the rules that have been agreed

The observation shows that the enforcement of discipline, the principals emphasizes more in providing good model for every aspect and the behavior of principal himself in carrying out the functions, duties and responsibilities in performing the duties in the school. In the applying discipline, the principal implements an open system to every teachers, so that the rules and regulations are made based on the results of decision that can be leaded well, the rules and regulations within the school are compulsory to be run by all the people because the system of rules and regulations in taken based on the result of deliberation and agreement by the principal, teachers and staffs.

According to the results of the study show that discipline is applied well by the principal, the principal gives the example of the teacher to start from themselves and from small things like the presence of the principal earlier than other teachers and in running the principal task without post phoning in doing all the duties until his behavior can be followed the principal's habit by the subordinate.

Applying the principle of reward and punishment by the principal is a very important principle for considering the need for fairness in carrying out the duties and obligations on the implementation of the function of each teacher. By the principle of the awards, the professional and productive teachers who have the higher achievements among other teachers need to be given the award.

Regarding discipline and sanctions put forward by the teacher: the teacher who ignores discipline will be given in the form of sanctions or penalties in accordance with the provisions agreed upon and written based on the results of the meeting deliberations and decisions contained in the Junior High School Principal city of Banda Aceh on the school system to teachers and servants. Sanctions usually consist about advice or verbal warning and a written warning.

The leadership style that was performed by the principal in improving discipline teachers that was indicated by the instructive leadership style, this style is done by having one by one meeting and was not intentionally done depends on the problems that was arisen at that time. Instructive leadership style is also carried out by the head teacher of the school at the time of the meeting, in connection with an instructive style of doing it every morning, the way he did was by sitting at the office of the principal teacher to monitor every teacher who comes and reminded about teaching time. Sometimes, the principal applies the instructive style by reminding undisciplined teacher when the teacher comes in to the principal's office. There are also a very wise principal of Junior High School in Banda Aceh when he warned a teacher who comes late but another teacher never know about it in order to keep the good name of the teacher, so the teacher becomes aware and will strive to maintain its responsibility.

Results of interviews with principals indicate that the principal determines the task of teacher in accordance with the job description which was agreed upon at the meeting. Each task is given by the principal in to every teacher always begins with guidance and instructions to be executed and then coordinates the carrying out task so that the task can be done perfectly. As far as the results of the study found that there is no teacher who avoids work and no one feels happy if there is no work to be done, because the duties and responsibilities of a teacher must be well-understood and properly implemented

and the results of the study indicate that the principal rarely finds the information from the teachers that the principal is very rare of having angry.

The Principal of Junior High School Banda Aceh always direct respecting each other between principal and teachers and develop the teachers' confidence. So, the entire programs can be accomplished perfectly because the principal guides and supervises them until they fell enjoyable without any depression from principal and every teacher can receive it because the principal applies consultative style.

From the interviews with teachers, it was revealed that the increasing discipline of teachers at a Junior High school principal of Banda Aceh accosts the teacher directly, makes the attendance list and has direct control to any class if there is a teacher who enters late to the classroom and to improve discipline of teachers and then all the teachers can finish the duties on time.

Principal Leadership Styles of Junior High School of Banda Aceh in Improving Teacher Commitment.

Form of the commitment to the task that the teachers has while carry out the task so far, the principal says: To achieve the goal of education, forms of commitment that should be done are professional commitment, organizational commitment and commitment to teaching. The school principal says that the commitment is still low effort which is done to create a sense of security and comfort at school to guidance communication individually.

The principal leadership of Junior High School of Banda Aceh in developing commitments which was undertaken by the principal of the school, the principal says that: In fostering commitment, I send teachers to attend seminars and training sessions, bring in the experts, provide the opportunities for teachers to continue their education, place the teachers in proportion to the field and have meeting with teachers for each semester which is intended to evaluate the performance of teachers as well as providing briefings to the deficiencies. I try to hold and complete the school supplies which are necessary to support for succeeding teaching-learning process.

Regarding to developing commitments which have been undertaken by the head teacher of the school, researchers also attempted to interview more details about the guidance that has conducted by principals to teachers in improving teachers' commitment, he says that: "Development of teacher commitment is always done by the school principal sustainably, including the author of last year and some teachers were sent for training on learning management of district/municipal and teacher competence seminar which held at the Department of Education, Youth and Sports of Banda Aceh.

In increasing the commitment of teachers, the principal has a role, duty and responsibility which essential in guiding and increasing the commitment of teachers to carry out duties as a teacher perfectly. It can not be denied that the principal's role in encouraging and mobilizing teachers to work are needed.

The guidance was held by the principal was reached by the guidance to both of groups and individuals. Development is carried out continuously and scheduled. It is illustrated from how that is done when there

are teachers have difficulty, especially teachers who have a problem with the learning process, then the principal's conduct special coaching individually.

Those ways are directed only to to teachers who actually face hard obstacles. By the applying those approach, the teachers feel motivated and proud to the principal's attention to the teacher. In fostering the improvement of the quality of teaching, the teacher will perform a change in the attitudes of teachers which leads to the improvement.

In the implementation, the principal's leadership style is applied through familiarizing to accept the individual differences. According to field observations of the application of this discretionary leadership style by the principal through the empowerment of teachers in performing their duties, where the principal distributes the division of tasks fairly to avoid arousing suspicion to the other teacher. In addition to a fair division of labor, the principal is also very consistent in the giving duties, in this case, the principal always uphold the commitment that has been made by the principal which was formulated in the meeting.

Based on the results of observation show that leadership styles which is adopted by principals is various, where the principal has a distinctive technique in leading subordinates who are considered as partners, the application of leadership style is based on the observations and interviews with teachers, principal applies the flexible leadership style, in which all the thing depends the condition of the field, if the field conditions are relatively good, then the principal himself always strive to continue to improve morale and wished can fuel the quality of teaching learning process.

According to the results of interviews with teachers, it was revealed that the main target of the principal is always on improving the quality, especially the quality of graduation, in which every graduate of Junior High School of Banda Aceh will be competed. In the quality of relationship, the principal emphasizes on the aspects of the employment relationship in the group. According to the principal, if the employment relationship in group is neglected, it will be very influential in achieving a very maximum result.

Based on the result of the result and discoveries in this research, so that can be concluded that leadership style of the principal in improving teacher commitment in Junior High School of Banda Aceh city such as follows:

Leadership efforts of the principal in improving teacher responsibilities to create harmonious corporation among teachers, try to provide teaching tool, reward and punishment. There are some steps in improving teacher responsibility are by having a harmonious circumstance in corporation. In the implementation, the principal makes an opened moment such as having the right to declare their opinion and their will toward the improvement of the school and if the problem exists, it will be solved together and also involves the teacher in every activity. Beside that the principal also explains about the goal of the school.

Discretionary leadership style is implemented to socialize the vision and mission of the school. The principal is very respect to the values of togetherness to bring the school of Junior High School of Banda Aceh to be better in the quality. Instructive leadership style is implemented in socializing the rules such as, every teacher should gather the target of curriculum which determined by the school, Department of

Education and Youth Sport at the district level, provincial and central level. Principal Leadership Styles in Improving Teacher Discipline in the Secondary Schools of Banda Aceh uses the Instructive leadership styles and consultation.

Instructive leadership style is implemented by the principal of Junior High School of Banda Aceh, in terms of the attendance and punctuality for the class entering in accordance with a the schedule and assist the teachers in developing patterns of behavior and knowledge, executes the order which has been agreed with the results of the deliberations. Discipline of teachers in various fields is a very important thing because it is one of the factors that determine the effectiveness of teaching learning. Leadership principals in developing teacher discipline is performed by conducting training to the teachers especially discipline. It means that in perform education activities effectively and efficiently, then all education personnel should have a high discipline in all areas.

The next step is providing guidance which are related to the professional competence and the capabilities of teachers. The steps which are taken by principals in developing and improving teacher discipline in every meeting is always reminding about the importance of teacher discipline and the importance of obeying the order which has been made with the teacher, in daily activities as principal I tried as much as possible to improve self-discipline in order to be a emulated and imitated by the teachers.

In controlling teacher discipline, the principal also forms a special team to supervise about teacher discipline, how important the discipline to improve performance. Teacher discipline in every side of education is very crucial because it is one of the main factor which determines the effectiveness of teaching learning in the school. If the teachers have been discipline in all side, so the all the program will run well. That is why they must be the pattern for the students. It wish that the students can imitate it, and if the teacher is in return, program of teaching learning will not run well and the students will not be discipline.

The implementation Discretionary leadership style of the principal of Junior High School in Banda Aceh appears such as giving the opportunity to supervise each other about their teaching learning process until they can advise and perfected their weaknesses one another in teaching. The principal behaves fair to all the staff, pay full the attention and fair either in distributing duties or welfare in accordance with their burdens.

Teacher commitment in working the duties so far is the first step to obtain the aim of education. Kinds of commitment that should be carried is commitment of profession, commitment of organization, and commitment of teaching. If the commitment is still low, the efforts of creating safe and comfortable school can be done by having individual guiding.

In improving commitment, the principal send the teachers to have seminars and training, invites the experts, give them chances to continuo their studies, places them on their skills. And get the meeting every semester in order to evaluate the performance of teacher and also to guide them on their problems during teaching learning and tries to provide all the needs for succeeding teaching learning process.

Conclusions

In the fact of research location on leadership style of principal in improving teacher performance can be formulated a sustainable recommendation for the implication in order to increase the quality of principal leadership style such as:

1. The principal as a leader of education shows the various style in leading in order to create a conducive circumstance to all personnel in the school. Trust and responsibilities are very important to improve the work satisfaction in which influence the teacher performance. In implementing leadership style, the principal should be in accordance with the applicable requirements in the school, the truth conditional which provides any participation opportunities and the right to be heard before the conclusions drawn or decisions made.

2. The principal should always provide high motivation to teachers, especially teachers' awareness about discipline, and compromise, which is the most effective solution on the difference or the exchange of consequence in improving teacher performance.

3. The principals and teachers have a strong commitment finishing the tasks in on time, the principal has the role, duties and responsibilities which are essential in coaching and increasing teachers' commitment to carry out the task as a teacher to run the work in order to achieve the optimal performance. The school principal provides books about the school leadership style, until the knowledge of the leadership style increases their understanding in order to achieve high quality education.

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English in Arts' is One of the Best Methods in Practicing English (Teaching and Learning English Through the Performing Arts)

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Abstract

Why do we use arts and what are the advantages in English Language Teaching? The teachers andstudents felt positive of using any kind of arts in the English language classroom.Students of this study found that arts could create a relaxing environment; provide fun, interest and motivation; offer active participation opportunities; help in cognitive development; encourage self expression; develop creativity and imagination; facilitate the development of communication and collaboration skills; help them to learn things in depth; and providecontext for language acquisition. Regarding the teaching of literacy skills through performing arts, students also found the approach useful in teaching reading, writing, speaking and listening. Students generally found themselves comfortable in participating in the arts activities when they were given enough exposure to get used to the approach and could work in groups to prepare for their performances. Moreover, students revealed that most of them performed seriously in front of the class. Nevertheless, the top-ranked students and the lower-ranked students admitted that they did not make full use of their preparation time to prepare for their performances. The positive perceptions of the use of process arts in teaching English among learners may suggest that teachers should adopt this approach in their language classrooms to motivate students to learn English and to develop their generic skills. Teachers can also use performing arts to link up the teaching of the reading, writing, speaking and listening because arts could provide meaningful contexts for students to acquire and to use the language. Arts in the English language classroom is ultimately indispensable because it gives learners the chance to use their own personalities. It draws upon students' natural abilities to imitate and express themselves, and if well-handled should arouse interest and imagination. Art encourages adaptability, fluency, and communicative competence. It puts language into context, and by giving learners experience of success in real-life situations it should arm them with confidence for tackling the world outside the classroom.

Keywords: One of the Best Methods in Practicing English

Introduction

The Art is a personal and cultural phenomenon which now and then motivates some people to express some of their ideas in a variety of shapes and ways. The arts have a profound ability to enrich the live as they touch and can be an invaluable tool for teachers at all levels to enhance instruction for English Language Learners. By integrating the arts and art-making into English language teaching and learning, students will develop and deepen their understanding of their own and others' human experience. In combination with reading, writing, speaking and listening, the arts can open doors for high levels of analysis and also challenge students to explore themselves and their surroundings, and thus find avenues for sophisticated comprehension and communication. The arts convey what it means to be human, challenge the intellect and provide rich experiences in analysis, exploration, reflection, observation, imagination, experimentation, and communication. It is hopeful that all teachers of English as a second language will find continued value participating in professional development aimed at incorporating the arts in classrooms as effective tools for reaching students. There are the kinds of popular arts here that concerns with teaching and learning English: * **Drama / Theatre** (the art of representing a story before audience); ***Singing** (the art of human voice, solo or combined): ***Film / Cinema** (the art of creating sensation with recorded movements and dialogues); ***Comic writing** (the art of telling a story with drawings and script); ***Music** (the art of sounds, the arts of silences); ***Opera** (an art which combines singing, music, and theatre); ***Photography** (the art of capturing a moment in a film or a computer file); ***Poetry** (a kind of writing as focused in stories and also in the sensations words); ***Writing** (the art of telling stories only with words).

Problems in teaching English. The **problem** comes when we are going to teach 'dialogues' in a big class. If we have a class of more than fifty students, or if we are preparing resource-based learning materials, we can't have this live dialogue, so we have to speculate about potential misunderstandings by putting ourselves as best we can in the shoes of the learners: and try to offer something for everyone. But wherever possible, evidence is better than speculation.

So the best guarantee of effective teaching is to keep our eye on the ball: concentrate on the learning and the teaching will follow. Think about the teaching and we might produce a great performance, but the main thing our students will learn is merely that we have a high opinion of ourselves as teachers.

It is also a problem of the English or foreign language class. The English Class often causes tension, frustration, and embarrassment in students. The students find that what they say is very limited. The possibility of their making mistakes, especially simple ones, is always present. The teacher may ask the students a question that they could answer - if they had understood the question. The emotions that result from such circumstances can cause insecurity about speaking and understanding the target language. It is therefore extremely important that the English teacher be fully aware of the feelings of his students and just how much his own behavior influences these feelings. To overcome the insecurities in his students, the teacher must create in the class a warm, accepting climate. The students develop confidence only if

they meet with success and feel that understanding and speaking English are not beyond them. But feelings of confidence are rarely found in a classroom climate that is cold, impersonal, and tense.

Another problem comes from the very shy students. If you are in a classroom where everybody can move about, you tend to move toward the students you are speaking to or would like to speak to. And this is just what many teachers do when they ask a student a question: they walk up to the student. The frequent result of this is that the student speaks only loud enough for the teacher to hear--leaving most of the students out of hearing range. So, instead of walking toward the student, the teacher should normally back away. I say "normally" because I am aware of the difficulty with very shy students, and they should of course not be intimidated by "speak up" barked from the other side of classroom.

Are you sensitive to the impact of behavior in teaching and learning process? We know how important variety of activity is in the teaching process. But are we equally sensitive to the impact of behavior? Interaction analysis makes teachers aware of the behaviors they use automatically -- and also of the wider variety of behaviors available to the students. The interaction system most widely used in teacher training. This system has more than ten categories of behavior in relating them to the English class. The teacher's behaviors are divided into two types of influence: indirect and direct. The indirect behaviors tend to encourage and reinforce student talk. The categories are: - Accepts students' feeling. - Asks questions. - Uses students' ideas. - Praises, encourages, or jokes. - Lectures. - Gives directions. - Criticizes. - Specific. - Open ended. - Open initiated. - Silence and - Confusion.

Methods in Teaching

English in arts is one of the best **methods** in teaching and learning English, specially for the teacher of English as a second or foreign language. If arts performances can be brought up to the classroom, they would be good motivations for the students in learning subjects, as in speaking, reading comprehension and composition. Kinds of arts can be performed in front of the class, like singing an English song, and reading poetry. They are not only performed in front of the class, but they can be performed on the stage, in the auditorium, or they can be filmed as the final test of the subjects. In teaching and learning English, the students can combine dialogues in speaking with **arts** (**Singing an English song; reading poetry; telling a story; doing a speech; fragment; pantomime; debating; hosting; playing drama; film making; visual arts; etc**). And there are many other arts may be performed.

Relaxed classroom atmosphere is good method in teaching and learning process. Relaxed classroom atmosphere is conducive to the learning process, especially if that process involves a good deal of communication between the teacher and the students and among the students themselves. What I have to suggest does not seek to ruin a pleasant atmosphere. I simply want to make one or two practical points on behavior that is natural in our everyday life but which should be avoided in the classroom. It is the very fact that the behavior in question is so natural to us that makes it so difficult to eradicate in the classroom.

The silent way is a method that has received much less attention than it deserves. This method makes the teacher doesn't have to talk so much, he has more time to observe the students, figure out where they

are, and choose just the right task to suggest next. The best means of learning more about the silent way is to participate in a workshop or at least to watch a live demonstration. Learning in the silent way thus becomes ninety percents productive right from the start. It is therefore production, rather than mere reflection, that is reinforced by the teacher's acceptance of what the student says. Students have a great part of the class time available for interacting with one another, and this builds group spirit and a feeling of belonging.

Good Teacher. The essence of teaching is difficult to qualify, but that line leads directly into the most essential criterion. Indeed such **a teacher will be able to make students discover their potential in life and also be motivated or be interested in what the teacher is delivering**. There are some characteristics of being a good teacher: *He is encouraging and patient. *He loves his students and his work. *He has a contagious enthusiasm for his teaching. * He must be creative and he can add pace and humor to the class. *He challenges the students, and takes an interest in student as a person. * He knows grammar well and he can explain something on the spot if necessary. *He/She will take a minute or two to answer a question after class. *He/She will treat student as a person, on an equal basis with all the members of the class. *He / She must be an actor. A good teacher is one who will leave his emotional baggage outside the classroom. The classroom is a stage, and to be effective the teacher must in some cases be an actor. A teacher's effectiveness depends on his demonstration of the affective characteristics. Teacher's effectiveness depends on his demonstration of the affective characteristics. These are in born in some of us, but they are also within the grasp of most teachers. Most of us want to be encouraging, enthusiastic, and available, but we just have to be reminded once in a while. The classroom management techniques of peace and fairness are often over looked, but they can be crucial to effective teaching.

Teaching and learning 'English Speaking'. The following areas of knowledge and competence are important in their own right, within the overall heading 'Teaching, Learning and Assessment' for ease of reference. Teachers' abilities in these different aspects of teaching involve not only the practical application of knowledge, but also familiarity with and practice in using a range of different teaching techniques. It is an example in teaching 'speaking'. It refers to: the key concepts, principles and techniques used in teaching speaking skills and techniques for correcting learners' spoken language. Understanding different genre. The types of speaking and their purposes, levels of formal it. The differences between spoken and written English. The difficulties learners face ability to select appropriate models and tasks demonstration of practical application through a variety of appropriate teaching techniques in a specified context, in order to achieve desired learning outcomes. Learn by Speaking, Listening and Watching. There is really only one way to learn how to do something and that is to do it. We understand that learning a skill means eventually trying our hand at the skill. Remember that we need to hear things, not just see things, in order to learn well. If we are good learners, we learn by hearing and listening. We understand and remember things we have heard. We store information by the way it sounds, and we have an easier time understanding spoken instructions than written ones. When it comes to school, however, instead of allowing students to learn by doing, we create courses of instruction that

tell students about the theory of the task without concentrating on the doing of the task. It's not easy to see how to apply apprenticeship to mass education.

Using Art Performances in practicing English. **DRAMA / THEATRE**. The purposes of Drama lesson helps to achieve two goals of English program. First, it provides an active approach to the study of English, putting students into situations that require practice in oral communication. Second, it provides an opportunity for the students to use creativity the English they have already learned, presenting them with situations that stimulate imaginative responses. As that objectives indicate, the main purpose of the drama program is to enable advanced students of English to practice the language productively and realistically. However, its usefulness does not stop there. The drama activity itself provides the student-teacher with a set of skills that will be useful to him as a teacher. Dramatic activity by its very nature can make the study and practice of a language interesting, enjoyable, and dynamic. The students gain much encouragement from the dialogues and improvisations they do in the class. If the student feels that drama helps him to express himself better in English, he will as a full-fledged teacher, make use of this technique and adapt it to the objectives of classrooms teaching. In early foreign language teaching, drama is very useful to promote language. Quite apart from the benefits for pronunciation and general language use, drama also helps to build students confidence, contextualize language, develop students' empathy for other characters, involves students in appropriate problem solving and engage them as whole people. The basic idea to the development of drama was realization that needs to play is an important developmental process in a person. Using drama to teach English results in real communication involving ideas, emotions, feelings appropriateness and adaptability; in short an opportunity to use language in operation which is absent in a conventional language class.

The drama activity also helps the students develop the personal traits appropriate for the cultural-social activities in the classroom. Acting can develop student's creative abilities to the utmost. And certain of the actor's skills are useful for any teacher in his work as communicator. He must have a strong, clear voice so that he can be heard and understood in the classroom. The teacher must project his voice, so that the students can hear clearly what he is saying. And he must project an image of himself and of the language he teaches that will earn the sympathy of his participating audience. Educational circles have always acknowledged that the creative teacher, who projects his own personality in the classroom attractively, is well on the way to success. Using drama activities can foster language skills. In the vocabulary of the English-speaking world the word 'drama' may be used to mean any one of several things. It may mean that 'art' which is concerned with plays as written and performed.

Drama may mean a certain kind of composition in prose or verse presenting, mainly through dialogue and pantomime, a sequence of events intended to be acted on the stage. In learning and teaching process, drama can foster language skills such as reading, writing, speaking and listening by creating a suitable context. Drama is a powerful language teaching tool that involves all of the students interactively all of the class period. Drama can also provide the means for connecting students' emotions and cognition as it enables students to take risks with language and experience the connection between thought and action.

Through drama, a class will address, practice and integrate reading, writing, speaking and listening. Drama also fosters and maintains students' motivation, by providing an atmosphere which is full of fun and entertainment. Teaching English as a foreign language inevitably involves a balance between receptive and productive skills; here performing arts can effectively deal with this requirement. I'd say that one of the best methods in teaching and learning English is using **drama as an object of the lesson**. Why? You've to know first the definitions of drama. Than try to get your English with the items in acting and practicing 'speaking', 'dialogues', 'writing a script', and others.

Drama is a kind of arts which concerned with plays as written and performed. It is a certain kind of composition in prose or verse presenting, mainly through dialogues and pantomime, a sequence of events intended to be acted on the stage. Drama is a branch of literature encompassing such dramatic compositions. **Drama in teaching English.** Why should we use a drama in teaching English? Language is very easy learnt but is very difficult to understand. A suitable play provides a realistic model of the way we talk. A good playwright is attuned to capture the language as it is spoken. Naturally, the play is not an exact model of the way we talk, but it is closer than the content of most English language textbooks, which must be concerned with specific structures and perfect English. In daily conversation we rarely speak perfect English. In developing English through drama can motivate students to do a lot things; they practice their speaking, arranged their sentences in dialogues and composition.

There are many ways and methods of teaching English language students with drama especially for professional English language teachers. This is the exciting sector of teaching English language students using drama, plays and with theatre techniques. The wide range of subjects for teachers including how to plan class work, choosing appropriate texts, working with students with theatrical techniques, modifying dialogue and lines for different levels of student, stage management, and how these all work together to improve language appreciation and learning; using classic plays, suggested characters; resources beyond the textbook; using stories, using songs, making games, reading poems, dialogues and monologue, etc.

From the very moment that students decide which role to take on they start learning a certain number of facts about themselves and about other people – as we have just seen that we do in our everyday life. The emotional experience conveyed in the process is not limited to having a personal insight but also extends to understanding and feeling sympathy for the experience of others. And this is essential in any learning process.

The most significant kind of learning which is attributable to experience in drama is the growth in the student's understanding about human behavior, themselves and the world they live in. **What make** the students happy with performing the play?, The students will be happy with their performing if in presenting a play in English is success. They need everything successes, for these encourage us to strive for further success. Even though their production of the play may be less than perfect, the students will feel it is successful, for they have done it. A play should be fun.

SONGS. One of the art activities in learning English is singing songs. Some teachers claim that singing songs in English will improve students' pronunciation and intonation. My purpose in using songs is to improve listening comprehension and to provide cultural topic for discussion. In places where these goals have high priority, popular songs can be of great benefit, as well as fun. I do not say that songs provide the best way to teach listening comprehension. I would oppose an English course called 'proficiency through popular song'. But I would like to see more songs used in our classes for listening comprehension and cultural understanding, and I would like to offer the following suggestions for their selection and use. Remember that your goal is to become a well-rounded performer. Don't shy away from classes that challenge you. For example, if you can't sing, take a singing course anyway. There's more to learn than carrying a tune. As an actor breath control is vital, and there's no better way to learn the tricks of this skill than a course in vocal music. In selecting songs to use with the classes, I have found it helpful to keep in mind the following points: (a) The song should be popular among the students. It should be a song the students talk about or sing frequently. (b) The song should not be too fast or too difficult to sing.

Not all popular songs can be used in the classroom; some are much too difficult or too fast to sing. (c) The words of the song should be fairly well articulated. If the goal is listening comprehension, the words must be clear enough to be understood. (d) Consider the cultural aspects as you select the song.

Suggested Procedure

Prepare a script of the words of the songs. You can write the words on the blackboard for all the students to see, or you may wish to give each students his own duplicated copy to look at. Let the students listen to the song twice while looking at the words. Let the students ask any questions they may have about the song. Ask the students some general questions about the song. Have the students answer specific questions about the song. Keep in mind your students' interests and level of ability in English. Have the class sing the song together.

FILM / CINEMA. Language teachers have been using films in their classes for decades, and there are a number of reasons why film is an excellent teaching and learning tool. Learning from films is **motivating and enjoyable.** Motivation is one of the most important factors in determining successful second-language acquisition. Films shows are an integral part of students' lives so it makes perfect sense to bring them into the language classroom. Film, as a motivator, also makes the language learning process more entertaining and enjoyable. **Film provides authentic** and varied language. Another benefit of using film is that it provides a source of authentic and varied language. Film provides students with examples of English used in 'real' situations outside the classroom, particularly interactive language – the language of real-life conversation. Film exposes students to natural expressions and the natural flow of speech. If they are not living in an English-speaking environment, perhaps only film can provide learners with this real-life language input. **Film gives a visual context.** The visuality of film makes it an invaluable language teaching tool, enabling learners to understand more by interpreting the language in a full visual context. Film assists the learners' comprehension by enabling them to listen to language exchanges and see such visual supports as facial expressions and gestures simultaneously. These visual clues support the verbal

message and provide a focus of attention. Film can also bring variety and flexibility to the language classroom by extending the range of teaching techniques and resources, helping students to develop all for communicative skills. For example, a whole film or sequence can be used to practice listening and reading, and as a model for speaking and writing. Film can also act as a springboard for follow-up tasks such as discussions, debates on social issues, role plays, reconstructing a dialogue. It is also possible to bring further variety to the language learning classroom by screening different types of film: feature-length films, short sequences of films, short films, and adverts. Given the benefits of using film in the language learning classroom, it is not surprising that many teachers are keen to use film with their students, and an increasing number of them are successfully integrating film into the language-learning syllabus. Until quite recently it was difficult to find pedagogically sound film material to help students improve their language through watching film, and teachers had to spend many hours creating their own materials. However, with the advent of the internet there is now a wealth of online resources for both language teachers and their students. With so many resources, it's sometimes difficult for teachers to see the wood for the trees.

Making and watching English Film. How will 'watching English films' help students in learning English?. Watching movies in English will help them in many ways: *__Listening skills__ – The students will hear English being used in a very natural way. Some parts may be spoken too fast for them to understand but it will be a perfect way for them to get used to hearing native speakers talk to each other. They will also hear informal English and slang words and phrases that they often do not find in **books** or dictionaries. *__Speaking skills__ – Hearing natives speaker will also help their speaking skills, especially their fluency. They will hear how to link your words together and where to put intonation on certain words and sentences. Why not watching films with their friends and speak about them afterwards? Or they could even find movie scripts online and act out scenes with their friends! They can then play the scene to check if their pronunciation were correct. *__Pronunciation__ – We all know that English pronunciation is extremely difficult and when you read words it is hard to know how they should be said. Hearing native English speakers talk to each other will help you to hear how words are pronounced. If you are using English subtitles, you will also be able to see how the words are written. *__Vocabulary__ – By watching English movies, you will hear many new words and phrases, especially idioms and colloquial expressions. I would suggest keeping a notebook with you and writing down any new words or phrases you hear and you would like to remember or you don't understand. You can look up the meaning later or ask your English teacher. *__Put knowledge into practice__ – In your English classes, you will learn a lot of vocabulary and grammar but you may not know how to use it in real life. Watching English films will help you understand how to use all the knowledge you have learnt in everyday situations.

Conclusion

The teachers and students felt positive of using any kind of arts in the English language classroom. Students of this study found that arts could create a relaxing environment; provide fun, interest and motivation; offer active participation opportunities; help in cognitive development; encourage self expression; develop creativity and imagination; facilitate the development of communication and

collaboration skills; help them to learn things in depth; and provide context for language acquisition. Regarding the teaching of literacy skills through performing arts, students also found the approach useful in teaching reading, writing, speaking and listening. Students also identified problems in adopting the process of art approach in English teaching context. They revealed that there might be discipline problems. Also, the effectiveness of the learning outcome relied on students' learning attitudes. When students did not take the art activities seriously, they might not be able to benefit from the lessons. Furthermore, they pointed out that large class size would be a big problem in adopting the process of art activities. It seems that many of the problems identified are related to the large classes in the University.

Art strengthens the bond between thought and expression in language, provides practice of supra segmental and paralanguage, and offers good listening practice. If art is considered as a teaching method in the sense of being part of the eclectic approach to language teaching, then it can become a main aid in the acquisition of communicative competence.

Art activities facilitate the type of language behavior that should lead to fluency, and if it is accepted that the learners want to learn a language in order to make themselves understood in the target language, then art does indeed further this end. In addition, art could always be extended and used as a starting-point for other activities. The theme can act as a stimulus for discussion or written work going far beyond the acting out of scenes. Art activities can thus be integrated into a course, which in turn could lead to them being exploited in terms of the language syllabus, for example the learning of vocabulary, even of structures. As matters stand now, art activities tend not to exist as a special area within the syllabus separate from all other language activities, but they often overlap with them. Perhaps one of the greatest advantages to be gained from the use of art is that students become more confident in their use of English by experiencing the language in operation.

The student - centredness inherent in all art activities also improves students' maturity and motivation, and the physical involvement contained in art along with the concept of learning language through action is an effective variation on the method of Total Physical Response and other holistic approaches to language teaching, where the learner rather than the language or indeed the teacher is at the centre of the learning process. Arts in the English language classroom is ultimately indispensable because it gives learners the chance to use their own personalities. It draws upon students' natural abilities to imitate and express themselves, and if well-handled should arouse interest and imagination. Art encourages adaptability, fluency, and communicative competence. It puts language into context, and by giving learners experience of success in real-life situations it should arm them with confidence for tackling the world outside the classroom.

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The Evaluation of Physical Fitness of the Preeminent Junior High School Students in Aceh Besar

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Abstract

This study was carried out under the title "The Evaluation of Physical Fitness of the Preeminent Junior High School Students in Aceh Besar in the 2015/2016 academic year (Evaluasi Kebugaran Jasmani Pada Siswa SMP Unggul Kabupaten Aceh Besar Tahun Pelajaran 2015/2016)". Physical fitness literally means a condition where someone can carry out tasks productively without growing any considerable fatigue and still has the rest of the energy afterward. This research focused on how the level of Physical Fitness of the students is at Preeminent Junior High School in Aceh Besar in the 2015/2016 Academic Year. For that reason, the objective of the writer in conducting this research was to see the level of Physical Fitness of the students at the stated schools. This research was described by using descriptive research method. The population taken for this research was all of the students at the preeminent schools in Aceh Besar. Whereas the sample was selected only three representative preeminent schools in Aceh Besar. To collect the data, TKJI test was administered which was then analyzed using data tabulation model started from gathering data, analyzing data, and exploring the result. From the analysis result, it was found that the physical fitness of the Preeminent Junior High School Students in Aceh Besar in the 2015/2016 academic year was counted as not good (less). It was shown in the percentage result of the test which were there was no student who was in very good category (0%), only 8% was at good, 31% was in average, 61% was at less, and 0% for the less. In reference to this result, it is better for the students to be more excited in developing their physical fitness, thus, the can maximize their activities. In addition, for physical education teachers, it is important to give more attention in enhancing the physical fitness of their students.

Keywords: Evaluation, physical fitness, preeminent junior high school

Background

In order to achieve the goal of life, human needs to develop the physical and mental strength as well as the physical fitness. Since the one who has well physical fitness will be more competent in accomplishing

their work to have better life, whether as officer, farmer, seller, and/ students. Physic education is the learning process through the physical activities which designed to improve the physical fitness, develop motoric competence, knowledge and healthy ways of life, sportive attitude, as well as the emotional competence.

According to the rules of Education Ministry of Indonesia No. 02 year 2006 which said "the development of the education quality should be directed to develop Indonesian human quality holistically through heart, mind, feeling, and physical development so that they have competitive competence to face global challenge," therefore the development of the students' quality is the long lasting process to shape their awareness and attitude.

The physical fitness actually is a condition which reflect someone ability to do their work productively without the ease of tired. The physical fitness is not merely about the physic dimension, but it also about the mental, social, emotional fitness which leads someone to reach the total fitness. The attitude of someone's physical fitness is not static while it is dynamic based on the physical activities he/she has done, especially by doing sport. So, in order reach the physical fitness, someone need to do planned, systematic, scaffold, and sustained sport activities.

After understandingthe significant of the physical fitness, it is crucial to develop students' physical fitness in the preeminent junior high school in Aceh Besar regency. This is one of the way to accomplish the goal of our national education as it has been stated in the Indonesian Law. Indeed, sport is one of the effort to develop the physical fitness by having continuous exercise, for it leads to the holistic healthy life as soesmosardjo's (1987:10) statement which said "physical continuous physical activities will result with physical fitness."

Therefore, based on the interesting explanation, the writer would like to conduct research on those problem under the title "The Evaluation of Physical Fitness of the Preeminent Junior High School Students in Aceh Besar in the 2015/2016 academic year."

Materials and Methods

According to the previous discussion, this research could be classified into the descriptive research in which to study about the problems in the society as well as the procedure in the society, activities, attitude, point of view, and processes that is ongoing along with the influence of phenomena (Arikunto, 1991:63). The approach used in this study is qualitative approach because it observes people in their life, how they interact with each other, their language, and their ideas about the surrounding. Therefore, in this research the data was in the form of words, not numbers, in which the writer try to investigate about the facts and factors of it during the research was conducting. This research was conducting in SMP Ingin Jaya, SMP Peukan Bada, and SMP Mesjid Raya in 2015.

Population and Sample

Population is the whole object of the research, in this case is the whole students of preeminent Junior High School in Aceh Besar Regency; SMP Ingin Jaya, SMP Peukan Bada, and SMP Mesjid Raya. While sample of this study were 31 students of SMP Ingin Jaya, 38 students of SMP Peukan Bada, and 45 students of SMP Mesjid Raya.

Technique of Data Collection

In order to reach the data, the writer used The Physical Fitness Testing or well known as TKJI in Indonesian, which consist of several activities such as running, pull up about 60 minutes, sit up about 60 minutes, and vertical jump.

Technique of Data Analysis

Technique of data analysis used in this study was using Mean Formula from Sudjana (1989), such as:

$$M = \frac{\sum X}{N}$$

M = Mean

$\sum$ = Number of X score

N = Number of research sample (individual)

As well as the used of percentage formula, such as:

$$P = \frac{F}{N} x 100\%$$

P   = percentage

F   = Frequency

N   = Number of respondence

100%   = Constant numbers by Hadi (1992:67).

Finding and Discussion

Based on the data analysis, the male students of SMP Ingin Jaya has medium level of physical fitness, with the frequency very high 0 student, high 3 students, medium 8 students, low 4 students, and very low 0 student. Otherwise, the female students' level of physical fitness is stay in the low category, with the frequency very high 0 student, high 1 student, medium 0 student, low 15 student, and very low 0 student. In addition, the male student of SMP Peukan Bada has medium level of physical fitness, with the frequency very high 0 student, high 1 student, medium 11 students, and low 3 students, and very low 0 student. While the female student of SMP Peukan Bada has low level of physical fitness, with the frequency very high 0 student, high 0 student, low 23 students, and very low 0 student. Male students of SMP Mesjid Raya also has medium level of physical fitness, with the frequency very high 0, high 4 student, medium 10 student, low 0 student, and very low 0 student. Otherwise, the female student of SMP

Mesjid Raya has low level of physical fitness, with frequency very high 0 student, high 0 student, medium 6 students, low 25 students, and very low 0 student.

Thus, the result show that according to gender difference, the male student has medium level of physical fitness while female students stay in low level category. The frequency is for male students; very high 0, high 8, medium 29, low 7, very low 0, while for female students; very high 0, high 1 student, medium 6 students, low 63 students, and very low 0 student. Simply, it can be said that the whole percentage of the physical fitness level of the preeminent junior high school in Aceh Besar Regency is LOW, with the frequency very high 0 student equal 0%, high 9 students equal 8%, medium 35 students equal 31%, low 70 students equal 61% and very low 0 student equal 0%.

Conclusion

Based on the discussion and data analysis, it can be concluded that the level of physical fitness of preeminent junior high school in Aceh Besar Regency stays in the low level. The frequency is very high 0 student equal 0%, high 9 students equal 8%, medium 35 students equal 31%, low 70 students equal 61% and very low 0 student equal 0%.

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The Differences between Cooperative Script and Direct Instruction Model to Improve Student's Critical Thinking in Energy (Experimental Research at SMP Negeri 1 Jeunieb)

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Abstract

Based on the problems were found the researcher in physics, such as; first, students' motivation were low in learning physics. Second, students did not have critical thinking. Third, the teacher still used the conventional method. This research intended to increase the students' critical thinking in energy material through coooperative script and direct instruction model. This reasearch was conducted at VIII SMP Negeri 1 Jeunieb and the researcher took two classes namely, VIII.1class as the experiment class and VIII.3 as control class which consisted 49 students. The instrument test was used in collecting the data. Test was consisted 12 questions in essay form for pre-test and post-test. After data analyzed by using uji t with criteria of success is "accepted H_a if t_{hitung} > t_{tabel} and rejected H_a if t another score at db (db = N_x + N_y - 2) = 47. Based on the result of got the value t_{hitung} = 2.25 and t_{tabel} = 1.67 significance between 95% with db = 47. It meant that, t_{hitung} > t_{tabel}, it can be concluded that hypothesis (H_0) was rejected and hypothesis (H_a) was accepted. It meant that there is significance the differences between *cooperative script* dengan *direct instruction* model in improving students' critical thinking.

Keyword: *Cooperative Script*, *Direct Instruction*, critical thinking in energy material

Introduction

Based on some problems were found by the researcher such as; first, students' motivation were low in learning physics. Second, students did not have critical thinking. Third, the teacher still used the conventional method. The researcher needs to give new concept to the students and the teacher also about critical thinking. The teacher should use the new model and innovative in solving students' problems and to increase students' learning in physics with their critical thinking and creative. Critical thinking is the ability to evaluate our own or another person's ideas or opinions in good organizing and

systematically. Critical thinking is a process in guiding that used in solving the problem, taking the conclusion, analyzing assumption and doing the research. Critical thinking is the ability to think in level complex and used in analyzing and evaluating process.

Science is a concept of learning about nature and all of related to the human in a live. Science holds the important role in education and technology also. Physics is one of science that study about nature and technology. Based on the researcher's observation at SMP Negeri 1 Jeunieb Kabupaten Bireuen shown that the result of teaching and learning process still low. In this case students did not have critical thinking yet, caused by the teacher still used conventional method. Therefore, students did not have the ability to thinking and analyzing physics concept, so, made their score was low. The teacher should use creative and innovative method, such as cooperative script model.

Cooperative script is the model that given students to read and take the conclusion about what they have read and also give the chance for students running out the ideas or opinions. The students show their main idea to complete the idea in the text reciprocally with they each partner. In this model students should be active, critical thinking, brave in giving opinion and encourage their friend in working together. Cooperative script model have some advantages such as; help the students in understanding difficult concepts, encourage students in working together, and helping each other.

According to background and some problems above, the researcher should be applied cooperative script and direct instruction model to improve students' critical thinking in energy material at SMP Negeri 1 Jeunieb.

Materials and Methods

The research design in this research was used quantitative research. In this research designed the researcher was conducted by true experimental research. Therefore, to analyze the data hypothesis.

Tabel 1. Research True Experimental Design

Class	Model Pembelajaran	Pre-test	Treament	Post-test
A	Cooperative Script	O_1	X_1	O_2
B	Direct Instruction	O_3	X_2	O_4

Sugiyono (2010)

Where:

O_1 : Pre-test class A cooperative script

O_2 : Post-test class A cooperative script

O_3 : Pre-test class B direct instruction

O_4 : Post-test class B direct instruction

X_1 : Giving treatment cooperative script

X_2 : Giving treatment direct instruction

In collecting data in this research was analyzed by using the formula. Mean score is used to find the average score of the students mastery.

$$Nilai = \frac{Skor\ yang\ diperoleh}{Skor\ maksimum} x 100\%$$

1. Normality test

Normality test used for to analyze the data normal or not. The following formula according to Ridwan (2005) below:

$\chi^2 = \sum \frac{(Oi-Ei)^2}{Ei}$

Where:

- Rejected H_o and accepted H_1 if $\chi^2_{hitung} < \chi^2_{tabel,}$ normal data distribution
- Accepted H_o and rejected H_1 if $\chi^2_{hitung} > \chi^2_{tabel,}$ is not normal data distribution

With criterion (db) = k-3.

2. Homogenity test

Homogenity test used to find out the data homogity or not. The collecting data in this research analyzed by using the formula

$$F = \frac{Varians\ terbesar}{Varians\ terkecil}$$

Where:

H_o : homogeneity data

H_1 : is not homogeneity data

Where:

Bila F $_{hitung}$ < F

Results and Discussions

Before the teaching and learning process was began. The researcher did the pre-test for the students. Pre-test was given to know the basic knowledge of the students before teaching and learning process. The result of per-test for both classes can be seen in the Table 2 as below:

Tabel 2. Result of Pre-test class A (Cooperative Script) and B (Direct Instruction)

Data	Class A (Cooperative Script)	Class B (Direct Instruction)
Highest score	65	68
Lowest score	30	30
Mean score	47	48
Standard deviation	9.49	9.75
Variance	90.06	95.06

Based on the data calculating above, the result of students' class A got the highest score was 65 and the lowest score was 30. Mean score of class A was 47 standard deviation was 9,49 and variance was 90,06. While, class B based the result shown that students' class B got the highest score was 68 and the lowest score was 30. The mean score was 48, standard deviation was 9,75 and variance was 95,06.

Based on the table can be shown in the diagram below:
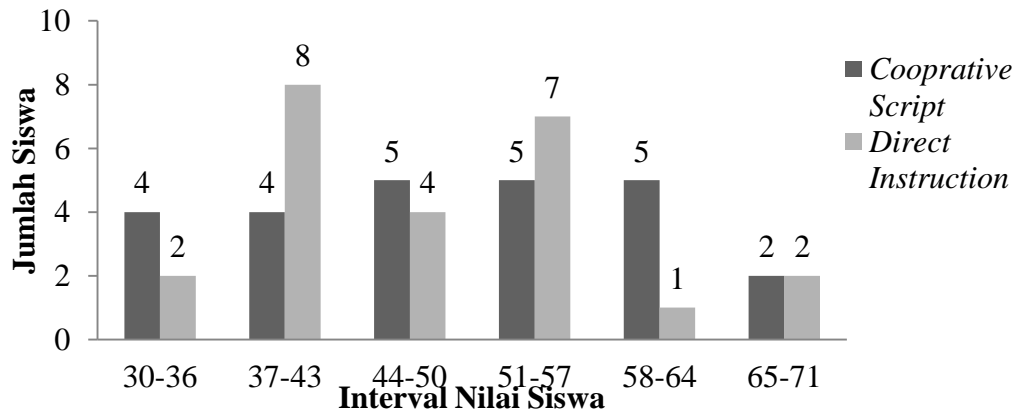
Figure 1. Graphics of Pre-test Class Cooperative Script and Direct Instruction

According to graphics above shown that from direct instruction class there were 2 students got the score interval 30-36, while, from cooperative script class there were 4 students got the score interval 30-36. In score interval 37-43, cooperative script class there were 4 students got that value while direct instruction class there were 8 students. At the interval 44-50 cooperative script class ther were 5 students and direct instruction class only 4 students. For interval 51-57 cooperative script class 5 students got the value, direct instruction class there were 7 students. At interval 58-64 cooperative script class and direct instruction class of each class got 5 and 1 student got the value. While interval 65-71 there were 2 students got the score for both classes.

Result of Post-test

Result of post-test both of class can be seen on the 4.2 below:

Table 3. Result of Post-test Class A (Cooperative Script) and Class B (Direct Instruction)

Data	Class A (Cooperative Script)	Class B (Direct Instruction)
Highest score	95	90
Lowest score	75	73
Mean score	82	78.8
Standard Deviation	5.54	4.14
Variance	30.69	17.13

Based on the data calculating above, the result of students' class A got the highest score was 95 and the lowest score was 75. Mean score of class A was 82. Standard deviation was 5.54 and variance was

30.69. While, class B based the result shown that students' class B got the highest score was 90 and the lowest score was 73. The mean score was 78.8, standard deviation was 4.14 and variance was 17.13.

Based on the table can be shown in the diagram below:
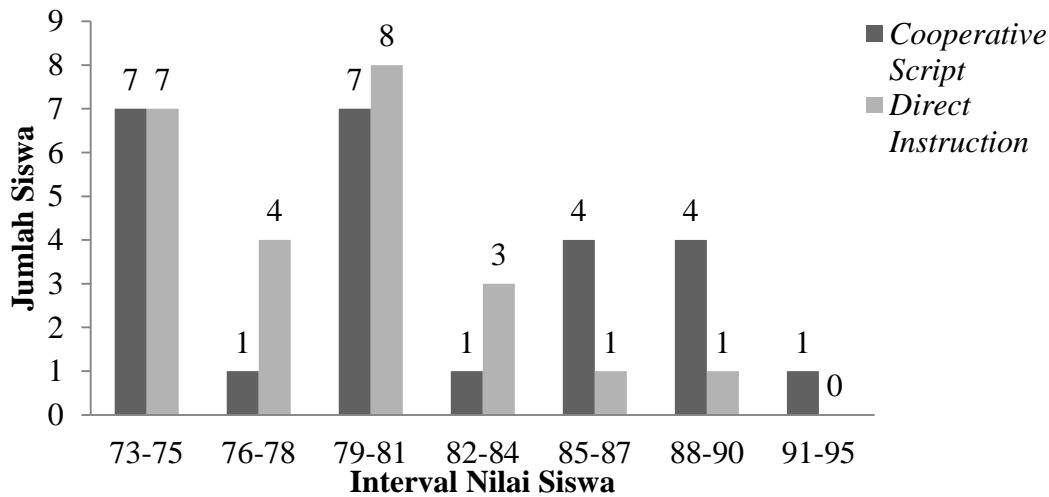
Figure 2. Graphics of Post-test Class Cooperative Script and Direct Instruction

According to graphics above shown that cooperative script and direct instruction class there were 7 students got the score interval 73-75 of each classes. From cooperative script class there were 1 student got the score interval 76-78. While, direct instruction class there were 4 students got it value. In score interval 79-81 , cooperative script class there were 7 students got that value while direct instruction class there were 8 students. At the interval 82-84 cooperative script class ther were 1 student and direct instruction class 3 students. For interval 85-87 and 88-90 for both classes there were 4 students and 1 student got it the value of each classes. At interval 91-95 cooperative script class only 1 student got the value. while, direct instruction class there was nothing got it the value.

Based on the graphic above shown that the students' result for both classes had increased.

Analysis the improvement the ability of critical thinking

Data of the improvement the ability of critical thinking Cooperative Script class A

The improvement students' ability of critical thinking in cooperative script class was 0,66 or in criteria good. Recapitulation N-gain cooperative script class can be seen below:

Table 4. Summarize of N-Gain class A (Cooperative Script)

Data	Pre-test	Post-test	N-Gain
Mean score	47	82	0.66
Standard Deviation	9.49	5.54	0.10
Variance	90.06	30.69	0.01

Based on the table above, shown that the result of N-gain for cooperative script class was 72% or 18 students were in category good and 28% or 7 students in category very good.

Table 5. Percentage of the improvement based on indicator for critical thinking of class A (Cooperative Script)

Indikator Keterampilan Berpikir Kritis	Pretest (%)	Postest (%)	Peningkatan (%)
Memberikan Penjelasan Secara Sederhana	36	78	42
Membangun Keterampilan Dasar	56	88	32
Menyimpulkan	55	77	22
Memberikan Penjelasan Lebih Lanjut	43	84	41

Data of the improvement the ability of critical thinking of Class B (Direct Instruction)

The improvement students' ability of critical thinking in direct instruction class was 0.60 or in criteria good. Rekapitulation N-gain cooperative script class can be seen below:

Table 6. Summarize of N-Gain of Class B (Direct Instruction)

Data	Pre-test	Post-test	N-Gain
Mean score	48	78.8	0.60
Standard Deviation	9.75	4.14	0.06
Variance	95.06	17.13	0.004

Based on the table above, shown that the result of N-gain for direct instruction class was 91,7% or ss students were in category good and 8,3% or 2students in category very good.

Table 7. Percentage of the improvement based on indicator for critical thinking of class B (Direct Instruction)

Indikator Keterampilan Berpikir Kritis	Pretest (%)	Postest (%)	Peningkatan (%)
Memberikan Penjelasan Secara Sederhana	39	70	31
Membangun Keterampilan Dasar	54	90	36
Menyimpulkan	56	79	23
Memberikan Penjelasan Lebih Lanjut	45	78	33

Analysis Data

Normality test

Normality test for pre-test and post-test at class VIII.1 as cooperative script class and VIII.3 as direct instruction class. in analyzing the data for normality test using the formula chi kuadrat below:

Table 8. Result of Normality Test Chi Kuadrat

Statistic	Class A (*Cooperative Script*)		Class B (*Direct Instruction*)	
	Pretest	Postest	Pretest	Postest
N	25	25	24	24
$\overline{X}$	47	82	48	78.8
SD	9.49	5.54	9.75	4.14
χ^2_{hitung}	2.58	6.19	7.67	7.36
χ^2_{tabel}	7.81	7.81	7.81	7.81
conclusion	Normal	Normal	Normal	Normal

Based on χ^2_{tabel} shown that the score was signifince 95% (α = 0.05). It can be concluded that the hypothesis in normality test $\chi^2_{hitung} < \chi^2_{tabel}$ was normal. It also $\chi^2_{hitung} > \chi^2_{tabel}$ was not normal destribution. On the table above shown that the score χ^2_{hitung} for both classes smallest than χ^2_{tabel} so, it meant that for both classes had normal data.

Homogenity test

Homogeneity test for both classes in collecting the data were using the formula $F_{hitung} < F_{tabel}$ below:

Table 9. Result of Homogenity test

Statistic	Pre-test		Post-test	
	Class A (Cooperative Script)	Class B (Direct Instruction)	Class A (Cooperative Script)	Class B (Direct Instruction)
SD	9.49	9.75	5.54	4.14
F_{hitung}	1.05		1.79	
F_{tabel}	2.00		2.00	
conclusion	Homogen		Homogen	

The result of homogenity tes was 95 % (α = 0,05) dengan derajat kebebasan (dk) = (24;23) for both classes. From calculating the result of pre-test and post-test for cooperative script class and direct instruction class can be concluded that for both classes were homogen. It shown that F_{hitung} for both the data smaller than F_{tabel} so, it meant that the data for both classes were homogen.

Hyphothesis

Basen on the result of the both test were normal and homogen. Threrefore, the researcher used the formula *t-test.* The result shown the yable below:

Table 10. Hyhpotesis' Result

Statistic	Class A (Cooperative Script)	Class B (Direct Instruction)
N	25	24
$\overline{X}$	82	78.8
SD^2	30.6916	17.1369
t_{hitung}	2.25	
t_{tabel}	1.67	
conclusion	H_a accepted and H_0 rejected	

Based on the table shown that the score of t_{hitung} was 2,25 and score of t_{tabel} was significance 95% (α = 0,05) for db = 47 score of t_{tabel} was 1,67. It can be conclude that the result of t_{hitung} was accepted H_a, that is t_{hitung} > t_{tabel}. Thereby, H_0 was rejected and H_a was accepted, it meant that there are significant the differences between cooperative script and direct instruction model.

Conclusion

Based on the result of this research can be concluded that there are that there are significant the differences between cooperative script and direct instruction model toward the improvement of students' critical thinking in physics. It can be proved by the result of *cooperative script* class post-test was 82. While, edangkan *direct instruction* class was 78,8 and proved also by t_{hitung} > t_{tabel} score was 2,25 > 1,67, it can be concluded that (H_a) was accepted. Thereby, students' critical thinking at SMP Negeri 1 Jeunieb by using cooperative script class more good than direct instruction class. it shown that the implementation of cooperative script model can improve students' critical thinking at SMP Negeri 1 Jeunieb.

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Improving Students' Ability in Learning English Through Emotional Quotient (Eq) Learning (A Classroom Action Research at the Fifth Grade of MIN Uteun Gathom)

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Abstract

This research entitled "*Improving Students' Ability in Learning English through Emotional Quotient (EQ) Learning (A Collaborative Classroom Action Research to the Fifth Grade of MIN Uteun Gathom*)". Emotional Quotient (EQ) is the ability to recognize emotions, ability to motivate them selves, the ability to recognize emotions in others, and the ability to build relationships. In implementing Emotional Quotient (EQ) Learning, the researcher used role play as activity where the students learned vocabularies by playing the action of the verb in front of the class. The design of this research was a Classroom Action Research (CAR) that have four steps, they were 1) planning the action, 2) implementing the action, 3) observing the action, 4) analyzing and reflecting. There were two cycles in this research. The data was collected by using some instruments, they were observation, test, questionnaires and field note. The data analyzed qualitatively and quantitatively. Based on the result' test in cycle, it was found that 30% students got 65+ while in cycle 2, they were 85% students got 65+ and the students response was good based on questionnaires' result, it was 0.78 (good). The researcher took conclusion that the implementation of Emotional Quotient (EQ) Learnings to the fifth grade students was success.

Key Words: Learning English, Emotional Quotient (EQ) Learning

Introduction

Learning English is the process to know about elements are in English that is able to build the students' knowledge especially in langauge. English as one of the subjects is taught from elementary school to university in Indonesia. English teaching covers four skills, namely listening, speaking, reading and writing. All these components are taught in integrated ways. At schools in Indonesia, English subject aimed at developing communication competence in oral and written form (Depdikbud, 2004). This means the students have progress in learning English (listening, speaking, reading and writing).

Based on experience of the reseracher who had done practice learning at the school, there are many problems faced both from students and from teachers. The students had lack of vocabularies so that the students could not balance with the material given, when the teacher gave the task for them.

Other problems which the students have in learning English is unavailability of textbooks in schools. It can prevent or reduce the motivation of the students. The other problem also face in teaching English is the methods and teaching strategies by teachers who are not in accordance with the development of students. It makes the students low competence in learning English. The other factors also came from teacher who did not use the appropriate techniques in teaching. The elementary students are asked to translate the difficult sentences and wrote the grammar which makes the students confused. In fact the students need real world situation to help them easy in understanding the material. So the teacher must make a suitable the technique in teaching.

Now, the Goverment uses School Based Curriculum or (KTSP), In curriculum there are standard competence and basic competence. It is use to difference the level of learning achievement. One of the standard competences of English in Fifth grade in Elementary school is understand the simple instruction with action in school context. It means that students of elementary school were expected able to communicate with simple instruction by using English in the school context. Every standard competence has basics competence deal with the lesson that learned.

In Elementary school, students were taught about the basic of English. They learned about the simple subject such as things around them, the name of fruit, sport, game and giving instruction, etc. In other word, students learned a lot about vocabulary.

In term of English, vocabulary is one of the components which support other skills such as listening, speaking, reading and writing. On the other hand, students learning English should know some words as basic foundation for learning the language. Besides, they must learn about meaning of vocabulary and how to use it in sentences. It means that in learning vocabulary. Students have to know the meaning of word and they have to know how to use it in context.

Teaching vocabulary is clearly more than just new words, this may of course, have it place, but there other issue too. The students see a lot of words course of a week, some of them are used straight way, the elementary students have the limitation of way to think English, they must be learned about the something that appropriate for them, the material must deal with their knowledge in order they can understand the topic is learned. So the teacher can use the appropriate learning system to manage them because they are young learner.

Based on the characteristics and condition of the students at elementary school for developing their English ability is Emotional Quotient (EQ). Emotional Quotient (EQ) is the body's reaction to the surroundings and they offer information to the brain and heart. Emotional Quotient (EQ) have the

important role in reaching for professional and personal successfulness. EQ considered by conditions for personal successfulness (Ginanjar, 2001).

The theory of Emotional Intelligence and its measurement, the Emotional Quotient (EQ) were developed in the 1970s and 80s but popularised by Daniel Goleman in the mid-90s. This concept got familiarity with the publication of book titled 'Emotional Intelligence' by Daniel Goleman's in 1995.

EQ is one of models originating in psychology which are being incorporated into language teaching. The concept of Intelligence Quotient (IQ) which relates to the determination of level of intellect or sharpness of mind of a person is very common. People normally use in our daily conversation that the IQ of a specific person is high or low. However, the concept of Emotional Intelligence or Emotional Quotient is relatively new in the field of Psychological Research. Emotional Quotient (EQ) relates to the ability or skill to understand, evaluate and manage the emotions of one's self and others.

Related to the expalanation above, in this research the researcher would like to conduct a research entitled "*Improving Students' Ability in Learning English through Emotional Quotient (EQ) Learning (A Collaborative Classroom Action Research at the Fifth Grade of MIN Uteun Gathom Students)*."

Materials and Methods

Research Design

The design of this study is a Classroom Action Research (CAR). CAR is the research that have purpose to improve students' ability and make it better than before. The researcher made an action research as a research design because the language knowledge always change and develop in the practicing and implementing. Nunan (1992) stated that a form of research which is becoming increasingly significant in language education is action research. In action research, a researcher identified the problem, planed and designed a way to overcome it, and implemented the plan.

Sugiono (2008) states that data collection can be done in certain setting, source, and ways. Based on setting, data collection can be done in natural setting, in laboratory by experimental research, etc. To collect the required data, the researcher used observation checklist, tests and questionnaires as the research instruments. Instruments are tool in collecting data. So, in this research, the researcher made some instruments that are required, such as test, questionnaire, observation check list and field note.

Technique of Data Analysis

In analyzing the data in Classroom Action Research, there are two kinds of data gathered in the study, they were qualitative and quantitative. Qualiatative was the data that analyze descriptively whereas quantitative was the data analyze through formula or scale had been determined before.

The qualitative data obtained from the observation checklist, field note and questionnaires guidelines, were analyzed inductively to get a conclusion toward the accomplishment of the criteria of success whether the students were active and happy or not learning by using Emotional Quetiont (EQ).

In the quantitative data, they are analyzed by using formula to calculate the mean score of the students in order to know their grade, the scale prepared by the researcher as follows; Quantitative data is displayed by using formula, for example searching for student's mean score, percentage of successful learning, the researcher used the formula $\left(\bar{x}\right) = \dfrac{\sum fx}{N}$ introduced by Winarsunu (2002).

Where $\left(\bar{x}\right)$ = Mean score

$\sum$fx = Total score of all students

N   = The number of samples

Results and Discussions

Cycle 1

In the first cycle the researcher done for three meetings. The analysis of the result of the students' achievement in implementation Emotional Quotient (EQ) learning in teaching vocabulary by using test. In the analysis, the researcher presented the students score on the test' result. The students got different score but here the researcher describe the mean score. Based on analysis in students' learning process in cycle 1, the researcher found that the different students' score. To know the mean score got by students in vocabulary, the researcher used formula:

$$\left(\bar{x}\right) = \frac{\sum fx}{N} = \frac{1155}{20} = 58$$

The mean score of students after doing implementation of Communicative Emotional Quotient (EQ) learning by involving role play activity showed that the students were in low category. The average score was 58. There are six students who got 65+, it meant 30% students got 65+ and 70% got 65−.

After analyzing the result in cycle 1, some findings were gotten. The result of the analysis of teaching learning process, there were some processes that have not achieved yet. The teacher needed to change some ways in order to get best achievement. The teacher can change the style of their teaching process and direct the students well by repeating the verbs after they played in front of the class. It needed some changes in order the researcher could get the expected result in the next cycle. So, the researcher revised the plans and continued the plan in cycle 2.

Cycle 2

Based on analysis in students' learning process in cycle 1, the researcher found that the different students' score. There are six categories to know the mean score got by students in vocabulary, the researcher used formula:

$$\left(\bar{x}\right) = \frac{\sum fx}{N} = \frac{1385}{20} = 69$$

The average score of students after doing implementation of Communicative Emotional Quotient (EQ) learning by involving role play activity showed that the students were in low category. The average score was 69. There are 17 students who got 65+ (85%) and 3 students got 65- (15%).

To know the students' perception about the learning process or whether they felt happy or not on implementation Emotional Quotient (EQ) learning in teaching vocabulary. The researcher gave questionnaire that consisted of 15 questions list. The students directed to cross the choice (a or b) in the provided options that the questions related to the learned method. The choice was crossed honestly without repressing on their choice. The questions were made in two forms, positive and negative statement about the activities and task in finding out the class atmosphere. The questionnaire were crossed by the students using the Guttman Scale as follows:

Table 1. The mean score of the students' perception toward Emotional Quotient (EQ) Learning

No	Variable Measured	Questionnaire Number	Total Score	Mean score
1	Studying Happily in English class	2,7,9,14,15	3.95	0.79
2	Easy to comprehend the lesson	5,6,8,13	2.98	0.74
3	Interested to the activities	1, 3, 9	2.5	0.83
4	Working together in group	4,10,11,12	3.05	0.76
	Average		11.7	**0.78**

Based on table it was found that the mean score for each variable from several items toward the maximum score can be interpreted. Studying happily in the class through Emotional Quotient (EQ) Learning included 5 questions, they were the questions' number 2, 7, 9, 14 and 15. Five questions got the mean score was 0.79. It was categorized good. The second variable was easy to comprehend the lesson through Emotional Quotient (EQ) Learning included 4 questions, they were the questions' number 5, 6, 8, and 13. Four questions got the mean score was 0.74. It was categorized good.

The third variable was interested to the activities of Emotional Quotient that included 3 questions, the questions' number were 1, 3, 9, the mean score of three questuions were 0.83, it was categorized good. And the last variable was working together in group and pair, the variable included 4 questions, they were questions number 4, 10, 11, 12. Four questions got mean score was 0.76, it was categorized good.

The mean score of all questions in questionnaires on the students' response of implementing Emotional Quetiont (EQ) Learning in improving students' ability in vocabulary was 0.78. It was categorized good.

Conclusion

Emotional Quotient (EQ) Learning could improve the students vocabulary, based on test' result in cycle 1, the mean score of students was 58.30% students got 65− whereas in cycle 2, the mean score of students was 69.85% students got 65+.

The students' response on implementation of Emotional Quotient (EQ) learning were good, the students felt happy learning by using Emotional Quotient (EQ) Learning, easy to comprehend the lesson, interested with activities and mastered the vocabularies easier. It could be proved by the mean score of

questionnaire' result, it was 0.78 (good). Based on observation, most students were active in teaching learning process, the students could involve in activity well and worked cooperatively in group.

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Application of the *Open-ended* Approach to Improve Students' Achievement and Creativity at Multiplication in the Fourth Grade of SD Negeri 1 Makmur, Bireuen District

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Abstract

This peper reports the proses and resuts of an experimental study concerning the inplementation of open-ended approach in multiplication topic to improve students' achievement and creativity. The data were calcolected through one-short case study using quasi-experiment research design. The sample are one class grade 4 students at SD Negeri 1 Makmur. The result of data analysis show that there is a significant improvement of student achievement and creativity in multiplication with the application of open-ended approach in the process of learning.

Keywords: Open-ended, learning and multiplication.

Introduction

It often happens in the classroom after the student experience of learning mathematics that they still lack of understanding of what they have learned, this is due to the inability of students in reasoning, mastering and understanding the material even if the lesson is completed. When the delivery of content through the explanation by a teacher who some times students do not care, lack of attention or attention without understanding. The inability of student to understand the lessons are influenced by the absorption of these students, as a result of a cursory explanation that makes the students are no table to respond glimpse of the material described by the teacher.

Based on preliminary studies in the fourth grade primary school 1 Makmur there are the inability of students to multiply two numbers with two numbers achieve mentac quisition value < 65. While the value of the minimum mastery in the school 65.This led to the acquisition value after they study material multiplication of two digit numbers far from expectations. Students have a low value on the ability of the material multiplication of two numbers two numbers. On the answer sheet student looks 12 x 13 = $\frac{\frac{12}{13}}{36} x$, $\frac{12}{48}+$.

should have 12 x 13 = $\dfrac{\frac{12}{13}}{\frac{36}{\frac{12}{156}}+}x$, Errors in the results due to the lack of knowledge of students on procedural

multiplication is tiered.

Based on the above statement, the researchers tried to make changes to open-ended approach to learning. The reason for choosing the open-ended approach to learning is that students are able to complete the multiplication is not just one way, but many ways can be done by students to complete the two-digit multiplication of two numbers. The use of open-ended in the learning of mathematics in primary school can make students creative that can affect student achievement as well as the results of the study Marzuki et al (2014), learning by using teaching materials based on open-ended problems and realistic approach is better than the students conventional learning. While Fardah (2012), analysis of processes and creative thinking abilities of students in mathematics through an open-ended task with the result is a creative mindset student high category. The use of open-ended approach considered appropriate in the hope avoid mistakes of the fact, concepts, principles and skills. Learning material two numbers are two numbers that are planned using the open-ended approach is intended that students do multiplication with many ways of learning can make students creative.

Problem formulation, How does learning with an open-ended approach can improve the performance and creativity of the fourth grade students of SD Negeri 1 Makmur. *The purpose ofthe study*, the purpose ofthe study is to determine the learning outcomes of the fourth grade students of SD Negeri 1 Makmur is taught through approaches.

Emphasis open-ended is expected of each student has the freedom to solve problems according to their ability and interest, students with higher ability can perform various activities of mathematics, and students with lower ability can still enjoys the activity of mathematics according to the capabilities of their own (Muhsinin, 2013).

Learning with an open-ended approach begins by providing an open problem to students. Muhsinin (2013) can be classified into three types, namely: process is open, products are open, and ways to develop are open. Open process means the type of a given problem has many ways correct completion. The step-by-step approach is open-ended, according Muhsinin (2013), write the student's response is expected, the problem given to the students to be clear, present the problem as attractive as possible for students, fill principles of formulation problems and provide enough time for students to explore problem.

The ability of creative thinking can be defined as the specific levels of thinking. Consists of four aspects: 1) the smooth cover, first solve the problem and give many answers, secondly, gives many examples or statements related to a specific mathematical concept or situation; 2) include the flexibility aspect, using problem-solving strategies and provide a variety of examples; 3) aspect of new, using new strategies and provide examples that arenew; 4) aspects of detail includes the ability to explain in detail, coherent and incoherent to the mathematical procedure.

Materials and Methods

Approach and type of study

This study uses a quantitative approach with a model of experimental research. Sugiono (2010: 8) states that quantitative research the method of research that is based on the philosophy of positivism, used to examine the population or a particular sample, data collection using assessment instrument, the analysis of quantitative data statistics with the aim to test the hypothesis that has been set.

This experimental study using a trial that is specifically designed to generate the data needed to answer the research questions. In this study there is only one group is the experimental group will be given a pretest before the implementation of the open-ended approach and given a posttest after the implementation of the open-ended approach.

Research design

This study uses a one-shot case study. In the implementation of this study only used one time treatment that is thought to have a significance impact. The design of the research is as follows:

X O (Arikunto, 2010)

X: treatment with open-ended approach in determining the multiplication

O: observation of the results of the application of the model.

This study was conducted at SD N 1 Makmur, in the second semester of academic year of 2014/2015. The population of this study was all the fourth grade students at SDN 1 Makmur Bireuen Academic Year 2014/2015. They are just one class numbering 16 students, research samples are all students of the fourth grade.

Data collection techniques, data collection in this study is based on observations and test techniques. Tests are a number of questions to be answered by the students. In this study, the test is given only once after the treatment and the test is called the post test. The test is given in the form of essay about the multiplication of short tiered learning outcomes with open-ended approach. While the results of observation through the sheet charging the observations made by two observers who observe the learning process both teachers and students' activities.

Data analysis techniques, as for the steps taken by the authors to analyze the data in this study is to calculate the average value, Calculating the standard deviation or standard deviation of each variable, and then in the normality test (chi square) was conducted to test the significance of differences in the frequency of observed data Oi (data based on the frequency of observation) with Ei frequency (frequency of expectation). Normality test data can be performed using the formula chi squared (x2).

Normality test is done on the significant level of 0.05 by the degrees of freedom df = n-1. Normal distributions of data when X^2 $_{count}$ < than X^2 $_{table}$. Test the hypothesis by using t-test, the data collected in this study a quantitative data were processed using the formula t test: $t = \frac{\bar{x}-}{\frac{is}{\sqrt{n}}}$. Criteria for testing

hypotheses by Sudjana (2005) is received H_0 if $t \leq t$ (1- α). Price $t \leq t$ (1- α) is obtained from the distribution list student (t) with probability 1-α, otherwise H_0 is rejected at other prices. If t_{count} > t table then Ha accepted. H_0 "model approach is open-ended on the material multiplication tiered there is no achievement, learning outcomes of the fourth grade students at SDN 1 Makmur reached an average (μ_0) <65" while the alternative hypothesis Ha "Model approach is open-ended on the material multiplication tiered there is increasing achievement, learning outcomes of the fourth grade students at SDN 1 Makmur reached an average (μ_0) ≥ 65". Statistical hypothesis is: H_0: μ <65 and the alternative hypothesis Ha: μ ≥ 65. The average score is 72.06 with standard deviation 14.02.

From the calculation of standard deviation (s), then the normality hypothesis calculated based on the value of post test. It is stiffened to determine whether the data is normally distributed group or not.

Normality Test

Based on the calculation table normality test, with degrees of freedom dk=n-1, the obtained $X2_{tabel}$ = 9.49 by $X2_{count}$ =0.7722. Then found that the group of data over the normal distribution X^2_{table} > X^2_{count}. The data obtained were normal then continue by calculating t test to answer the hypothesis. Calculating hypothesis by usingt test t_{count} = 2,014

Based on the calculation of the t test obtained t 2.014 t table 1.75. On the condition that if t_{count} > t_{table} then the hypothesis is accepted. With the acquisition t_{count} 2.014 > 1.75 t_{tabel} so Ha is received or the hypothesis model of open-ended approach to the multiplication composite materials improve learning outcomes of the fourth grade students of SD Negeri 1 Makmur reached an average of ≥ 65 " be accepted.

Result and Discussions

In this study, the researcher also used the observation sheet to obtain a balanced outcome of the learning process. With the observation sheet when teaching and research activities of the students when learning, observation of activities carried out by two observers with the acquisition of average percentage of 85% of teacher activities and activities of the students is 83%. Thus the activities of the teacher and the student activities are included in both categories is good.

Conclusion

Application of the open-ended approach has positive effect on learning outcomes of the fourth grade studentsof SD Negeri 1 Makmur on multiplication composite material. The learning process as an activity of the teacher and the student activity categorizede it her.

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An Example of Exemplary Assessment to Determine Students Conceptions on Acid and Base Topic in Science

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Abstract

Most of the teachers in Aceh still use traditional forms of assessment, specifically summative assessment in their teaching and learning activity. There is a critique on traditional assessment where it does not support higher order thinking skill. The aims of the essay are to review and discuss an example of exemplary assessment task for diagnostic assessment. There are two good assessment tasks that can be used to determine students' prior knowledge on acids and bases topic in this essay, namely: grouping and crossword puzzle. These assessments are considered as a good and effective assessment because it has some characteristics of a good and effective assessment, namely: it aims to improve students' learning, it is integrated with teaching and learning process, it is designed based on constructivist theory of learning, it is valid and reliable.

Key words: Diagnostic assessment, grouping, crossword puzzle, acid and base

Introduction

One of key element in teaching and learning activity is assessment. There are several types of assessment. However, in the context of Aceh, most of the teachers still use traditional forms of assessment, specifically summative assessment in their teaching and learning activity. There is a critique on traditional assessment. The critique has been based on the assumption that these forms of assessment do not support high quality of leaning associated with 'deep' learning, critical thinking, sustainable knowledge and lifelong learning (Havnes & McDowell, 2008)

Diagnostic assessment is one form of assessment that can be used by the teachers to support high quality of learning. Diagnostic assessment aims to determine students' prior knowledge. In order to plan the effective teaching, it is essential for the teacher to determine students' prior knowledge, because the

students have their own conceptions on phenomena in the world before they study in the classroom (Tytler, n.d.).

The aims of the essay are to review and discuss an example of exemplary assessment task for diagnostic assessment. Before further discussion about example of exemplary diagnostic assessment, it might be necessary to review the definition, purposes, and types of assessment, as well as characteristics of effective assessment.

Assessment

Athanasou (1997) stated that assessment come from the Latin *assessare* which means to impose a tax or set a rate. However, Wiggins (1993, cited in Emmitt and Rice, 2010) said that assessment derived from *assidere* which means "to sit by one's side". According to Athanasou, Assessment is the activity "of collecting and combining information from test (e.g., on performance, learning, quality) with a view to making a judgment about a person or making a comparison against an established criterion" (p. 22). In addition, Black and William (1998b) generally defined assessment as all activities that done by teachers and students to gather information that diagnostically used to enhance teaching and learning activity (Wang and Lê, 2006). Further, Satterly defined assessment as, an omnibus term which includes all the processes and products which describe the nature and extent of children's learning, its degree of correspondence with the aims and objectives of teaching and its relationship with the environments which are designed to facilitate learning (Carrol, 2005).

Assessment has several purposes, although sometimes they can support each other, purposes of assessment sometimes conflict each other (Earl, 2003). In general, purposes of assessment can be divided into three levels, namely: into classroom level (students and teachers), school level, and system level (Te Kete Ipurangi, n.d.). Firstly, at the classroom level, assessment aims to provide students with appropriate learning based on their needs, to provide the students feedback that they can use to identify their next steps of learning, to develop good partnership with parents, to help teachers to plan next teaching, and to guarantee continuity of education for the students (Te Kete Ipurangi, n.d). Mutch and Brown (2002) supported that assessment helps students to improve their learning by providing them feedback, motivating them to learn, and diagnosing their strengths and weaknesses. In addition, Cohen (1994), and Mutch and Brown (2002) added that assessment can be used for certification, for example, to certify pass or fail a student and to grade or rank individual students.

Secondly, at school level, assessment can be used to evaluate the success of the schools in applying their curriculum and teaching programs, to collect information to plan strategies for school development, and to improve the achievement of particular students and groups (Te Kete Ipurangi, n.d.). Cohen supported that assessment can be used to evaluate curriculum and teaching (1994).

Thirdly, at the system level, assessment can be used as quality assurance of education (Te Kete Ipurangi, 2007; Mutch and Brown, 2002). Moreover, it can Provide the means of evaluating progress

towards raising achievement and reducing disparity, certify the achievement of senior secondary students, and provide the foundation for further study and the world of work (Te Kete Ipurangi, n.d.)

Types of Assessment

In general, there are two types of assessment, namely summative and formative assessment (Scriven, 1991; Wang and Lê, 2006). *Formative and summative assessment* (n.d.) stated that Summative assessment is an assessment *of* learning. According to Earl (2003), assessment *of* learning aims to certify the students on their learning and report it to their parents in a symbol form. Assessment *of* learning usually conducted at the end of something such as a unit or a course. Moreover, Blom, Hastings and Madhaus (1997) defined summative assessment as tests that conducted at the end of a program or a course to evaluate and certify students learning (cited in Wang and Lê, 2006). In addition, *How do you define 'assessment'?* (n.d.) stated that "Summative assessment is comprehensive in nature, provides accountability and is used to check the level of learning at the end of the program". National examination and semester examination in secondary school is the example of summative assessment.

In contrast, *Formative and summative assessment* (n.d.) stated that formative assessment is an assessment *for* learning. According to Earl (2003), assessment *for* learning aims to gather information that can be used by the teacher to plan the next step of learning. Fennell & Maccoll (1983) added formative assessment is important as feedback for the teacher regarding to students progress in learning. Thus, the teacher can identify the weaknesses of the students and correct any misconception (cited in Wang and Lê, 2006). Moreover, Airasian stated, formative assessment include "collecting, synthesizing, and interpreting data for the purpose of improving learning and teaching" (cited in Wang and Lê, 2006). Usually, formative assessment conducted at the beginning (*How do you define 'assessment'?*, n.d.) and during the program of learning (*Formative and summative assessment,* n.d.; *How do you define 'assessment'?*, n.d.). Diagnostic assessment can be considered as a kind of formative assessment (Curriculum Design and Development Unit, n.d.). However, some authors considered diagnostic assessment as another type of assessment (Kellough et al, 1999 and McMillan, 2000; cited in Swearingen, 2002).

Diagnostic Assessment

Diagnostic assessment is an assessment that aims "to determine the nature of students' learning, and then provide the appropriate feedback and intervention" (Queensland studies authority, 2010). Traegust (2006) suggested that diagnostic assessment is important to improve teaching and learning science in the classroom. It is believed that students come into the classrooms with various interest and perception of phenomena in the world. Therefore, it is would not be effective for teachers to start the lesson before evaluating students conceptions. Some students might have insufficient perquisite knowledge and skills to learn lessons required or they might not engage to lessons, without realizing these problem in the beginning, the teacher will be found the difficulties in teaching the lesson. In contrast, for students which already have skills and knowledge, they also will not engage if the teachers repeat the activities or lesson (Marsh, 1996).

Additionally, Cornwell and Cornwell (n.d.) stated that diagnostic assessment is conducted periodically. For example, when the teacher predicts that a student has difficulty in a learning process. They also added that Diagnosis of the aptitudes, abilities and progress of each student must be unambiguous, anticipatory, timely, frequent and dynamic. Just as content changes, learners change as the result of physical, social, personal, familial and a myriad of other circumstances. Diagnostic assessment enables the education system and the student to anticipate and solve problems (Cornwell and Cornwell, n.d.).

Not only affect students learning and motivation, but assessment also impacts the nature of classroom instruction (McMillan, 2000). There is recent literature that considers assessment as not only activities to evaluate learning process, but also something that correlate to instruction (Shepard, 2000, cited in McMillan, 2000). Therefore, good and effective assessment will enhance classrooms instructions, as well as students' learning and motivation (McMillan, 2000).

The Characteristic of Effective Assessment

There are several characteristic of good and effective assessment. Firstly, good assessment should aim to improve students' performance (Victorian Education Department, n.d.). In addition, based on the result of assessment, learner should receive the guidance on how to improve. So that, the students able to plan next steps of their learning (Qualifications and Curriculum Authority, n.d.). Herman, Aschbacher, and Winters (1992) supported that assessment should provide comprehensive feedback for the students.

Secondly, assessment should be an integral part of teaching and learning activity (Centre for the study of higher education. n.d.). Moreover, The teaching and learning elements of each program should be designed in full knowledge of the sorts of assessment students will undertake, and vice versa, so that students can demonstrate what they have learned and see the results of their efforts (Victorian Education Department, n.d.).

Thirdly, effective assessment should be based on the perception of how students learn? (Victorian Education Department, n.d.). Qualifications and Curriculum Authority (n.d.) supported that, in planning assessment, the teacher should consider on the process of students learning. Herman, Aschbacher, and Winters added that "cognitive learning theory and its constructivist approach to knowledge acquisition supports the need to integrate assessment methodologies with instructional outcomes and curriculum content" (1992).

Fourthly, Effective assessment requires that procedures be fair to everyone (Gronlund, 2003). Therefore, assessment should valid and reliable (Victorian Education Department, n.d.). According to Worthen *et al.* (1993), Reliability is "the measure of how stable, dependable, trustworthy, and consistent a test is in measuring the same thing each time", while validity is "the degree to which they accomplish the purpose for which they are being used" (cited in *Educational Assessment*, n.d.). In this case, reliability means when the assessment tasks are used by other assessors, they will come up with the same result.

Fifthly, good assessment should have clear purposes, criteria, goals and standards (Victorian Education Department, n.d.). The purposes of assessment should be clear for the students, so that, they can understand the standard that they should reach. Moreover, effective assessment should have explicit criteria for judging successful performance (Gronlund, 2003).

Sixthly, good assessment needs a variety of measures (Victorian Education Department, n.d.). Single assessment instrument will make teacher misunderstand in perceiving students achievement and performance. In addition, a variety of assessment method would minimize the limitation of particular methods (Centre for the study of higher education, n.d.).

Seventhly, according to Herman, Aschbacher, and Winters (1992), good assessment examine the process and the product of learning. It means, effective assessment should be considering to outcomes students have achieved and process led to these outcomes (Victorian Education Department, n.d.).

Example of Exemplary Diagnostic Assessment task

The assessment tasks aim to diagnose students' conception and prior knowledge about on the topic acid and base in chemistry subject. There are several reasons why it is important for the teacher to know students prior knowledge about this topic. Firstly, based on the Indonesian curriculum, the teacher should teach this topic to the year 5 secondary school students. Secondly, it is obvious that chemistry is a difficult subject in the school. Therefore, the students often have difficulty in understanding in chemistry subject (Kavanaugh *et al.*, 1981, cited in Demircioğlu, Ayas and Demircioğlu, 2005). Specifically, students have difficulty in understanding concepts of acids and bases (Ross, et al., 1991, cited in Demircioğlu, Ayas and Demircioğlu, 2005). Moreover, Hand and Treagust have identified some misconceptions about acids and bases among 16 years olds students, they were: (1) An acid is something which eats material away; an acid can burn you, (2) Testing of an acid can only be done by trying to eat something away, (3) To neutralize is to break down an acid or to change from an acid, (4) A base is something which makes up an acid, and (5) A strong acid can eat material away faster than a weak acid (Demircioğlu, Ayas and Demircioğlu, 2005).

There are two good assessment tasks that can be used to determine students' prior knowledge on acids and bases topic, namely: grouping for assessment task 1 and using crossword puzzle for assessment task 2. In the assessment task 1, students will group the materials given in the box into acid group or base group. This assessment task aims to determine students' prior knowledge about acid and base, by this assessment task, the teacher will aware whether the students able to differentiate acid and base. While in the assessment task 2, the students will work to solve the crossword puzzle, the crossword puzzle is adopted from Scoilnet. This activity aims to assess students' prior knowledge about some concepts of acid and base such as about indicator.

In addition to these assessment tasks, the teacher also can ask some open-ended and closed questions to the students. This assessment is considered as a good assessment, because they have some characteristics of a good assessment which have discussed before. Firstly, this assessment aims to

improve students' learning. Students come into the class before the lesson with various ideas and conception about the phenomena in the world. They are not "empty vessels" that are need be filled by the knowledge by the teacher. However, most of these conceptions are alternative conceptions. Sometimes, they teacher will find the difficulties in shifting students' alternative conceptions, while the teacher also might find that students' alternative conceptions help the students to learn the concepts of the lesson effectively (Tytler, n.d). Therefore, it might be very useful for the teacher to know students' alternative conceptions and prior knowledge in any teaching and learning activity. This assessment (diagnostic assessment) is a good strategy to determine students' alternative conceptions.

Secondly, this assessment is not separate part of the lesson, but it is conducted at the beginning of the lesson to determine students' alternative conceptions and prior knowledge. Thirdly, this assessment is designed based on constructivist theory of learning. Constructivist theory believes that students construct their own knowledge based on their experiences and prior knowledge (Tytler, n.d.). Students' prior knowledge can be assessed using this assessment (diagnostic assessment).

Fourthly, this assessment is valid and reliable. It is valid because it can determine students' prior knowledge and alternative conceptions about acid and base effectively. Moreover, it is reliable, because they will come up with the same result when they are used by other assessors. Finally, there is a variety of assessment tasks in this assessment. Two assessment tasks, some open-ended, and closed questions are used to determine students' prior knowledge and alternative conceptions. These assessment tasks will support each other's to identify students' prior knowledge and alternative conceptions. They would minimize the limitations of particular assessment tasks.

Conclusions

Diagnostic assessment aims to determine students' alternative conceptions and prior knowledge. The assessment in this essay is an example of diagnostic assessment which aims to determine students' alternative conceptions and prior knowledge of acid and base. This assessment is considered as a good and effective assessment because it has some characteristics of a good and effective assessment, namely: it aims to improve students' learning, it is integrated with teaching and learning process, it is designed based on constructivist theory of learning, and it is valid and reliable.

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The Effect of Problems Based Learning Model and Open-Ended Questions to Critical Thinking Ability of the Students for *Fungi* Concept in Grade X SMA

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Abstract

The aims of this study are to know: (1) The effect of problems based learning model, open-ended questions and conventional to critical thinking ability of the students of the *fungi* concept in grade X, Senior High School 1 Peusangan Bireuen regency, Aceh province. The study method used is quasi experiment with pre-test and post-test control group design involving three groups of grade XI students; 34 with problems based learning model, 32 grade X3 students with open-ended question learning model, and 30 grade X2 students as control model. The instrument used in this study is multiple choice tests. Data analysis techniques use the software from SPSS 19.0 version and the hypothesis was tested with Analysis of Covariate (Anacova) using Tukey Test Least Significant Difference (LSD). The results of the study show that: (1) The effect of problems based learning model ($\bar{x}$=64.91), open-ended questions ($\bar{x}$=57.63) on the development of critical thinking ability is higher than the effect of the conventional model applied in the teaching of grade ($\bar{x}$=46.27) students. The Tukey tests show that there is significant difference in critical thinking ability between those who were taught with problems based learning model and those who were taught with open-ended questions with the value sig. 0.000, and there is significant difference in critical thinking ability of the students of the conventional grade with value sig. 0.000. Based on the results of this study it can be concluded that problems based learning model and open-ended questions can improve to critical thinking ability of the students.

Keywords: Problem *Based Learning, Open-ended Questions, Conventional, and Critical Thinking Ability.*

Introduction

The problems that must be faced by the world Indonesian education today, among others is still the weak a learning done by teachers. Such as using a model of learning which is inaccurate. The colection and use learning model wich efficient to need balance by teacher's in to conduct learning process, because with the use of learning models exactly that will impact on students in their mastery of the subject matter, which will at last can stimulate the capacity to think students in learning.

The nature of learning is process that help students to obtain information, idea, skills, value, way of thinking, and means of learn how to learn (Arifah, 2012). One of the capacity to think high level of learning can solve problems faced by students in order to improve the critical thinking ability. To achieve this aim, teachers have to provide opportunities in class that can consider initiatives and involvement of students greater. Asked was art in teaching, for asking is one of the who customarily done in learning.

Open ended question is a question which invites a number of answers. On the open ended question lateral extent likelihood of the response that can be given is broader. Problem based learning also upgrading answer of the open ended questions with many alternatives right answer and eventually able to improve the critical thinking ability then increase of understand to application, synthesis and analysis (Griffin, 2000).

Sanjaya (2007) that is strategy of problems based learning of students invited to think active, communicate, search, data process and concluded, putting matter as keywords from the process of learning, it means without issue so there is no possible learning process. The low critical thinking ability of student's there are also at SMA Negeri 1 Peusangan Bireuen district Aceh province, it is visible from behavior of teachers and students during learning process going on in the class, that is where curiosity of students in seeking the information is still very low. It can be seen of students who only received the information from teachers alone. So that the understanding of students to the information that still weak. The low critical thinking ability of student's in biology subjects matter, the last three years influence in the low test scores the end of the semester presented of the Table 1 follows:

Table 1. Test scores the end of the semester in 3 years academic

No	Academic Year	Average Value
1	2011-2012	6,30
2	2012-2013	6,40
3	2013-2014	6,50

Source: SMAN 1 Peusangan Bireuen District Aceh Province

Based on preliminary observations results during this turns out to the learning process that occurs at SMA Negeri 1 Peusangan Bireuen district Aceh province, especially in class X is still using conventional learning model, this proves that teachers still not trying to develop the critical thinking ability of student's in the learning process. Learning process only using the conventional learning model it will not were developed critical thinking ability of student's because they were forced to get information from the teacher in other words learning process it was centered on teachers (*teacher center*). If this is not

immediately sought to actioned the changes (the use of learning model) in the learning process will have an influence on the learning outcome which is less optimal. Therefore, learning model and open ended question very useful to improve the critical thinking ability of student's in learning process.

Based on the discussion that is in the background of problems, identified several problems as follows:

1. Biology learning in class tend to use conventional learning model (traditionally).
2. Learning process in the classroom handed to students ability for memorization information.
3. Limited capability the critical thinking ability of student's.
4. Many matter on biology as classification systems, plant diversity, fungi, and others who need the capacity to critical thinking ability of student's.
5. Problem based learning model and open ended question have not yet been widely applied an effort to improve the critical thinking ability of student's.

In this regard, the problem on the limitation of scope this as follows:

1. Learning model in this research restricted with using the problems based learning model, open ended question and conventional.
2. The subject matter of fungi based on the curriculum 2013.
3. To know the capacity to critical thinking ability of student's in learning be limited to some indicators, as the characteristics of a fungus, reproduction process, association with other plants, and the role of fungi.

Based on the background problems, identification problems and problem restrictions, so the formulation a lingering would done is: Is there any the effect of problems based learning, open ended question and conventional on critical thinking ability student's of the fungiconcept in class X SMA Negeri 1 Peusangan Bireuen district Aceh province?

As for the formulation matter as the follows, the objectives of this research is tTo know the effect of problems based learning, open ended question and conventional on critical thinking ability student's of the fungi concept in class X SMA Negeri 1 Peusangan.

Materials and Methods

Study conducted at SMA Negeri 1 Peusangan Bireuen District Aceh Province, Medan-Banda Aceh street KM. 230. The time conducted of the month is January-August 2015.

The population in this research is a whole of class X, as much as 4 class which totaled 150 students. Sample totaled 3 class, taken with technique of cluster random sampling. In this class that is become the first experiment was a class X1 (problem based learning model) and X3 as second experiment (open ended question learning model) while who became class control is class X2 (conventional learning model).

Research Variables

Free variable of this research is problem based learning model, open ended question, and conventional learning, while the bound variable means the critical thinking ability of student's.

The kind of this research is quasi eksperiment to a draft pretest-posttest control group design. Research design are presented in table 2 follows.

Groups	Pretest	Learning	Posttest
A	A T_1	X_1	A T_1
B	B T_1	X_3	B T_1
C	C T_1	X_2	C T_1

Explanation:

Group A is the group was teaching with problem based learning model (X1). Group B is the group was teaching with open ended questions learning model (X3). Group C is the group was teaching with conventional learning model (X2). And then T1 is the ability think critically students.

Research Conduction Procedure

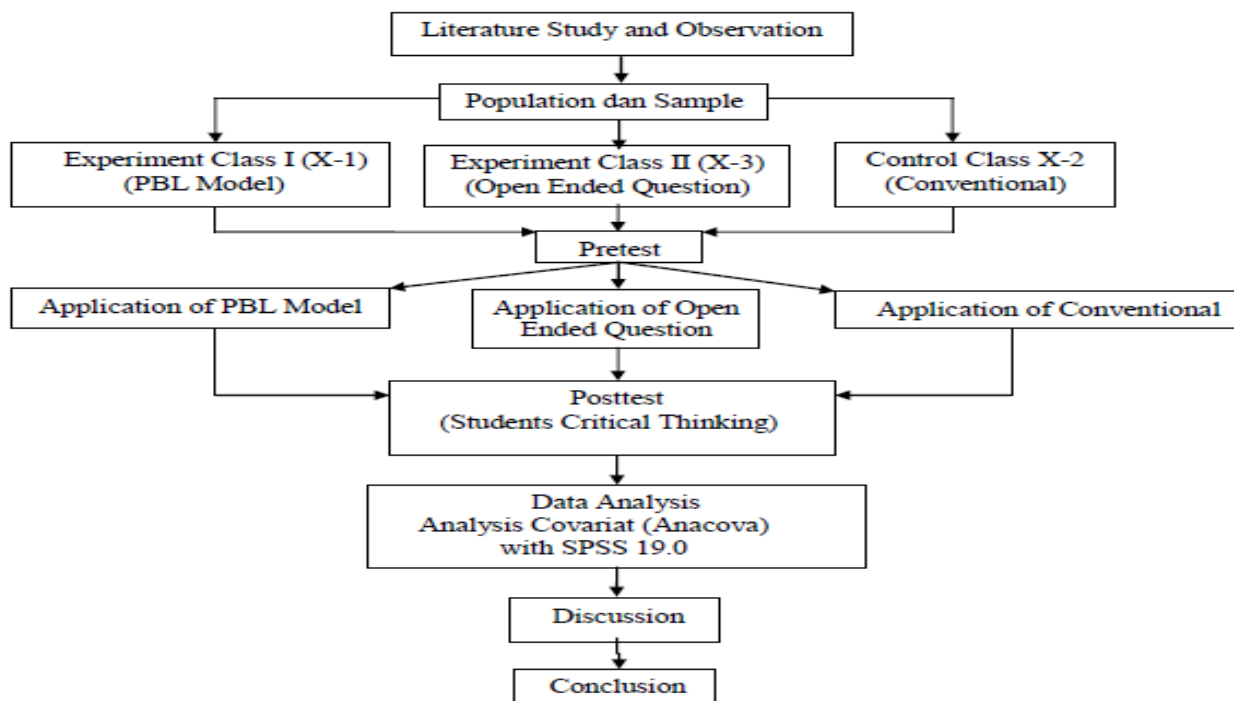Chart procedure this study can be seen from figure 1 following:

Figure 1. Chart of Research Procedures

Variable Control

Treatment controlling is needed to give the belief that designed research by good enough to hypotheses test and results outcome generalization. Therefore, doing the controlling related to the internal validity and external validity.

Internal Validity

The internal validity control is needed to give the belief that obtained as a result of treatment of the experiment. Controlling for internal validity to includes are:

1. The maturation effect controlled for the purpose of reduce the possibility of the special due to given long treatment and that students not being stuck in saturation and exhaustion during held experiment, so time using short relatively, two meeting enough.
2. The history effect controlled by means of all activities a test or biology learning evaluation only done in school by during teaching hours which specified.
3. The influence of instrument conducted with students method who had not given the previous instrument, considering the validity, good instrument reliability, and standart meet to appropriate.
4. The selection maturation interaction effect controlled means technique not informing on treatment class that they are being investigated, so that learning take place it is accordance with treatment rendered against to other class.
5. The mortality effect controlled by means of tighten the presence of student for the treatment conducted that there is no subject of study did not attend from start to finish experiment.
6. The differential selection of subject effect controlled by means of seek the study subject which have the knowledge that is same relatively of the different to class group.
7. The statistical regression controlled by means of tighten administration or implementation with involving of students who have learning outcome with extreme score.

Eksternal Validity

The external validity includes are:

1. The population validity, need controlled to see the extent which due to experienced by study sample that will result in against research population. The population validity have to controlled by: (1) Take of the sample in accordance with the population characteristics; and (2) Each member of sample given treatment and equal rights for experiment.
2. The ecology validity controlled with aim to effects avoid of research procedure reaction, namely to controlling the cases with relation to condition how to experiment results that goes. To obtain the ecology validity, controlling can be done by: (1) Keeping the condition class to stay occurs as usually day; (2) Not to tell sample group that they were eksperimented in the class; (3) Teachers to teaching of two different experiment groups with a staple subjects of equal and set from the beginning of experiment until late of experiment; and (4) Tests conducted a week after treated the treatment of experiment.

Data Collected Techniques

Data collection in this research conducted using a option test to see what critical thinking ability of students.

Test of Thinking Ability

The sum test of thinking ability as many as 20 questions. Grating an instrument on table 3 follow.

No	Indicators	Critical Thinking	
		Deduction	Induction
1.	The characteristics of fungi	3, 4, 9	1, 2, 11, 14
2.	The reproduction process of fungi	7, 12	5, 10, 13, 15
3.	The fungi assosiation with other plant's	18, 19	17, 20
4.	The role of fungi	6, 8	16
	Total of questions	20	

Instrument Analysis

The Test Grains Validity of Critical Thinking Ability

To know the questionnaire grains validity used formula is correlation of product moment was as follows:

$$\gamma xy = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{(N \sum x^2 - (x)^2)(N \sum r^2 - (\sum y)^2)}}$$

(Arikunto, 2006)

Explanation:

γ_{xy} = Correlation Coefficient

X = Item Score

Y = Total Score

N = Sum of Student

Trouble Index

To know the trouble index used formula as follows:

$$P = \frac{B}{JS}$$

(Arikunto, 2006)

Explanation:

P = Trouble Index

B = Sum of Student which Question Answer with right.

JS = Sum of all Students as Participant

Distinguishing Power

To determine the distinguishing power about each test used formula as follows:

$$D = \frac{BA}{JA} - \frac{BB}{JB} = PA - PB$$

(Arikunto, 2006)

Explanation:

D = Qustions Distinguishing Power

B_A = Sum of Students Given Right Answer of Upper Group

B_B = Sum of Students Given Right Answer of Under Group

J_A = Sum of Students in Upper Group

J_B = Sum of Students in Under Group

The Test Grains Reliability of Critical Thinking Ability

The Questionnaire grains reliability tested with using formula of alpha coefficients as follows:

$$r_n = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum \delta^2 i}{\sum \delta^2 t}\right)$$

Explanation:

r_n = Reliability coefficients of Questionnaire Instrument Grains

n = Sum of Questionnaire Instruments

$\sum \delta^2 i$ = Sum of Grain Score Variance

$\sum \delta^2 t$ = Sum of Total Score Variance

Data Analysis Technics

Descriftive Analysis Technique

The descriptive analysis technique intended to described research outcome data to overload: mean, median, modus, variance, standard deviations, minimum value and data maximum value, next the data presented in the form of table a frequency distribution use rules of Sturges and in the form of histogram.

Inferential Analysis Technics

Requirements Test of Data Normality

The data normality test intended to determine normal whereabouts of research data distribution, it is means that do their distributions are in the population is normal. The normality test done by Kolgomorov-Smirnov test. The data expressed have the normality distribution if the probability or value significance (sig. > 0.05).

Requirements Test of Data Homogenity

The homogeneity test intended to knows the differences of data variance, it is mean there is groups that forms sample derived of the same population (their distribution are in the population is homogeneous). The data homogeneity test was undertaken with Levene's Test. As for the data expressed homogeneous if the probability or value significance (sig. > 0.05).

Hypothesis Test

After the requirements have to met the next done the research hypotheses testing, for data the critical thinking ability of student the analyzed by using technique of analysis covariat (anacova). If the results of

the analysis describe the effect according to significant between each in the three of different treatment class, so undergone a further by Tukey's Test. As for the test that the constructed uses software of anates version 4.0. In general the event will count of the validity, trouble index, distinguishing power, and reliability tests. While of all the research data of normality, homogeneity, hypothesis test, and tukey test analyzed using with application of SPSS version 19.0 for windows.

Results and Discussions

The data collected and analyzed in this research used to answer the research problems. The data collected consist of: (1) Values of pretest and posttest test on the critical thinking ability of students.

Critical Thinking Ability

Comparison of prestest and postest value in the critical thinking ability of students in class X SMA 1
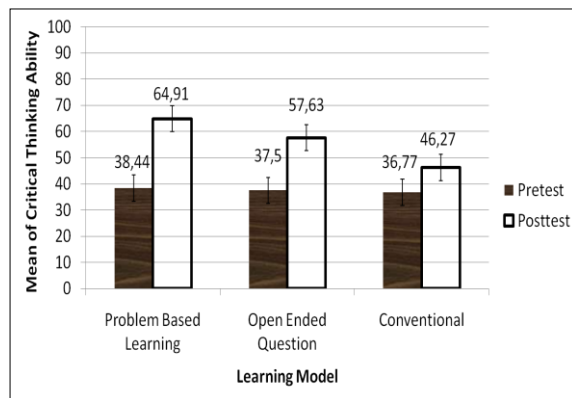
Peusangan Bireuen district Aceh province to matter the concept of fungi.

Figure 2. Comparison the value average of pretest and posttest in the critical thinking ability of students

The Result of Data Normality Test in Critical Thinking Ability

The data of pretest and posttest in critical thinking ability of students to teaching with using problem based learning model, open ended question, and conventionally have the normal distribution. Where the results of data normality is collected significantly by kolmogorov-smirnov test obtained above the significance = 0.05. The data normality obtained as the presented of Table 4 follow.

Data	Learning Model	*Asymp.sig (2 tailed)*	α	Decision	Conclusion
	PBL	0.052	0.05	Accept H_0	Homogenous
	Open Ended Question	0.032	0.05	Reject H_0	No
Pretest					Homogenous
	Control	0.056	0.05	Accept H_0	Homogenous
	PBL	0.069	0.05	Accept H_0	Homogenous
Posttest	Open Ended Question	0.195	0.05	Accept H_0	Homogenous
	Control	0.117	0.05	Accept H_0	Homogenous

The Result of Data Homogenity Test in Critical Thinking Ability

The data pretest and posttest in the critical thinking ability of students to teaching with using problem based learning model, open ended question, and conventionally have homogenity distribution. Where the results of data homogenity is collected significantly by levene's test obtained above the significance = 0.05. The data homogenity obtained as the presented of table 5 follow.

Data	Sig. Based on trimmed mean	α	Decision	Conclusion
Pretest	0.221	0.05	Accept H_0	Homogenous
Posttest	0.056	0.05	Accept H_0	Homogenous

Hypothesis Testing

Based on the results of hypothesis test using analysis of covarians (anacova) known from value significance on output anacova is 0.00 < 0.05 (α) then rejected H_0, it means there are significant differences of critical thinking ability of students on the concept of fungi in class who use the problems based learning model, open ended question, and conventional class ($\mu_1 \neq \mu_2 \neq \mu_3$).

Based on the results of the anacova showing significant differences in all three class included in learning model, then undergone a further (post-hoc) or post analysis of covarians (anacova) using LSD, as it was outlined in Table 6 follow.

Sample Class	Comparer Class	Sig.	α	Std Error	Decision	Conclusion
Problem Based Learning	Open Ended Qustion	0.000	0,05	2.476	Reject H_0	Significant Difference
	Control	0.010	0,05	2.434	Reject H_0	Significant Difference
Open Ended Qustion	Problem Based Learning	0.010	0,05	2.434	Reject H_0	Significant Difference
	Control	0.000	0,05	2.512	Reject H_0	Significant Difference
Conventional	Problem Based Learning	0.000	0,05	2.476	Reject H_0	Significant Difference
	Open Ended Qustion	0.000	0,05	2.512	Reject H_0	Significant Difference

Conclusion

Based on the results of the data analysis and the research hypotheses testing, so can be drawn some conclusion as follows are: The learning process with problems based learning model have an effect over against to the critical thinking ability of students and the learning process with using open ended question learning model also affected in improve to the critical thinking ability of students compared with the learning process in conventional learning model.

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The Application of the Learning Model of Teams Games Tournaments (TGT) to Improve Students' Learning Outcome on the Subject of Solubility and Solubility Product for Students

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Abstract

This study aim was to determine the activities, attitudes, skills, learning outcomes and students' response to the application of the learning model of Teams Games Tournaments (TGT) on the subject of solubility and solubility product for students. This research's type was descriptive with qualitative approach. The research's subjects were students of class XI MIA 2 at SMAN 12 Banda Aceh totaling 18 students, consisting of 10 female and 8 male students. The data was collected through observation, test, questionnaires, and documentation. Data were analyzed by using qualitative descriptive analysis technique. Based on the result of the activities of an individual student, it was obtained that an average percentage in the first, the second and the third meetings were 68.75%, 78.13% and 96.88%; respectively. The learning outcomes of the students' attitudes and skills domains have a classical average percentage of 81.40% and 88.00% respectively. The learning outcome of cognitive domain gained an average value of 3.33 with the percentage of classical learning completeness was 83.16% with a very good category. The result of students' response obtained an average percentage value of 82.50% with very good criteria.

Key words: TGT, learning outcomes, solubility and solubility product

Introduction

The teachers are required to create the learning process to become interesting and fun at schools. One of the things that the teachers can do is to adopt a cooperative learning model which emphasizes cooperation among students in small groups in which these students have different ability levels.

Solubility and solubility product is one of the chemical subjects which is considered as difficult by many students. This is caused by the existence of the concepts that are abstract and complex and it is added with the concept of complex mathematical statistics. According to Onder and Geban (2006), that in order to mastery the concept of solubility and solubility product, it is needed several prerequisite concepts such as solubility, chemical equilibrium, Le Chatelier's law, chemical solvents, and chemical equations.

Based on the observation and the interview results toward the chemistry teachers at SMAN 12 Banda Aceh, it found that, generally, the teachers still used the traditional way of teaching chemistry topics. This was because they considered this method as simple, easy, and suitable to be applied in large classes. This causes less active students, especially students of class XI MIA 2 in where the class discussion rarely done so the interaction and communication among students and the teachers still had not been established optimally. Activities undertaken by the students only hear and write which make the students rarely asked questions or expressed their opinions. As a result, the learning outcome of the students in the chemistry classes was not satisfactory (low). This was proved by the classical average value of the daily test on the lesson of solubility and solubility product in the academic year of 2013-2014 was still below than the minimum completeness criteria (KKM) established at school for this subject that is 2.67.

One of the efforts to improve students' learning outcomes in this lesson is by applying TGT learning model. TGT learning model is a cooperative learning model that puts the students in groups of 5 to 6 students with different abilities, genders and tribes (Anggraini, Ashadi, and Utami, 2015). This model uses game as a reinforcement technique. Games learning activities was applied in order to create more active and fun learning experiences, and they also develop students' sense of responsibility, cooperation and involvement (Nopiyanita, Haryono, and Ashadi, 2013). Based on the research results conducted by Ghalia, Masykuri, and Nurhayati (2015), they concluded that TGT learning model with the destination card in the subject of periodic system can improve the students' activities, attitudes, and learning outcomes.

The steps of TGT learning model according to Istarani (2012) are as follows: (1) providing material (2) studying in group (3) doing games (4) doing tournaments and (5) giving reward. In this model, the teacher present the lesson and then the students work in team. In order to make sure that all the team members has already mastered the concepts, the teacher do a tournament in where the students can donate the point for their team. By doing so, it is hoped that the students' creativity can be developed so that they have motivation to learn chemistry.

Materials and Methods

This research's type used was descriptive with qualitative approach. The research's subjects were students of class XI MIA 2 at SMAN 12 Banda Aceh totaling 18 students, consisting of 10 female and 8 male students.

The data was collected through observation, test, questionnaire, and documentation. The observation on the students' activities. attitudes, and skills were done by 3 observers consisting of 1 chemistry teacher in this school and 2 students of Chemistry Education Department at FKIP Unsyiah.

The research instrument used was the observation sheets of students' activities, attitudes and skills; the cognitive test which was consisted of 5 multiple choice questions, the questionnaire sheet of students' response and the camera. Before these instruments were used, they were tested for their validation by 2 validators. The instruments tested were test items, the observation sheets of students' activities, attitudes, and skills; and questionnaire sheet of students' response. After the data were obtained, they were analysed by using qualitative descriptive analysis technique.

Results and Discussion

The assessment result of the students' knowledge was collected through group score, individual scores, and the score of post-test. Group score was obtained from the total score of students' work sheet (LKS) at the second and the third meetings (sessions), the score of group presentation, and the total value of the tournament results from the study group on the second and the third sessions. Whilst, the individual score was obtained from the score of each individual tournament in the second and the third sessions.

The completeness of individual student learning outcomes can be determined by comparing the learning outcome scores with the KKM of the subject of solubility and solubility product that has been set by the school that is ≥ 2.67. The data of the student's learning outcomes can be seen in Table 1.

Table 1.The assessment results of students' knowledge on the subject of solubility and solubility product through the implementation of TGT learning model

No	Student Initial	Score			Average	Predicate	Information
		Group 35%	Tournament 25%	Test 40%			
1	AA	3,11	2,67	3,60	3,20	B+	Complete
2	AE	3,03	4,00	4,00	3,66	A	Complete
3	AH	3,11	2,00	3,20	2,87	B	Complete
4	EA	3,03	2,67	2,40	2,69	B	Complete
5	FA	3,27	2,00	2,40	2,60	B-	Incomplete
6	HU	3,11	4,00	4,00	3,69	A	Complete
7	MA	3,11	3,33	3,60	3,36	A-	Complete
8	MH	3,11	4,00	4,00	3,69	A	Complete
9	MZ	3,27	3,33	3,20	3,26	B+	Complete
10	NH	3,03	3,33	3,20	3,17	B+	Complete
11	PW	3,27	2,67	3,20	3,09	B+	Complete
12	RI	3,11	4,00	3,20	3,37	A-	Complete
13	SU	3,03	2,67	3,20	3,01	B+	Complete

14	SH	3,03	3,33	4,00	3,49	A-	Complete
15	SM	3,27	3,33	4,00	3,58	A-	Complete
16	SK	3,27	4,00	4,00	3,74	A	Complete
17	SW	3,27	4,00	4,00	3,74	A	Complete
18	WN	3,03	4,00	4,00	3,66	A	Complete
	Total				59,87	A-	
	Average				3,33		
	Completeness Percentage				83,16%	Very Good	

Based on the data in Table 1, it can be known that the students' average score classically after the implementation of TGT learning model is 3.33. This is obtained due to there was an awareness from the students to help each other and share the knowledge in completing the tasks given. The students will learn better and much more if they have sense of responsibility to finish the tasks. The students who got the score below the KKM of 2.67 were because they are less active and tend to be passive in class and they also did not much answer the tournament's and post-test's questions correctly. According to Hanki and Meini (2013), the achievement test (post-test) gave an influence to the completeness of student's learning outcomes as a total of 28 students completed their study and they can achieve the KKM of >80%.

Classically, the students who reach the KKM is as much as 83.16%, so it can be said that they reach the requirements to continue the instructional activities for the new subject. This result was in accordance with the statement of Djamarah and Zain (2010), who said that If 75% of the number of the students who follow the learning process reached the level of minimal, optimal, or even maximal success, then the subsequent subject can be discussed.

The appraised score of the students' attitudes were accumulated from the first to the third applications. The attitude assessment sheet prepared was filled by 3 observers in who each of them will observe 1 study group and 2 tournament groups. So, all together there were 3 study groups and 6 tournament groups.

Table 2. The students' attitude assessment during the learning process with TGT model

No	Students Initial	Openness	Diligence	Honesty	Cooperation	Score	Predicate	Information
1	AA	80	80	85	80	81.25	VG	Very Good
2	AE	85	85	85	85	85.00	VG	Very Good
3	AH	75	70	75	75	73.75	G	Good
4	EA	75	70	75	75	73.75	G	Good
5	FA	80	70	75	75	75.00	G	Good

6	HU	85	85	85	85	85.00	VG	Very Good
7	MA	85	80	85	85	83.75	VG	Very Good
8	MH	85	87	85	85	85.50	VG	Very Good
9	MZ	85	80	85	85	83.75	VG	Very Good
10	NH	85	80	85	85	83.75	VG	Very Good
11	PW	75	70	80	80	76.25	G	Good
12	RI	85	80	85	85	83.75	VG	Very Good
13	SU	75	75	75	75	75.00	G	Good
14	SH	80	75	80	85	80.00	VG	Very Good
15	SM	85	80	85	85	83.75	VG	Very Good
16	SK	85	85	85	85	85.00	VG	Very Good
17	SW	85	88	85	85	85.75	VG	Very Good
18	WN	85	85	85	85	85.00	VG	Very Good
	The Average Score					81.40	VG	Very Good

Based on the data above, it shows that the average score of the students' attitude is 81.40. This score indicates that the attitude of the students during the lesson with TGT learning model is very good. This is due to during the learning process the students expressed their openness, diligence, cooperation and honesty during tournament. This result is in line with the study results done by Ghalia, Masykuri, and Nurhayati (2015) that the learning outcome of students' attitude domain in the first cycle had a percentage of 77.69% which increased to 82.49% in the second cycle.

The students' skill assessment was conducted by 3 observers during the discussion process in the study groups, presentations and students' work steps in conducting tournament. The observation score of students' skills were accumulated from the second to the third application of TGT learning model.

Table 3. The students' skill assessment during the learning process with TGT learning model

| No | Student Initial | Score | | | Score Average | Predicate |
		Working step & time	Data processing	Presentation		
1	AA	3	3	3	3.00	B
2	AE	4	4	4	4.00	A
3	AH	2	3	3	2.67	B-
4	EA	3	3	2	2.67	B-
5	FA	3	3	2	2.67	B-
6	HU	4	4	4	4.00	A
7	MA	4	4	3	2.67	A-
8	MH	4	4	3	3.67	A-
9	MZ	4	4	4	4.00	A

10	NH	4	4	3	3.67	A-
11	PW	3	3	2	2.67	B-
12	RI	4	4	3	3.67	A-
13	SU	4	4	3	3.67	A-
14	SH	3	4	3	3.33	B+
15	SM	4	4	4	4.00	A
16	SK	4	4	4	4.00	A
17	SW	4	4	4	4.00	A
18	WN	4	4	4	4.00	A
		Average Score			3.52	A-
		Average Percentage			88%	Very Good

Based on the data in Table 3, it shows that the average score of the students' skills is 3.52. According to Depdiknas (2014), this score indicates that the average students' skills during the lesson with TGT learning model get the criteria of A- with the average percentage of 88% which is categorized as excellent. This was happened due to during the learning process, the students' skills were presented in the discussion, presentation and in the tournament.

The students' activities were observed by 3 observers during the instructional process for three consecutive meetings. The activities began with doing prayer to the implementation of TGT learning model steps until the concluding activity. This observation aim was to look at the interaction among the students during the lesson.

Based on the data in Table 4, it appears that during the learning process, the students used most of their time for discussion in the study group and do a tournament. The instructional process at the first session was still not optimal as the students could not make use of the time to discuss the lesson as they were not still unfamiliar with TGT learning model. At the tournament, the students still confused when made a round or changed a clockwise role. As a results, the time given was not enough and the students only had a chance to answer one querry. The average score of students' activities at the first session was considered less good, that was equal to 2.75.

The second meeting was better than the first one as the students already used the time given maximally, even though there was some students who still confused with the clockwise role change. This was lead to the more time spent to answer one question in the tournament. The average score of students' activities at this meeting was categorized as good, that was equal to 3.13.

In the last meeting, the students were already familiar with TGT learning model. This can be seen when the students discussed and shared the knowledge and information to other students. At the time of the tournament, the students were disciplined and responsible to perform their role and were honest when

answering the tournament's questions. The average score of students' activities at this time was 3.88 categorized as very good.

Table 4. The students' activities during the learning process with TGT learning model

No	Students' activities	Score average at the session		
		I	II	III
1	**Preliminary Activity**			
	a. The students answer the teacher greeting	4	4	4
	b. The students pray before the lesson is begun	4	4	4
	c. The students response to the teacher questions	3	3	4
2	**Main Activity**			
	a. The students form a group of 6 people	2	3	4
	b. The students pay an attention to the teacher explanation	3	3	4
	c. The students listen to what the teacher say	3	3	4
	d. The students discuss in group	2	3	4
	e. The students ask the teacher about ucertain things	3	3	4
	f. The students present the discussion result regarding the subject being learnt. The students listen to the teacher affirmation about the subject	3	3	3
	g. The students are diveded into 6 homogenous groups which consist of 2 high, 2 middle, and 2 low group categories	3	3	4
	h. The students are taken turn to read the tournament queries. Another student, who can answer the querry given, get the reply card	2	3	4
	i. The students in the homogenous groups return to their earlier group by carrying the reply cards from the tournament result	2	3	4
	j. The students collect their total score from the reply cards of their group members	2	3	4
	Closing Activity			
	a. The students summarize the subject that has been learnt	3	3	4
	b. The students listen and write about the task given	3	3	4
	Average value	2.75	3.13	3.88
	Average %	68.75	78.13	96.88

Explanation: *4 = Very Good, 3 = Good, 2 = Not Quite Good, and 1 = Not Good

The student activities in the second and the third sessions showed an increased compared to the first one. Compared to the first, the activities of students in the second meeting increased up to 0.375 or

9.38%. Meanwhile, in the third meeting, it rose to 0.75 to become 3.88. This results are consistent with the research conducted by Tyasning, Haryono, and Nurhayati (2012) that the implementation of TGT can improve students' learning activities on the subject of crude oil. Moreover, they stated that in the first cycle the average percentage of students' activity indicator was 67.06% which then increased in the second cycle to 85.65%.

The questionnaire sheet are given after the student has done the cognitive test at the end of the third meeting. This questionnaire were used to determine the students' interest and opinion towards the application of TGT learning model in class XI MIA 2 (Table 5).

Table 5. The students' response towards the implementation of TGT learning model

No	Question	Frequency (Score)				Average	Category
		1	2	3	4		
1	Do you ever learn chemistry by using TGT learning model?	0	0	4	14	3.78	Very Good
2	Do TGT learning model used by the teacher make chemistry learning experiences fun for you?	0	1	6	11	3.55	Very Good
3	Do the application of TGT learning model make you interact with your friends better?	0	4	8	6	3.11	Good
4	Do TGT learning model used make the solubility and solubility product subject become more understandable for you?	1	0	15	2	3.00	Good
5	Do you expect the teacher to apply TGT learning model in other chemistry subjects?	1	0	14	3	3.05	Good
6	Is TGT learning model suitable to be applied in other chemistry subjects?	0	0	15	3	3.16	Good
7	Do the use of TGT learning model motivate you to learn chemistry lesson?	0	1	8	9	3.44	Good
	Average Score					3.30	Good
	Average %					82.50	

Based on the questionnaires distributed to the students on the application of TGT learning model, they were obtained an average value of the responses was 3.30 with the average percentage of 82.50% which was in good criteria. It indicates that the application of TGT learning model has never been used in chemistry subjects and the students were more excited and motivated to learn chemistry with it. This result was in accordance with the study carried out by Tyasning, Haryono, and Nurhayati (2012) that in the light of the students' satisfaction towards the implementation of TGT learning model on crude oil

lesson, there was an increased on students' satisfaction from 78.04% in the first cycle to 79.22% in the second cycle.

Conclusions

Based on the research result, it can be concluded that the application of TGT learning model on the subject of solubility and solubility product can improve the learning outcomes of the students in class XI MIA 2 at SMA 12 Banda Aceh. This is proved as follows: (1) the result of the activities of an individual student, it was obtained that an average percentage in the first, the second and the third meetings were 68.75%, 78.13% and 96.88% consecutively (2) the learning outcomes of the students' attitudes and skills domains have a classical average percentage of 81.40% and 88.00% respectively (3) The learning outcome of cognitive domain gained an average value of 3.33 with the percentage of classical learning completeness was 83.16% with a very good category and (4) The result of students' response obtained an average percentage value of 82.50% with very good criteria.

Acknowledgements

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Dayah As Education Laboratory Of Morals (Akhlak)

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Abstract

This study aims to determine the contribution to the development of akhlak *dayah* students. This research uses research (field research). The process of collecting the data, researchers used the method of observation, interviews, and documentation study. The results showed that the pattern of boarding education, strengthening professional fields can be done simultaneously with the strengthening in the fields of Islamic and educational character (*akhlak al-karimah*). In addition, the interactions between educators and learners with dormitory manager enables the creation of a competitive academic culture, even that is not less important is the exemplary aspects of the practice of religion. There are 5 advantages *dayah* educational institutions, especially in Aceh. First, education in Islamic boarding school to instill the values of a strong faith, second, education in *dayah* instill "values of character". Third, the Islamic boarding school education in instilling the values of worship. Fourth, education in *dayah* always imparted to his students to always seek the pleasure of Allah. Because of Allah's approval is sought, then everything is done adjusted to desired by Allah. Fifth, in the Islamic boarding school education with instilling the values of exemplary. In the language of the Qur'an mentioned the former showed a positive of worship in daily life.

Keywords: Boarding School, Laboratory, Akhlak

Background

The dynamics of religious life in Aceh are currently being received great attention from various circles, especially in the context of Aceh as the only example or model regions comprehensively implement Islamic *shari'a* in Indonesia (Kamaruzzaman Bustaman-Ahmad, 2007).

The Law of the Republic of Indonesia (UU RI) No. 44 of 1999 on the Special Status of the Province of Aceh, Law No. 22 of 1999 on Regional Government Declaration of Aceh as an area which apply Islamic *shari'a* of course give rise to liability which is unusual compared to the state duties others, because Islamic *shari'a* has always been associated with human morality on earth, especially in Aceh.

In line with this, for the achievement of that goal required roles and responsibilities of the clergy as a driver education institutions *dayah* in Aceh and scholars / academics Islam as the driving Islamic University in describing the meaning of moral or human characters that can be understood and practiced in religious life in Aceh (Musliadi, 2012).

Aceh is part of the Unitary Republic of Indonesia, where the Indonesian known as a great country which has a population of hundreds of millions of people. Indonesia is also a country that is predominantly Muslim. According to a human calculation Muslim Indonesia is the largest number of Muslims in the world. If compared with other Muslim countries, the Muslim population of Indonesia in terms of number no match.

Based on the interview author with one of the leading organizations of dayah; "*Dayah* still remains the top choice for most Acehnese, especially people living in the outposts village. The parents in this area over many put their children in *dayah* than in public schools. Dayah is still the main choice for the parents in educating their children. In fact *dayah salafiah* pure religion teaches science more attractive ".

In essence, educational institutions *dayah* and educational institutions schools have in common in the curriculum with equally transferring science Islam to learners, but the difference is only in the instructional media and methods applied in the learning process, so far from the application of values from a knowledge gained.

The process of interaction between students and teachers only takes place in the room when the learning takes place, but when the learning process is over, the process of interaction of students and teachers completed anyway. Thus, allowing the emergence of a variety of reactions in the students, as an example the case of frequent fighting between students. Lodging in Bireuen frequent fighting between high school students, one of the cases that brawl between students of SMK Negeri 1 Bireuen with SMA 2 Bireuen which occurred on May 17, 2014 ago. Then in addition to that at the level of the students beginning in February 2014 and there has been a student demonstration against the Rector that raise student tuition fee. In addition to the case some time ago STAIN Lhokseumawe students also had time to do a demonstration demanding the Chairman STAIN solve various problems that occur on campus. All these cases related to morality pupils and students were increasingly reduced (Observation, 2014).

Based on interviews with one of the community leaders stated that "to educate a child in order to gain knowledge of religion broad and can be applied in everyday life more good children educated in educational institutions *dayah,* because the pattern of education *dayah* adheres to the system boarding school that is capable of directing students to his moral development "(Marzuki, 2014).

In the aspect of morality shifts occur in society's view of the concept of morality itself. Morality is here understood as a concept of goodness or good morals or something that has been constructed by people. Assessment carried out by the community against these two institutions into the motor to increase the quality of graduates of the educational institutions. Where over the last few years people look at educational institutions in general has undergone a shift in moral values that should be the spirit of the

institution. So the impact to the minimal number of new students coming into the institutions and the lack of quality of graduates who have moral values (Ajat Sudrajat, et.al, Din Al-Islam, 2008).

Because of this, the focus of the discussion of this study, higher priority to moral education pattern imposed on *dayah* educational institutions, both with regard to the learning curriculum, instructional media and teaching methods are applied in improving morals learners each.

The research objective is the end point of an action or activities of a person who wants to achieve, so also in this study has the objective to be achieved are as follows: a) To examine the concept of *akhlak* education, b) to determine the implementation of *akhlak* education of students in *dayah.*

Materials and Methods

In conducting the research, the author will use the research that is qualitative field study or research by using descriptive method with comparative types. The purpose of the field study is to understand the condition of society which includes thinking, comprehension, perception and culture in relation to morals, development and improvement of *akhlak* learners conducted by educational institutions *dayah salafi*. Data collected through review of documentation, in-depth interviews (depth interview), participant observation (participant observation), and questionnaires. Overall data have been obtained from a variety of data collection techniques previously be analyzed by using stages, namely, the reduction stage, stage displays, data verification

Results and Discussions

Patterns and models developed during the Islamic education is still struggling in the provision of material that is not applicable and practical. In fact, most of the models and the education process seem "arbitrary" or not professional. In addition, Islamic education in Indonesia started reduced by negative values movement and the modernization project that is sometimes or obviously contrary to the teachings of Islam itself (Syahrin Harahap, 1998).

Talking about the Islamic education in Indonesia cannot be separated from the formal educational institutions and non-formal, in this case represented by the education the Islamic boarding school is believed to be non-formal education of the oldest in Indonesia, while the institutions of formal education consists of *Raudhatul Athfal*, *Madrasah* (school) up to Islamic Universities . Non Formal Education that still exist today are *dayah* educational institutions, while the formal educational institutions are all still exist until now.

Understanding context *dayah* and madrasah education in Indonesia is not enough just to see that Islamic education in general. However, the pattern of Islamic boarding school and *madrasah* education has a tradition and a culture different academic characteristics of Islamic education in general.

Curriculum areas, for example, we may not make the Islamic educational institutions could produce ideal graduates, when the structure of the curriculum does not give enough room for strengthening science specifically and intensively; and vice versa. The science that has been obtained at the school through the

teacher will not be beneficial without any applied continuously. So it would be naive to foster *ahklak* (character) students who only a few hours in a day's time interaction among teachers (Bambang S, 1996).

The condition does not allow the creation of *akhlakul karimah* in students if the learning is done without integrated with the educational pattern *dayah* (Islamic boarding school). With the pattern of boarding education, strengthening professional fields can be done simultaneously with the strengthening in the fields of Islamic and *akhlak* education. In addition, the interactions between educators and learners with dormitory manager enables the creation of a competitive academic culture, even that is no less important is the aspect of exemplary practice of religion.

Speaking *dayah* education, especially in Aceh has five (5) advantages. First, the Islamic boarding school education in instilling the values of a strong faith and hatred against the enemies of Allah and Rasullah ie infidels against Islam (*kafir al-harby*), second, education in *dayah* instill "values of character". In the language of the Qur'an values of this character called *Ruhamâ'u bainahum* (culture of tolerance and compassion among Muslims). Third, the Islamic boarding school education in instilling the values of worship. In the language of the Qur'an values of worship is called the "always bowing and prostration" in the sense of a very steady in pass servitude to Allah. Fourth, education in *dayah* always imparted to his students to always seek the pleasure of Allah. Fifth, in the Islamic boarding school education with instilling the values of exemplary (Saifullah, 2013).

Based on the results of interviews with one of the characters author *dayah* organizations he mentioned that "*dayah* still remains the top choice for most Acehnese, especially people living in remote villages. Parents in this region more to educate their children in the Islamic boarding school than in public schools. *Dayah* is still the main choice for parents in educating their children. Instead *dayah* pure *salafi* taught the science of religion becomes the primary choice "(Tu Bulqaini, 2014).

Results of observation the author, at the level of MTs / SMP and Madrasah Aliyah / SMA, *dayah* which has a system of boarding school occurrence of an excess of students, as well as *dayah salafi*, as dayah MUDI MESRA Samalanga, Babussalam Blang Bladeh Bireuen, has exceeded the capacity of the dormitory No, this is due to interest graduates of MA / SMA who prefer education *dayah* of the higher education, resulting in a shortage of students in various universities.

Education pattern *dayah* and education in *madrasah* has similarities to the curriculum with equally transferring science Islam to learners, but the difference is only in the instructional media and methods applied in the learning process, so far from the application of the values of a knowledge gained.

The system that was made aiming to form good habits for students and can be embedded in the soul. Systems that regulate the daily activities of students, arrange the learning process, organizing all the discipline and law in Islamic boarding school. Business *dayah* see this is very important in fostering *akhlak* of students. This is as expressed by Abu Chairman of *Dayah*: "because the environment is very influential, meaning exceptional environmental influences earlier, if the environment is formed by a great many children was certainly a bit of influence there, because the environment is very important and very

supportive, where schools have environmental familiarize congregation prayers, reading the Al-Quran 's, and all that stuff, so that through it hopefully we hope to be embedded in the soul of the child (Tgk. Muhammad Ar; 20015)."

The scope of *akhlak* fostered in *dayah* includes *akhlak* to Allah, the Prophet, *dayah* family, parents, environment, and personal. *Dayah akhlak* coaching students in applying methods of involving various parties, namely the *mudir*, parenting, board of teachers, employees, students and administrators of the organization and the active role of parents is the main capital of the success of *akhlak* development of students. *Akhlak*s coaching method is not only focused on the students but also to the parties involved in it. The methods used are:

Advice. The advice always accompany the students during their stay in *dayah* environment, the advice given by people who are responsible for the moral guidance in *dayah.* Through good advice, students gain insight and solutions of the things encountered in daily life.

Guidance. This guidance in the form of guidance given by the team motivator two to three times a month for the students. And there is also guidance is done twice a year, namely the delivery of content on etiquette (ethics) of the manners of conduct and manners before a return *santri* when the holidays arrive.

Understanding. Business education institutions *dayah* provide guidance for the *asâtidzah* (the teachers) of the head of parenting, because the *asâtidzah* that is the builder of the students. This briefing is done once a week. Briefing for teachers end of each month by the head of each. And guidance to the board as an extension of the students organization of care. This briefing is done three times a month by the supervisor of each part of parenting.

Modeling. Modeling is one of the most effective methods in coaching morals in *dayah*. Because through the example of the students get a real picture of how it should behave. The example they see directly from the board of teachers. Particularly exemplary obedience related to the implementation of discipline.

Muhadharah. Every Friday evening, all students after evening prayers in the mosque is usually carried out *muhazarah* students containing wisdom and moral lessons, such as the story of the history of the prophets, the companions. The stories presented by the teacher council.

The subject lesson in the classroom. Some subjects that are the focus of talks about akhlak, and there is also a wide range of subject lesson that is closely related to akhlak. *Dayah* educators at several institutions have *libanin akhlak* subjects, *taisirul ahklak, daqaikul akhbar, Irsyadul ibad*, and other books.

Command, Prohibition and Punishment. *Dayah akhlak* guidance on them also by giving orders, prohibitions and penalties. Through the commands and prohibitions students are taught to be obedient to the instructed and able to control themselves for not doing prohibited.

Through penalty, which violates a person is required to dare to take responsibility for his actions is to undergo the punishment given. Penalties apply for the whole family cottage that do not obey the rules of

discipline. And in imposing penalties, which is cracking down on employers respectively. For example, the teachers followed by *mudir*, teachers and followed by the head section.

Practice and habituation. Not only given the advice, guidance, direction, and exemplary of how good *akhlak*, but students are also required to practice these things. After practice, students are also taught to apply them in their lives. According to the deputy chairman *dayah*, "activity is conducted on a regular basis with full awareness and responsibility according to time and schedule have been set together".

Conclusion

From the various descriptions that have been the author of the chain above, the writer can give the following conclusion:

1. Institutions of Islamic boarding school is one institution that has stood for hundreds of years in Aceh, until now *dayah* educational institutions are still recognized by the community as an institution that is able to bring the man of ethics and good character, it is caused by moral guidance systems students become the main focus on the personality development of students. Morals coaching students include: provision of advice, guidance, direction, exemplary, *muhazarah*, the subject matter, orders, prohibitions and penalties, as well as practice and habituation.

2. Educational institutions foster mother, has five (5) advantages, a) education in *dayah* instill the values of a strong faith, b) education in *dayah* instill "values of character", c) education in *dayah* instill the values of worship, d) education in *dayah* always imparted to his students to always seek the pleasure of Allah, e) education in *dayah* always instill exemplary values.

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Supporting Islamic Educational Programs within Philanthrophic Solidarity; The Way on Waqaf Roles In Aceh

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Abstract

Waqaf is one of the key success factors in financing the educational programs among Muslim people in the entire world. It *has been identified with the fervent roles,* especially to support Islamic education. Overwhelmingly, waqaf has widely been used in supporting the educational development and student empowerment as part of communal solidarity among Islamic society. Meanwhile, this paper intent to examine the spirit of philanthropy among Muslim people in supporting the Islamic educational activities based on the aspects on waqaf contribution. It is remarkable, the study showed how the waqaf system has been perceived as an significant factor, and whether the spirit of generosity among Muslim society towards the Islamic education is reflected through the waqaf tradition. Besides, the study also showed how the waqaf played the significant roles in supporting the Islamic traditional education in Islamic history, and become the important source for many Islamic institutions since waqaf properties are utilized for the purpose of facilitating and enhancing the educational processes.

Keywords: Islamic Education, Philanthrophic Solidarity and *Waqaf*

Introduction

Education, especially in the Muslim world, plays a tremendous role in empowering *Da'wah* of Islam or its missionary efforts as well as creating a civilized society. As an integral part of the religious paradigm, the foundation of Muslim education, based on the Quran and *Sunnah's* points of view, focuses much on the values of acquiring knowledge and wisdom (Ahmad, 1985). Moreover, one of the main purposes of Islamic education is to provide the concept of balance for both earthly life and the hereafter, serving knowledge and virtue not only for the needs of the mind but also the soul based on perception and intuition (Khan, 1990).

In Muslims' historical background, as stated by Khan (1990), educational institutions began from the mosques and other religious places until its development process became more complex as times changed and the institutional teaching and learning processes were more intensively conducted. In the

next periods, the existent types of educational institutions in Muslim history were called *Maktabs, Madrasas, Jamias and Darul Ulums*. As the aspect that fully emphasized by Islam, education, throughout the Islamic history has always been funded by the role of *Waqaf,* and one of the oldest Islamic educational institution which has been supported by *Waqaf* as a major seat of Islamic teaching and research and higher education is the Al Azhar University of Egypt. Besides, other *Madrashas* or orphanages in other parts, especially in south Asia, almost all the *Madrashas* are established, operated, financed, and managed through the *Waqaf* funding as well as like many other Muslim countries. And the significant role of education in the Islamic point of view is that through the attainment of education, Muslims will be able to develop Islamic characteristics in form of *Iman, Islam, Tauhid* and *Ma'rifat*.

And uniquely, throughout the Islamic history, *Waqaf* has played the crucial role in financing the Islamic educational institutions, as the source of funding for those institutional activities. In fact, for instance, the highest educational institution in Muslim history was 'Bayt-al Hikmah' (The House of Wisdom). It was established in A.D 830 by the Caliph Al-Ma'mun. But the famous highest institution worldwide was Al-Azhar in Cairo (Egypt) and founded during the fourth Caliph of Fatimid Dynasty Al-Muizz in A.D 925-975. The development of those Islamic educational institutions is the pertinent sample in educational field under the strong tradition of giving *Waqaf* charity in the Moslem society. Khan (1990).

Apparently therefore, as a lesson learned from the context of Aceh, the Islamic traditional institution called *Dayah,* has significantly capable of playing a major influence among Acehnese society, including in norms and character building of *Ummah*, and shaping the local culture of the populace. The *Ulama* became informal leaders in the society with significant role in both the social and political spheres of life. Jami'ah of Baiturahman which was also built as the Grand Mosque is one of the oldest Islamic higher educational institutions in Aceh and the center of the higher education of *Baiturrahman,* had 40 lecturers from Arabia and other countries such as Turki, Parsi and India, and it offered almost 20 programs of study which were included in 17 *Dar* or Faculties (Nazli, 2006). As a center for Islamic activities, especially in education, Baiturrahman was hardly influenced by the political situation. In 1873, it was burned by the Dutch soldiers at the beginning of the Acehnese war against Holland and was rebuilt in 1875. Although Jamiah Baiturrahman was supported by the sultanate in many aspects, its financial system was still funded by *Waqaf* System which includes *Zakat* and *Sadaqah*. And one of the important *Waqaf'* assets of Baiturrahman is Blang Padang square, a main city landmark in Banda Aceh (M Adli, 2010).

A Brief on *Waqaf*

The word of *waqaf* is used in the Islamic law in the meaning of holding certain property and preserving it for confined benefit of certain philanthropy and prohibiting any use or disposition of it outside its specific objective (Kahf, 2003). *Waqaf* is an additional boulevard for welfare which leads to the greater reward from Allah rather than other aids to the individuals who are providing the *Waqaf* endowment towards the community. Meanwhile, based on this event, many of Muslim scholars (*Ulama*) have decided to consider this *hadist* as the jurisdiction basic on the *Waqaf* Law which is strongly encouraged in Islam.

Furthermore, the pillars of *Waqaf* in Islam consist of four aspects; firstly, there must be a person who is the *Waqaf* giver or called *Waqif*, secondly, the wealth or possession designated for the endowment (mawquf), the third is the recipient of the endowment (Mawquf 'alaih) and the final is the *Sighah* or clear statement of the endowment and purpose of *Waqaf* (IRM, 2008)*. In order to conduct this type of worship in Islam that the execution of *Waqaf* can be stated that the confinement of a property, whether it is movable or immovable, by the *Waqif* and the dedication of its usufruct in perpetuity to the public or to the family. Actually, the type of *Waqaf* is divided into public *Waqaf* (*Waqaf khayri*), family *Waqaf* (*Waqaf al-ahli*) and the *Waqaf* combination of public and family (*Waqaf al-mushtarak*). (Mohsin, 2009). Besides, *Waqaf* actually divided in two categorical aspects which are religious and philanthropic *Waqaf*. Religious *Waqaf* is "adds to the social welfare of any community because it helps satisfy the religious need of people and reduces the direct cost of providing religious services for any future generations." While the philanthropic *Waqaf* is "aims at supporting the poor segment of society and all activities that are of interest to the people at large such as public utilities, the poor and needy, libraries and scientific research, education, health services, care of animal and environment, lending to small businessmen, parks, roads, bridges and dams, etc". (Kahf, 2003) Hence, the *Waqaf* discussed in this study is related to the philanthropic spirit.

Specifically, *waqaf* encompasses all aspects of human existence in their completeness, guides the personal lives among people for both individual and societal aspects, drives the equality principle among various existences of all humankind seeking their basic needs and represents the Islamic magnificence of *Rahmatan Lil-'alamin* which contains the meaning that Islam is for all mankind. Simultaneously, Islam requires us to achieve such goals by turning to certain social and institutional mechanisms within the specific collaboration with the human voluntary action among the community. As a result, all these efforts will lead us to Allah's pleasure which is part of the principle of *Taqwa* derived from the Islamic institution of w*aqaf* system (Imtiaz, 2009).

Waqaf therefore represents the Islamic principle of equality and justice through the distribution of welfare and properties and promotes the spirit of generosity within the Muslim society. Accordingly, *Waqaf*, stands out as similar to *Zakat* which is identified as an integral and essential part of the Islamic socio-economic organism. Muslim scholars and authoritative sources manage its benefits to be used in empowering the level of wealth among Muslim societies with the specific management and administration as effective and efficient as possible (Norhaliza & Mustafa, 2009). Moreover, it is remarkable that the *Waqaf* system provides services for the public which cannot be provided by the government thus a great social impact on the society. Historically, proceeds from *Waqaf* have been dedicated to places of worship, such as mosques, *Mushalla* and room prayer, learning purposes like *Madrasah*, schools, universities and libraries, health and hygiene facilities, food and soup kitchens, services for urban people etc. In contemporary times *Waqaf* provides shelter, delivering water to localities, paying neighbor-hood taxes, supplying food stuffs to children, etc. (Hasan, 2006).

Beside, through various studies are conducted in Muslim educational context, perhaps the future expectations around Muslim educators will be proudly grasped in view of their glorious history through better understanding and analysis which forces the emerging of the new morality awareness in term of ideas, plans, goals and efforts in reviving the early Muslim heritage. There is a need to revive awareness upon the *Waqaf* role in Islamic education with various efforts in terms of social, political and economic approaches.

Waqaf Toward Islamic Education.

The charitable tradition of the *Waqaf* among the *Ummatic* community is deep rooted in all Muslims worlds. Consequently, *Waqaf* system as part of the Islamic heritage has been inextricably interwoven with Muslim tradition for almost one and half millennium. *Waqaf* in Muslim states provides educational institutions, including universities, colleges and schools; orphanages that shelter poor orphans; mosques which provide religious and cultural activity centers; charitable clinics; and shopping complexes and commercial centers where the income is used for social and charitable purposes Esmaeili (Hossein, 2009).

In view of Social and human development, education stands out as the main purpose of the existence of the institution of *Waqaf*. As the aspect is fully emphasized by Islam, education, throughout the Islamic history has always been funded by the role of *Waqaf*, and one of the oldest Islamic educational institution which has been supported by *Waqaf* as a major seat of Islamic teaching and research and higher education is the Al Azhar University of Egypt. Besides, other *Madrashas* or orphanages in other parts, especially in south Asia, almost all the *Madrashas* are established, operated, financed, and managed through the *Waqaf* funding as well as like many other Muslim countries Hasan (Sami, 2006).

In case of Acehnese *Dayah* institution underpinning this study, the ability of its management and administration in organizing a better educational planning will also influence the students' development through *Dayah* principal's leadership, teacher and tutors' performances, parental participation and social stakeholders' involvement, including government and NGOs. In other words, stakeholders' involvement might be derived from various types of contributions, whether in form of economic and financial support, political participations, social attentions and also cultural appreciations towards education.

The main principle of educational programs in *Dayah* system is to educate Islamic moral values towards better students' attitudes through acquiring *quranic* knowledge and personalizing the prophetic values transferred or translated into daily life. In the meantime, students will learn the basic understanding of the Qur'an, Arabic literally methodological system to be able to study the required book of references (*kutub al-mu'tabar*s), and to comprehensively gather Islamic knowledge such as 'Aqidah Islamiyyah' (tauhidic theology), *fiqah* (Islamic jurisprudence law), *tashawwuf* (Sufism), *akhlaqul karimah* (Islamic morality and characteristic building), *bayan* and *manthiq* (logic and thinking methods) and many others. Normally, all of these study literatures, transcribed in *kitabs kuning* or Islamic books of yellowed papers (Mukhlis, 2010).

However, this categorization of Islamic educational curriculum in the traditional college, might be understood differently from its original curriculum during the *Dayah* institution since it had been found as a single system to education in history, especially before the colonial era. Meanwhile, for several centuries, the scope of educational curriculum in *Dayah* institutions was focused on all aspects, and not only taught the topics which are related to the religious matters.

Conditionally, the goal of *Dayah* educational system is desired towards providing students with a leadership mentality, moral individuality, creativity and responsiveness towards both the internal and external environment. It is important to recall that Islamic literature indicates that, *Waqaf* tradition reached its glorious days (apogee of *Waqaf*) during the Caliphate of the Ottomans (1326-1924), and from this era, we found there were many complexes or *kulliye* built and managed through the *Waqaf* support funds. In Istanbul, for instance, the most monumental and largest building constructed was the Complex of Sulaimaniye in 1556, and in the complex, other mutual buildings, including mosque, schools (madrasahs), mausoleums, hospital, dormitory, food kitchen to the poor, shop and other related facilities are dully housed.

As a result of being projected to produce a better generation and human resource capital as well as becoming the community' leaders in social, political and economic aspects and scholars in intellectual field among Muslim society, *Waqaf* has provided greater employment opportunities. Many other educational institutions found throughout the history that have been built by the *Waqaf* institution, such as university of Cordova in Andalus (Old Spain), Nizamiyah in Baghdad, Madrasah Al-Junied in Singapore, Jamia'h Islamiyah in Medina, and many others (Ahmad, Che & Norzaidi, 2006). This kind of tradition among Muslims has been in existence from the earlier times of Islam until the present day, whereas, the *Waqaf* donations fund the mosque establishment, management and operational cost as the largest recipient, Islamic education is found to be the second largest recipient, especially in opening the schools and universities, providing grants to the students and salaries to the teachers, staffs, libraries and all other aspects indispensable with education (Razali, 2006).

The growth of *Waqaf* tradition as it is known to date was not only championed by Muslim society only, interestingly, the political leaders as well as the official government agencies were also involved in *Waqaf* development. Caliph Al-Ma'mun (198-218) was recognized as the first Islamic political leader who planned the official *Waqaf* institutions in order to support the Islamic education, through organized types of *Waqaf* agencies and units. As a result, in Baghdad for instance, there were many Islamic Education Colleges funded by those *Waqaf* institutions (Ahmad, Che & Norzaidi: 2006 reviewed Shalaby,: 1976). Moreover this *Waqaf* success factor sustained its continuity during the Islamic Golden Ages, especially during the Empire of Abbasid Caliphs (754-1258 AD), The Ayyubiah Sultanate (1171-1249 AD), The Mamalik Sultanate (1249-1517 AD) and lastly during The Empire of Othmaniyah Caliphs (1299-1924 AD), however, in all those levels of Islamic history, *Waqaf* has been used and implemented in many aspects, especially education, as the global trend among Muslim communities (Ahmad, Che & Norzaidi, 2006).

After the fall of the Caliphs Empire of Othmaniyah in twentieth century, *Waqaf* tradition became deteriorated and secluded. This phenomenon was faced when many Muslim countries were being occupied by Western Non-Muslim powers. Consequently, as intended by the colonialists, the domination wave destroyed many Islamic infrastructures and supra-structures among people in political, social, economic, cultural, Law, including educational aspects. It is reasonable that the colonial powers diminished and slowly abolished the roles of traditional existences found within the people; especially the religious seed that originally contained the resistant spirit against them.

On the contrary, in case of *Waqaf* system, asserts the imperialist powers created their puppet government collected from the indigenous colonial servants usurped *Waqaf* properties, such as land from Muslim societies' authority and disrupted its management and administration. As a result, *Waqaf,* as an important source for Muslim people in supporting their development programs and surviving the life sustainability, and operating the educational activities, became meaningless and miss-managed (Norhaliza & Mustafa, 2009),

Premised on the negative effect of colonialism, *Waqaf* as the Islamic endowment is in disarray and having been abolished from the formal regulation, we must be steadfast to realize that this crucial matter is made free of colonialism for the Muslim community to prosper. It is kindly to be considered by the latest generation to have encouraged many scholars to reconstruct Islamic revivalism, especially *Waqaf* redevelopment (Razali, 2006).

Additionally, *Waqaf* in the present times found itself as part of uncertainties, being seen as far rudimental from modern management system, non-economic and antisocial. *Waqaf* is only recognized as a financial instrument that is closely related to the religious issue, such as mosque (Razali, 2006). However, in the latest decades, *Waqaf* issue has become an attractive discourse that is interestingly being discussed among Muslim scholars, especially in many universities through conferences, seminars, workshops, etc. As an Islamic tradition which has been assimilated into the Malay culture, people are encouraged to donate their properties for the purpose of mosque, *surau* or *mushalla* (prayer rooms) as well as to schools and other Islamic educational institutions. Moreover, the religious trend among people in Malaysia, *Waqaf* has been identified as a philanthropic reflection of generosity among the Muslim community and a dedication to Islamic education, purposely providing accommodation to teachers and students (Hajah, Abdullah, Asharaf, Hisham, Norhaziah & Syahidawati, 2009).

Interestingly, *Waqaf* properties are easily found in Bangladesh. One unique fact to be pointed out here is that most of the *madrasah* and mosques funded by *Waqaf* charity have several and specific buildings or landmark places, such as maqbarah (cemetery) and *dargahs* that were provided for from *Waqaf* sources. Somehow, people in Bangladesh visit those places and donate cash money, foods, cattle and poultries, and ultimately, all these types of donations will be automatically utilized as *Waqaf* sources and assets in supporting Islamic institutions and educational organizations, including Mosques, *Madrasahs*, *Darul Hifz*, *Darul Qerat*, Orphanages etc (Ahmad, Md. Mokhter & Safiullah, Md, 2009).

On one hand many government and non-government organizations (NGOs) from both majority and minority Muslim populations, are dealing with the *Waqaf* assets contemporarily in order to widely distribute its profits to the beneficiaries. To prioritize the discussion only in Islamic educational sector, the special organization such as SIBL in Bangladesh, managed and purposely used the *Waqaf* revenue in many social and educational aspects, including scholarship, education for orphans, modernization of education and researches: (Uswatun Hasanah, 2009)

Conclussion

Waqaf has started being identified as part of Islamic civilization, performed its contribution toward educational empowering, economics resolutions and social-religious issues, and it is remarkable to claim that in lately centuries, *Waqaf* organizations such as agencies and units have been formed in many Muslim developing countries. Thus, the establishment of *Waqaf* entity is clearly benefiting the aspect of Islamic education such as construction of new buildings, providing facilities, etc. Although, the above discussion upon *Waqaf's* role in Islamic education is limited to certain Muslim countries, it is understandable that *Waqaf* tradition can be found in all Muslim communities all over the world. *Waqaf* system is recognized as an important legacy of philanthropic spirit among the *ummatic* society, and has been developing since it was socialized by Prophet Muhammad (PBUH), and culturally aimed at supporting Islamic education.

Meanwhile, *Waqaf* is one of the Acehnese instruments used in supporting the *Dayah* Islamic education or Acehnese Islamic Traditional College. Besides, the central status and function of the *ulama* or Islamic leader and scholar among Acehnese people is truly dominant, not only after the colonial era but rather than before. *Ulama* as the informal leader played significant roles since the process of Islamization itself, especially during the Islamic Sultanates in some parts of Aceh (Amiruddin: 2006). Islamic society, *Dayah* and *Waqaf* are the alliance terms dealt with among Muslim people and Islamic education in Aceh. While the *ulama* as the principal, including teacher and tutors in *Dayah* institution are the major players in a bid to produce better Muslim generations and to sustain the future of Islamic traditional colleges. Therefore, the next agendas of Islamic education will be determined through the *ulama's* ability to maintain the specific ways in clarifying the vision of national education.

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The Instructional Model Development Based on Interactive Multimedia on Technical Mechanics Competence of Vocational High School Students of North Sumatera Province

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Abstract

This research is aimed to: (1) find interactive multimedia based instructional model, (2) examine the effectiveness of interactive multimedia based instructional model. This study is developmental research uses Borg and Gall model. The first design model of development of this instructional product is designed programmatically and student centered learning with the processed in five steps: i.e. instructional design, developing preliminary instructional model, validating, trying out, and revising of preliminary instructional model. The subject of preliminary field testing are three experts in technical mechanical material, one experts in instructional design, four students for one to one try out, twelve students for small group try out and twenty five students for classroom group try out. The instrument employed in this study is a questionnaire and analyzed by using descriptive statistics. The finding of study are: (1) the quality of instructional model viewed from the expert in educational technologies is *good (7*5.00%), (2) in the one to one try out of the three student observation indicated that the product is *good (75.46*%), (3) in the small group try out of twelve students observations indicated that the product is *good* (87.04%), (4) and in the classroom group try out of twenty five students observations indicated that the product is *good* (mean pretest = 31.39; mean posttest = 32.54).

Keywords: Instructional model development, Interactive multimedia.

Introduction

The emerging of global trend is the growing use of the results of the technology industry and information technology. Another challenge arises in the wave of globalization is universalizing the value of competition. So the most important requirement is the availability of human resources (HR) that should be able to manage the technological advances. Thus HR is the deciding factor of progress of a nation or state. On the other hand, Indonesian Human Resources are still far behind compared to other ASEAN countries. From the reports submitted by the Human Development Index (HDI), Indonesia ranks position 108 with HDI value = 0.600 from 169 countries under the Singapore which ranks position 27 with HDI

value 0.846; Brunei ranks position 37 with HDI value 0.805; Malaysia ranks position 57 with HDI value 0.744; Thailand ranks position 92 with HDI value 0.654, and Philippines ranks position 97 with HDI value 0.638. Above Indonesia, there is Vietnam that ranks position 113 with HDI value 0.497; Cambodia ranks position 124 with HDI value 0.494 and Myanmar that ranks position 132 with HDI value 0,0,451 (Ministry for the People's Welfare, 2010).

Along with the development of the use of technology in learning, the school will be equipped with the Information Communication Technology (ICT) in accordance with developed learning innovation. In 2012, it is targeted that 40 % elementary school, 80 % junior high school and 100 % senior high school and vocational high school has possessed library with adequate number of books, access to ICT and adequate laboratory facilities as well (Depdiknas, 2006).

In connection with learning tools and problems in the learning process, the development of multimedia and computer technology has brought a revolutionary change in the field of industrial and communications, data processing, and various areas that affect human life. Multimedia can also be utilized for the development of science and technology, as well as the transformation of education. Interactive multimedia -based learning is something possible efforts as a learning paradigm in the form of learning service focuses on student learning and the development of human resources in education, especially teacher who serve as a motivator and a facilitator.

Materials and Methods

This type of research is the developmental research (Research and Development) using the model of product development by Borg and Gall. This instructional product development model is a model that is structured in program and student-centered learning in a systematic order. This model includes five (5) stages, namely: designing a lesson plan in accordance with the competence and structure of learning materials; design and development of a model as the initial product, expert validation, testing, and revision of the preliminary product. Subject test consists of three technical mechanics subject matter experts, one expert in instructional design, three students for individual testing (one to one try out), twelve students for small group testing (small group try out), and twenty five students for field testing (classroom group try out). Early conduct of the research is the preparation and development of research instruments used in data collection that include, questionnaires, interviews, records and documents. Data analysis technique in the first stage is descriptive analysis of research data conducted through surveys.

In accordance with the research model of research and development approach, the execution of this study followed the steps, preliminary surveys, planning the model, test the model, model validation and dissemination. While determine the effect of instructional model. It is conducted a quasi-experimental research design with control group pre test-post test.

Population and Sample

The population of this study was all vocational high schools which in Indonesian language is known as *Sekolah Menengah Kejuruan* (SMK) in North Sumatra Province with the target population include

students and teachers. Sampling technique appointment in accordance with the criteria and characteristics of the schools that become the study treatment namely vocational schools which have competence in skill of structural drawing engineering with technical mechanics as the subject of those schools. This study sample was five state vocational high schools namely SMK Negeri 2 Balige Toba Samosir, SMK Negeri 2 Pematang Siantar, SMK Negeri 2 Lubuk Pakam, SMK Negeri 1 Percut Sei Tuan Deli Serdang and SMK Negeri Padang Sidempuan of North Sumatera Province.

Results and Discussion

Data Description of Results of Design and Development

Conceptually the development of interactive multimedia instructional model is assembling the components of learning in the scheme implementation steps interactive multimedia-based learning that is the computer -assisted learning program with face to face learning. In this case 30-70 % of learning materials already available on the computer and can be used as a learning support facilities are implementation in the classroom, the material presented directly in the display. In the pattern learning interaction, students can study in groups to seek a solution to the problem of learning from a variety of different sources and can communicate using the internet facility. Learning theory that is used in this study is constructivism learning theory as reference to learning system model developed by Dick and Carey that emphasizes on student-centered learning (Student Centered Learning). Instructional model development used in this study is ADDIE model (analysis, design, development, implementation and evaluation). The following were the results that were successfully developed in each stage:

Analysis stage (Analysis)

At this stage, need analysis of interactive multimedia-based instructional model development was done. After the analysis, it was found the need for further instructional model development. As a result, decision was made to continue the development of the instructional model.

Design Stage (Design)

At the stage of the analysis it was found that there was a need to develop a model of interactive multimedia in technical mechanics subjects in vocational high schools, therefore it is proceeded to the next step namely the design stage.

Development Stage (Development)

Development of interactive multimedia instructional model was developed by combining a variety of models as well as by using student-centered learning approaches that already exist , such as: Contextual Teaching Learning that is used to introduce the topic of learning contextually; Problem Based Learning is used to explain problems of learning and how the problem solving that will be performed by the students ; Cooperative Learning is used to classify students in group; and Project Based Learning is used to give a particular shape to serve as the object of student learning and be continued with explanation in the front

of class as a discovery response from students (Discovery Learning) . The results of the preliminary development of interactive multimedia instructional model can be seen as shown below:
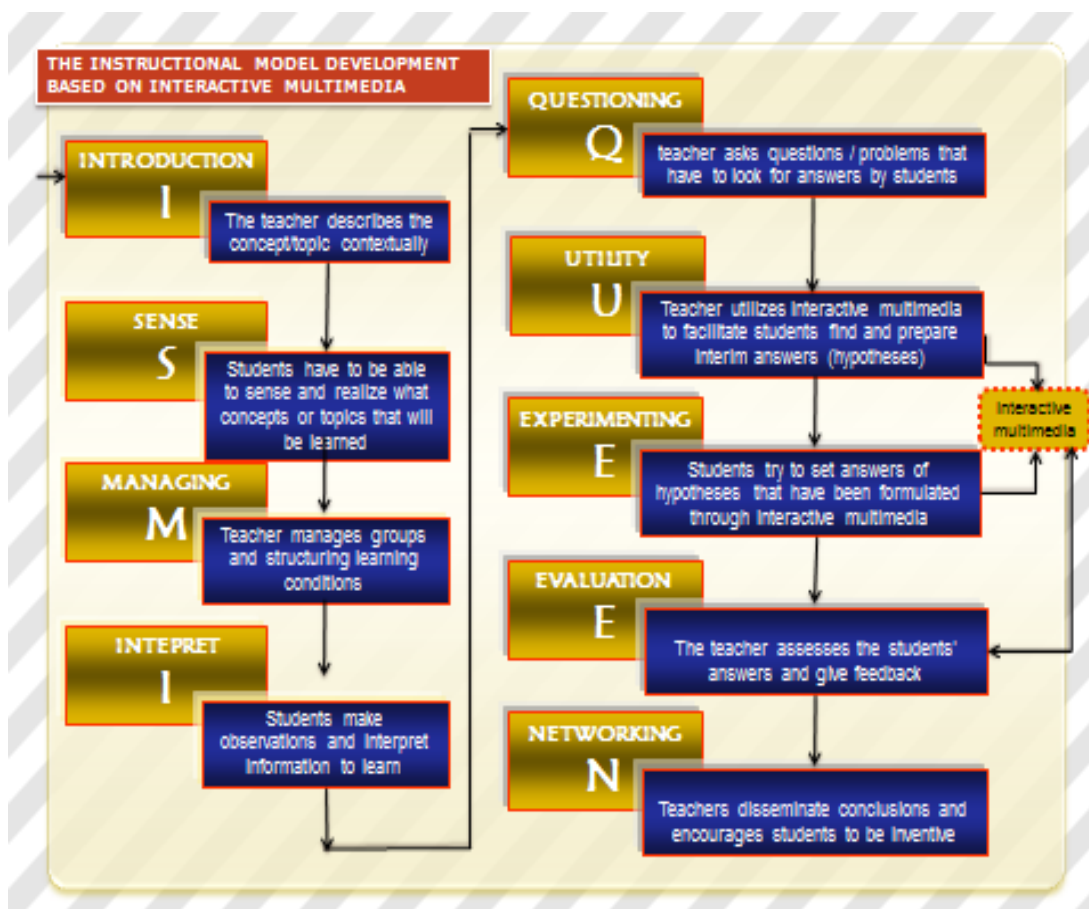
Figure 1. Preliminary Design of Interactive Multimedia-Based Instructional Model "IS MI QUEEN" model

The results of the preliminary design of interactive multimedia based instructional model as shown above is called the " IS MI QUEEN " model, with nine (9) steps of learning, namely: 1) Introduction: The teacher describes the concept/topic contextually; 2) Sense: Students have to be able to sense and realize what concepts or topics that will be learned; 3) Managing: Teacher manages groups and structuring learning conditions; 4) Interpret: Students make observations and interpret information to learn; 5) Questioning: teacher asks questions/ problems that have to look for answers by students; 6) Utility: Teacher utilizes interactive multimedia to facilitate students find and prepare interim answers (hypotheses); 7) Experimenting: Students try to set answers of hypotheses that have been formulated through interactive multimedia; 8) Evaluation: The teacher assesses the students' answers and give feedback; 9) Networking: Teachers disseminate conclusions and encourages students to be inventive.

Implementation Stage (Implementation)

Model implementation stage is a stage where the results of the instructional model are applied. Then, it is proceeded by the test of model to determine the effectiveness of it. The implementation as the test phase of this preliminary instructional model has been done in SMK Negeri 2 Balige, with the lesson topic of calculating equation pedestal reaction with certain static construction. By using interactive multimedia through powerpoint and guidance sheets for students in problem-solving steps to calculate equation pedestal reaction.

Evaluation Stage (Evaluation)

Evaluation stage is a process to determine whether the learning model successfully developed, according to initial expectations or not. The instructional model is evaluated by three experts covering materials experts, software experts (IT) and learning media expert. All three experts stated that the learning model has been eligible to apply but still need improvement in the integration of the power point into interactive multimedia instructional model. Furthermore, this model will be evaluated on an individual test stages, small group testing and field trials (testing) at the second stage of the research.

The results showed: (1) test of subject matter experts in technical mechanics are well qualified (70.83 %), (2) educational technology experts test on the learning model are in good qualifying (75.00 %), (3) the individuals test are in a good qualifying (75.46 %), (4) small group trials are also in good qualifying (87.04 %), (5) the trial classes are well qualified (average of preliminary test value = 31.39; average value of the final test=32.04), thus interactive multimedia-based learning model developed is effective in improving student learning outcomes of technical mechanics .

The results of the preliminary analysis are to analyze the needs of the development of the instructional model as a reference of needs in the development of interactive multimedia-based instructional model in technical mechanics subjects. Based on the study on the need analysis of instructional model development and theoretical studies it was concluded that the interactive multimedia learning model needs to be developed and can improve the learning outcomes of technical mechanics.

In accordance with the phases of the instructional design of Dick and Carey (2005), in which before designing the module learning / teaching materials, the first thing to be done is to define learning objectives, instructional analysis, identification of students' prior knowledge, determining a criterion-referenced test, and determine the learning strategies laid out in the lesson plan and the development of teaching materials. Instructional materials that are designed based on the curriculum of 2013 and from a variety of sources of technical mechanics books and Internet sites. Next is to develop a flowchart to notice what must be the flowchart elements such as: specific structure with the purpose and content, branching systems, label elements, used symbols as well as easy to follow and understand by the reader.

The use of interactive multimedia-based instructional model in learning allows students to have direct control and interact directly to the resources, so that students can control and discuss directly with the group about what their need as individual or as a team. Interactive multimedia -based learning model also

allows teachers to be flexible and to interact with the students so that the learning becomes interactive which makes learning focused on the problem and the subject matter being studied. Therefore, the role of the teacher in this case is required to master the technique of searching the information using internet, guiding the students to find sites that are relevant to learning materials, presents the material through a variety of learning sources that are attractive and desirable, as it serves the guidance and internet communications and other skills required (Haughey, 1998).

Instructional analysis of the research data proves that the use of interactive multimedia-based learning model is better in improving the knowledge of students in learning technical mechanics than before the use of interactive multimedia-based learning model. This is consistent with previous research that has been conducted by Kozma (1991), in which he has shown that the presentation of the combination of media (video) compared with any audio or visual presentation of the same material, is able to produce the ability to remember information better than just look at the pictures, reading, or listening. Computer technology, can provide greater benefits in helping to improve the capabilities and productivity rather than technologies such as radio, television, and tape recorders. This technology is sometimes even able to exceed the capacity of human brain. Technology, as cognitive means and thinking tools are able to develop cognitive function during the learning process takes place by involving the learner actively in abundance and cognitive activities (Jonassen, 1995).

Although in this study the data obtained generally mean that the learning outcomes of students of technical mechanics is higher if they were taught by the use of interactive multimedia-based learning model than the average learning outcomes before the use interactive multimedia-based instructional model. The implementation of interactive multimedia-based learning model is still need improvement in terms of implementation, including teacher's mastery in terms of explanation of the topic so that students are easier to interpret the content of the subject matter that was given to them.

Conclusions

1. Development of interactive multimedia-based instructional model is needed in the classroom which made on the availability of resources educators and students who have the ability and motivation to interact in the learning as well as the support of learning and networking devices that can be accessible to students in a classroom.

2. Results of the preliminary design of interactive multimedia -based learning model called " IS MI QUEEN " model , with nine (9) steps of learning , namely : 1) Introduction: The teacher describes the concept/topic contextually; 2) Sense : Students have to be able to sense and realize what concepts or topics that will be learned; 3) Managing: Teacher manages groups and structuring learning conditions; 4) Interpret : Students make observations and interpret information to learn; 5) Questioning : teacher asks questions / problems that have to look for answers by students; 6) Utility : Teacher utilizes interactive multimedia to facilitate students find and prepare interim answers (hypotheses); 7) Experimenting : Students try to set answers of hypotheses that have been formulated through interactive multimedia; 8) Evaluation : The teacher assesses the students'

answers and give feedback; 9) Networking : Teachers disseminate conclusions and encourages students to be inventive .

3. Interactive multimedia learning model developed is effective in improving students learning outcomes of technical mechanics subject.

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How First Language influences Foreign Language Learning

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Abstract

First language (L1) plays important role in second language (L2) learning. Maybe used in language of instruction, especially to very early learners, L1 also helps and shape learners' understanding. One with good L1 basis will benefit in the process. Transfer of language and meaning will be faster than the non. Contradictorily, one may also receive negative impact from his L1 when learning L2. Poor L1 knowledge, grammar and vocabulary, maybe to blame for the matter. However, as dominant language shifts based on one language use and preferences, influence may also moves. One with L2 dominant language may find his new language easier to comprehend in term of speaking, reading or writing.

Keywords: First language, second language, language learning

Introduction

First language is the first language one learns, usually from birth. They learn it from environment, parents or society. Indonesian and individual' ethnic language can either be one's first language. However, composed of so many ethnics, Indonesian people live in various bilingual or multilingual environments. Foreign language is a [language indigenous](#) to another country, not from the area, such as English in Indonesia. It is not indigenous to Indonesian yet spoken in secondarily in many regions of the country.

Quoted from wiki on first and second language, it says that "In a broad sense, any language learned after three has learnt one's native language [is called second language]. However, when contrasted with foreign language, the term refers more narrowly to a language that plays a major role in a particular country or region though it may not be the first language of many people who use it." (wikipedia.org). Crystal (2003) added that *first language* is distinguishable from *second language.* People use one as 'majority or dominant' language and the other as the 'minority'.

In the case of many Indonesian, people are raised bilinguals and therefore are able to speak more than one language. Later, as they go to school, they learn their foreign languages, English and or Arabic.

Most schools around the world teach at least one foreign language and most colleges and high schools require foreign language before graduation. (Wikipedia.org). likewise, Indonesian national curriculum also

had one to two compulsory languages from junior high schools. Students at public school have to study English and Islamic public schools have English and Arabic.

Theories on bilingualism

Indonesia is a very plural country. It has many ethnics and languages that are still alive and used all over the country. Acehnese, Javanese, Balinese, Sundanese are just among few examples of the languages in this beautiful country. Each of the ethnic language has its own language pattern and grammar and are not creoles, pidgins or dialects. It's a full language with a complex grammar system.

Generally speaking, children grow up with ethnical language and Indonesian language. They are raised with two language systems. This makes them bilingual by nature. Along the way, they may also pick up or learn other language(s) either another ethnical language or foreign. It is not surprising, therefore, many Indonesian are able to speak in 3 languages or more. Cobas (2001) added that learning second language generally does not interfere with first language. This explains why we can easily find bilingual in our neighborhood. However, even though people posses two languages or even more, they tend to have 'majority' and 'minority' language. Majority language is the language which they feel most comfortable. (Cobas, 2001).

More than six million (13.9%) children between the age of 5 to 17 spoke non-English at home, in 1990. (Cobas, 2001). This number has increased sharply in line with the increase and development of bilingual education and immigrants in the US. Survey held in Britain in 2004 showed that only one in 10 British workers could speak a foreign language and less than 5% could count to 20 in a second language. (Wikipedia). In most Asian countries, children also grow in bilingual environment. It is very normal for someone to be exposed to two or more languages since early ages.

There is also considerable evidence that many key literacy-related skills, including phonological awareness, print concepts, decoding skills, and extended discourse, are transferable from an L1 (first language) to an L2 (second language) (Wikipedia.org). Many students use their L1 as the base for their L2 learning. This has been useful and serves as one of the great tool one can use for L2 learning. In addition, similar grammatical procedures and vocabularies also help learning process. One whose first language is Bahasa Indonesia, for example, may use their first language skills as foundation to learning their second language, such as English.

Recent trends and cultures play significant role in many aspects of the change including language learning and teaching. Computer-assisted language learning (CALL) has been integrated into foreign language education and computer programs with varying levels of interactional relationship between computer and the language learner have been developed. Students exposed to these media will find language learning easier than those who are not. Students familiar with computer and English-based games will, therefore, learn the language while doing what they are doing.

English Learning in Indonesia

English is one of the required subjects in Indonesia. All students learn this international language from secondary school level to university. Living in a bilingual environment, Indonesian and ethnic language, many people take English as their third, if not fourth, language. Some students get mix-up with those languages and some even took it as an advantage. Some get confused with their third language as the languages get mixed-up with each other. However, some others take it as advantage as they have been exposed and experienced with bilingualism (slideshare.net/RonglinYao).

Teaching English in Indonesia is rather unique. Taught as the foreign language but uses it more extensively in many areas, social and political. Teaching English in Indonesia often relies on Bahasa Indonesia as language of delivery. Therefore, it is still very common to find that teachers/ lecturers teach English in Bahasa Indonesia in the class. However, regardless the debate on language use, still L1 is very helpful in L2 teaching. Schweers, in Yao, Ronglin added, "Consistent positive results are reported from practitioners, researchers, and learners when L1 is used (p.18f). As a result, "there appears to be an increasing conviction that L1 has a necessary and facilitating role in L2" (Schweers, 1999, p.1). Furthermore, Ringbom (1987) added "an L2 word is easily matched with a phonologically and semantically similar L1 word (p.38f). Swan (1985) argues that if we do not establish links between vocabulary items in L1 and L2, we would never be able to learn L2." This shows how Bahasa Indonesia can actually help them in language learning.

Bilinguals, gift and Curse

Students with bilingualism possess both benefit and the 'curse' of the gift. On one end, they are knows for better and faster language acquisition, which means that they can learn language faster and better than their monolingual peers. In addition, as information constantly goes back and forth in the two languages, these students posses the ability to learn faster than the monolingual. Also, they are found to have longer brain damage. On the other hand, bilingual are known for less complex language. They have less rich vocabulary and verbal skills compare to the monolinguals. On several occasions, they also found it hard to express their thought and loss ideas or words (Miller, Tory).

Bilinguals learn other language easier than the non (Miller, Tory). They are also able to memorize vocabulary faster than most of the monolinguals. Their brains are used to using various forms of vocabularies and languages back and forth. Thus, their brain function more in the way of information processing. This gives more 'brain exercise' and stronger brain. This *exercise* will leave healthier and cleverer mind.

Bilingual is not only acquired by nature, it can also be obtained at later age. Children can learn to be bilingual. A child whose mother tongue is Indonesian can be bilingual after he moved to England, for example. They can learn two languages at home, at school, or in the community. Some children learn both languages very well. But sometimes they know one language better than the other. The language a

child knows better or uses more comfortably is called the dominant language. Dominant language is not fixed. Over time, it may change, depends on switch in language use.

First Language influence in Second Language Study

Many aspects influence child with bilingualism. Brain process, exposure to more than one languages, and dominant language (language of preferences) are among other factors that influence second language learning. This is because they have unique exposure to the two languages. Students will think and reconnect the information with the information they already have in both languages. This is may be positive or negative to the speaker. On one hand, this may increase their brain processes and on the other hand, it may confuse them. Dominant language is another issue. One will find it easier when receiving information in his dominant language. Having been using the dominant language more and more comfortable with it, one will be able to process the information easier. However, should this is received in non-dominant language, he will have harder experience.

Students with good first language mastery will find it easier to learn the second. They can use their first language knowledge will serve as strong platform for the second one. Strong foundation of first language helps learners learn the second one. Indonesian, for example, has strong similarities with English. Many aspects of the language are similar with English grammar. One with good understanding of Indonesian language will definitely find it easier to learn English and English grammar. They can use their language understanding, both in term of grammar and language uses, to learn the second language. Beside this, as noted by Aron, 1984 and Connor 1986 in Durgunoglu and Hancin-Bhatt (1992) that background knowledge play very important role in information processes. One who is familiar with the topic or them discussed with understand easier than one who are not.

Reading of L2 can be a curse or leisure activity for someone. Durgunoglu and Hancin-Bhatt (1992) proposed that when reading, mind process will determine how being bilingual can be positive or negative to someone. As pointed out by Lado (1957), in theory of Contrastive Analysis (CA), the two languages similarities and differentiation will later determine whether and how one will benefit or even burden by bilingualism. They also talk about how reading can be hard when done in L2. They explain further that this may be caused by "inadequate L2 knowledge" thus hinder the process of noticing cues and markers in L2. This is true because reading is a combination of subcomponent processes.

L2 Use

I have discussed above that first language (L1) plays important role in L2 learning. One with good L1 foundation will have weak foundation to build their L2 understanding. It is safe to assume that a child from city area who is very familiar with L1 (Bahasa Indonesia) will learn their L2 easier from child living in urban area and has little interaction with Bahaasa Indonesia. This is due to proximity of the two languages in term of vocabulary, grammar, and other language aspects. However, further interaction with L2 will determine their L2 mastery.

In classrooms where the learners all share the same L1 or national language, there is a tendency for tasks which should be done in the L2 such as conversation activities, discussion of intensive reading, preparation for writing etc to be done in the L1. There are many reasons for this L1 use. Firstly it is more natural to use the L1 with others who have the same L1. Secondly, it is easier and more communicatively effective to use the L1, and thirdly, using the L2 can be a source of embarrassment particularly for shy learners and those who feel they are not very proficient in the L2. Towards the end of this article we will look at a range of options for overcoming this reluctance to use the L2, because as a general policy it is important to have strong strands of L2 meaning focused use and fluency development in a course.

There are however some times when use of the L1 can have very positive effects on learning and we will now look at these in relation to the four strands. Interestingly enough, research also found that in some bilingual settings, the use of L2 can influence L1, an up-side down approach. Kaushankaya, Yoo, & Marian found that, bilingual students who are used to their new environment may have difficulties understanding writings on their own language (L1). This issue may be caused by the shift of L1 from dominant to minority language.

Use of Language in the Classroom

Teaching and learning of L2 can be tricky, especially when participants have little to no prior L2 knowledge. Ways to convey information should be found in order to make the process possible. Some common ways of conveying the meaning of an unknown word can be seen as follow. Definition in the second language; teacher uses his skills to elaborate meanings in the target language. Demonstration; trying to demonstrate how the meaning 'looks like' in motion. Picture or a diagram; 'showing' the meaning using the media of picture or diagram. Real object; taking real object that can help defining the meanings.

In a more exposed class, students with little or some L2, other approach such as translating using L1 can be used. However, this approach can never be applicable in the previous situation. Non-verbal approaches are often used to pass the information to students. However, no method is superior over the other. All methods and approaches are wonderful in their own way and settings. Teachers will just have to find one that work best in their situation and target of participants (Lado, Baldwin and Lobo 1967; Mishima 1967; Laufer and Shmueli 1997).

To help speed up the process of learning, some adjustment in term of language use should be made. However, the more students interact with the target language (L2) the better and faster the learning would be. Students will benefit even more from personal and intense interaction of L2. This is true because all skills are acquired through a process; and the process of learning an L2 is actually using the language itself. Though using the language, students will learn to apply their knowledge of the language. They can also learn from their peers or speaking partners while using the L2 itself. They can also self-analyze their learning performances. They, along with their peers, will witness their learning progress and ability. Similarly, on the side of teachers, they will be able to detect students ability and weaknesses and

continue from there. Teachers can also use practice as grading moments, more reliable than many other ways.

Encouraging L2 Use

Needless to say, many of our students face challenge of L2 learning. Many still find it complicated and hard to acquire. Many still find L2 as a specter. Some even fail in L2 and cannot advance to higher level. This issue is not only true at school levels but go up higher level to university levels.

One of main case for arduous learning process is not using the L2, both in and out of class. Students are not familiar with any forms of L2, not even during the learning process. In the class, during the teaching, teachers often use L1 when speaking with students. Out of the class, the odd of using the target language is even smaller. This situation is actually contra productive and against the findings, "… teachers need to use a range of options to encourage learners to use the L2 as much as possible (Nation 1997)." Teachers often excuse themselves for not using the L2. Students' abilities are common *scapegoat* to tackle the matter. However, should we dig deeper more options can be found to help facilitate a good teaching and learning process. Internet actually provides ample and up to date approach to good teaching. Teachers just need to look up there and they will surely find them. Hands out and free copies can also be used to help break the ice of L2 use. Students will be brought to the gate of active conversation and interaction, step by step process.

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Physical Fitness Role in Improving the Quality Of Primary School Students

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Abstract

Purpose of this study is to determine the role of physical fitness for elementary school students in Aceh Besar district. Research objects in this study is students son in elementary school lower grade and higher by 4 School of Excellence and 2 Schools Ordinary in the district of Aceh Besar. The method of the research was a descriptive study through data collection techniques using a questionnaire (scale of likers) is analyzed using simple statistics. The results of the research was found that the response of Primary School students Aceh Besar district on the role of physical fitness consist of: (1) highly Agree (63%), (2) Agree (19%), Disagree (10%), Strongly Disagree (8%). The implications of it is necessary the application of the maximum learning activities that can enhance physical fitness, so that teachers Physical sport and health education particular should contribute actively quantitatively and qualitatively with optimal. The students who have a good understanding of the importance of physical fitness in many ways, would feel practically from implimentation study conducted by teachers of physical sport and health education both curricular and extracurricular activities. Physical sport and health teacher should be able to design learning device with a model approach that can stimulate the development and growth of phsychomotor, and affective cognesy students. In other words, through learning of physical sport and health will be able to improve the physical fitness of students and preservation body of the impact of various things such as, obesity, heart disease, hipertension and so on. By having a good physical fitness will also have an impact on preventing imsomnia, increase metabolism (energy), brain, fatigue and improved health of the body in the face of the learning process in schools.

Key words: Role, physical fitness

Introduction

Improving the quality of education is an absolute obligation by individuals, communities and institutions, especially the institution itself. This is in line with the development of technology and information in various fields, the demands on the education sector should be more optimally and comprehensively

systematically arranged in a frame program that is planned and appropriate. Various educate should get a decent and responsible in every effort to improve the ability of the nation in order to fill in the times of globalization are being faced in various parts of the world.

Physical education is an education that is integral or part of the overall education that promotes jasmni activity and development patterns of healthy living through increased growth and development of physical, mental, social, and emotional harmonious and balanced. The expected results of physical education is in addition to the mastery of a wide range of basic motor skills or physical condition is also a healthy degree of good, so that the resulting level of physical fitness that is primed by all individuals who are actively involved in various physical activities.

According to Bailey (2003) Many things can be improved in the application of physical education in a programmed and systematic such as: (1) improving the growth and development of the body which includes physical fitness and health, (2) improve the dexterity and skill, (3) improving the knowledge and intelligence, (4) adding a creative social life and recreation. Good level of physical fitness that will help make it easier for students to study all subjects in school and would always be excited in various activities.

Physical and mental health and overall health are intimately associated with physical activity every individual that lead to the improvement of physical fitness. Physical activity were done early by considering development and growth rate of the motor will have an impact on the speed of increase in the development and growth of children as a whole. Through physical activity is expected to be preservation and increasing organ function in line with the increase in activity patterns as well as the realization of physical and mental health of children. In addition, the physical activity that will improve the physical fitness of children will have an impact on emotional intelligence includes; self-control, diligence, perseverance, and the ability to motivate yourself and is one of the critical success factors of students' learning.

Learning through physical education and other physical activity events will be part of the effort to improve the quality of the students and is also expected to lead to implications for the quality peningkaPtan body as a whole. Physical fitness is required by the students in the school to participate in the learning process every day on average takes five hours or more. Therefore no doubt that physical education was sangaPt needed by the students to improve and maintain physical fitness as well as intelligence and creativity obtained through physical activity should be attached to the personality and abilities of students. Through Physical sport and health Education learning in school that will increase physical fitness is expected to be transferred positively to the learning ability of cognitive, affective and psychomotor students. All of that reflected in higher student achievement in learning other subjects.

Through Physical Education and sports, it is expected that students can more easily master the concepts and skills of the other, resulting in the transfer of physical education learning outcomes are positive

towards the acquisition of knowledge, attitudes and mortorik students. Because of the level of physical fitness of children has a very important role in any effort to improve the quality of self from various things.

Based on the problems above, it is in feeling the importance of physical fitness of students, so this study was formulated with the title: "The Role of Physical Kubugaran in Improving the Quality of Primary School Students Self Aceh Besar district academic year 2015/2016".

Materials and Methods

This research can be classified into descriptive study. Descriptive research has characteristics as proposed Furchan (2004) that (1) a descriptive research tends to describe a phenomenon as it is a way to examine regularly-tight, give priority to objectivity, and be done carefully. (2) the absence of treatment given or controlled, and (3) the absence of hypothesis testing. Pupulasi in this study were elementary school students in academic year 2015/2015 Aceh. Meanwhile, the number of samples consisting of 60 primary school students excel and 30 regular elementary school students with a total sample was 90 students for the low grade and high grade. Data obtained with the data collection technique using a Likert scale questionnaire and data analysis used in this study is through a simple statistical test to test the percentage, while the formula as follows (Supriyanto 2009):

$$P = \frac{f}{N} x100$$

Description:

f = frequency of subjects
N = total number

Results and Discussions

The results of measurements made with regard to the role of physical fitness to improve the quality of elementary school students in Aceh Besar district in the academic year 2015/2016. Based on data analysis, elementary school boys Aceh Besar Year 2015/2016 choosing the statement that role of physical fitness in improving the quality of self strongly agree (63%) agree (19%); disagree (10%) and strongly disagree (8%). Thus, research findings show that respondents strongly agreed with the role of physical fitness in improving the quality of the pupils. Therefore, we should need serious attention by all parties and the need to endeavor to improve the physical fitness of students, especially elementary school students in the district of Aceh Besar. Learning process in the school would have to be implemented in accordance with the level of development-oriented learners, such as in primary schools should be more emphasis on the approach pattern to play with modified models including learning media. Affection should be higher quality pattern of improvement compared with psychomotor and kognesi. Furthermore, the research data can be read in chart 1 below:
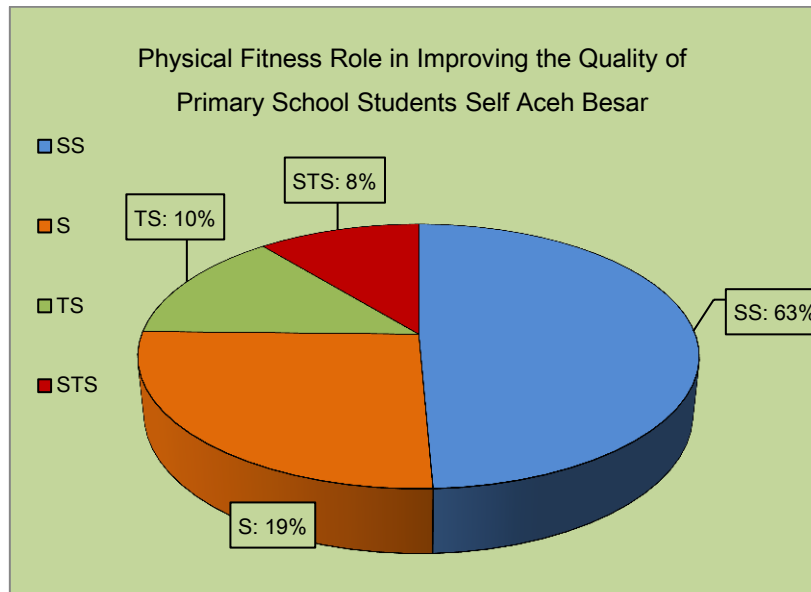
Figure 1. Response elementary students in Aceh Besar District

Conclusion

Based on data analysis in the previous section, it can be concluded that the role of physical fitness to improve the quality of elementary school students in Aceh Besar district in the academic year 2015/2016 highly approved by the students. Qualitative data it can be concluded that: SS (63%), ST (19%), TS (10%) and STS (8%), in other words more than 80% of students agreed that determine the quality of his physical fitness.

Suggestion

Based on the research results and conclusions, it can be suggested or to consider that: (1) all relevant elements in order to prioritize the improvement of physical fitness of students in an elementary school in Aceh Besar District. (2) Teachers of physical education and sport more and improved health of its human resources and implementing the learning process with a reliable competence and adapt to the growth and development of elementary school students.

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The Influence of Organizational Culture And Leadership On Performance Satisfaction

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Abstract

This study is to examine the impact of organizational culture and leadership on performance satisfaction of the head of study program at State University of Medan. This survey study used causal method. This research had been performed during six months, in period of April 2015 till September 2015. The population of this study consisted of all head of study program at State University of Medan. The fourty five of samples which was done by using Nomogram Harry King applied random sampling. Questionnaires were used to collect data. Validity and reliability were used to test the instrument in order to obtain the accurate data. The results of hypotheses testing are: 1). there is a direct positive influence of organizational culture on performance satisfaction, 2). there is a direct positive influence of leadership on performance satisfaction.

Keywords: Organizational culture, leadership, performance satisfaction of head of study program

Introduction

College as an educational unit that organizes higher education has a role and strategic function in realizing the mandate of Law Number 20 Year 2003 on National Education System, which produces graduates who has a noble character, honest, qualified, democratic and capable of facing the challenges and competition between nations. To achieve these aims it's required reliable human resources which can face the challenge, creating and filling employment opportunities, as indicated as one of the causes of the economic crisis is the low quality of human resources. Reality faced, in general the quality of Indonesian human resources is still low, an indicator of the low quality of human resources in Indonesia is characterized by the data reports of Human Development Index Report in 2010 which put Indonesia on the order of 108 out of 169 countries in ASEAN.

Quality of education can be characterized by the relevant or irrelevant of the graduates of the educational institutions with the needs of the society. The irrelevance of quality graduates of educational institutions can be characterized by the number of unemployed graduates. According Soehadi (2008), there are 740

thousand college graduates do not have a job in 2007, needed reorientation of college graduates of the job seekers' nuance to the job creator's nuance. Furthermore Suparno (2009), added, unemployment in Indonesia reaches 9 million of which 10 percent or 1.14 million people are diploma and scholar graduates . Responding this situation Jalal (2008) points out, high unemployment rate of college graduates today due to some factors, such as; graduates competence which do not fit the needs of the labor field, already been saturated the graduate study programs in the society or do not have any expertise to compete in the world of work.

This condition is getting difficult with the associated burden of higher education in Indonesia in achieving HELT (Jalal, 2008), which are elaborated into 6 (six) main issues be abbreviated L- RAISE, namely (1) Leadership (L), (2) Relevance (R), (3) Academic Atmosphere (A), (4) Internal Management (I), (5) Sustainability (S), and (6) Efficiency and Productivity (E). Strategic issue of L-RAISE meant to maintain the continuity and development of higher education institutions. Neglecting L-RAISE will decrease the performance of higher education which could ultimately threaten the college existence to fulfill the needs of internal and external stakeholders. Basically HELTS are launched to overcome the main issues of higher education, namely sustainability and superior products, especially products of study Program. Issues of sustainability, an issue of global universities. Approach of the measurement performance outcomes-based study program inspired by the concept of Talent Management and Human Capital Management. Application of Knowledge Based Economy Program should encourage the leading innovation sectors in all sectors of development. However the condition of the Studies Program in Indonesia does not yet fully support the concept. Therefore, needing to pay attention to work satisfaction of the chairman of the study program for the achievement of performance-based outcomes studies program at the State University of Medan.

Nothing the work description above it's necessary that the job satisfaction of head of study program is an absolute that can be considered as determinants of the success of the university. Many factors alleged can influence the satisfaction of the head of study program at the universities to improve the quality of its graduates. These factors can be expected such as: rewards are not clear, the high competitive spirit, lack of facilities, work culture, work climate, the style of leadership, knowledge, smooth communication in the organization, as well as chairman's motivatios and so on.

According to Robbins and Judge (2007: 56) to achieve the organizational goals effectively and efficiently we must understand the behavior of the organization, which the variables to take not of is the work satisfaction, the commitment and the manager performance in the organization. Further confirmed employee satisfaction is crucial of the organization performance, because the work satisfaction is an appraisal of the things that happened in the organization. Based on the background of the above problem posed hypothesis of the research as follows: (1) the Cultural organization affects positively on the work satisfaction directly, (2) the leadership style affects positively on the work satisfaction directly, and the culture of the Organization and Leadership Styles simultaneously affects positively on the work Satisfaction directly.

Materials and Methods

The research was conducted at the State University of Medan. The study period of 6 (six) months starting from April to September 2015. This study used a survey method with the causal approach. While the data used the path analysis. This study analyzed the effect of one variable to another. The variables of this research is the organizational culture, the leadership style, and the work satisfaction. The data colletion instrument in this study was a questionnaire. The data collection techniques used in the study was a survey into the field by distributing questionnaires to the every head of the study program as a research sample obtained from the responden directly. This technique is used to obtain the primary data from the respondents directly. The instrument used in this study was a questionnaire about the organizational culture, the leadership style and the work satisfaction of the chairman of the study program at the State University of Medan (Unimed).

This study is a causal study with the methodological path diagram. The data analysis techniques used are (1) a descriptive analysis to describe the characteristics of the data such as the average, the median, the modus and the variance, and (2) inferential analysis was used to test the hypotheses of the study with the path analysis at the significant level $\alpha = 0\ 05$. Before testing the hypothesis test is conducted prior involves the requirements analysis, namely: (1) test for the normality, (2) linearity test with statistic F test, and (3) test the homogeneity between the variables Barlett test. The results showed that the data of each variable distributed normally, homogeneous and linear.

Results and Discussion

Organizational Cultural variable data (X_1) has the lowest score 102 and the highest is 163, and score reach is 61. The mean score of the organizational culture is at 136.29 with the modus = 134, median = 136. The standard deviation (SD) = 14.33. Furthermore, the coefficient values obtained the courtesy ratio 0.695, and is between -2 and +2, according to the provision if courtesy ratio between -2 and + 2, the data is expressed in normal distribution. Thus, the data distributed normally on the Organizational Culture.

The lowest score variable data of the Leadership Style is 94, and the highest score is 160, and score reach is 66. The mean scores of the Leadership Style is at 124.55 with the modus = 124, median = 126. The standard deviation (SD) = 15 , 75. Furthermore, the coefficient values obtained the courtesy ratio 0.695, and is between -2 and +2, according to the provisions if ratio between -2 and + 2, so that the data is expressed in normal distribution. Thus, the data distributed normally on the leadership style.

Variable data of the work satisfaction (Y) has the lowest score 101 and the highest is 167, and score reach is 66. The mean score of job satisfaction is at 138.87 with the modus = 140, median = 142. The standard deviation (SD) = 14.34. Furthermore, the coefficient values obtained the courtesy ratio 0.695, and is between -2 and +2, according to the provisions if ratio between -2 and + 2, the data is expressed in normal distribution. Thus, the data normally distributed normally on the work satisfaction.

Furthermore, the next requirement that must be done in performing the path analysis are the variables which formulated in theoretical models have linear relationship substantially. Therefore, performed

significant and linearity test linear regression model in accordance with the model of the relationship between the variables are formulated in the theoretical model.

Assumption Calculation of the linear regression models of the work satisfaction variable (Y) and the Cultural Organization (X_1) produced a alleged model that Y = 38.95 + 0.733 X_1 Results of the variance analysis (ANOVA) was obtained F_{count} regression model is 49.80 is greater than F_{table} $\alpha = 0.05)$ = 4.06. Thus it can be argued that the allegations of the regression models is significant. Assumption Calculation of the linear regression models of the work satisfaction variable (Y) and the leadership Style (X_2) produce a alleged models that Y = 51.66 + 0.70 X_2. Results of variance analysis (ANOVA) found that price regression model F_{count} is= 62.40 is greater than F_{table} $\alpha = 0.05)$ = 4.06. Thus it can be argued that the allegations of the regression models is significant.

Hypothesis testing

Before testing the following hypothesis can be explained the results of the correlation between the variables.

Table 1. Simple Correlation Coefficient Matrix between the variabel

Variables	X_1	X_2	X_3
X_1	1,000	0.695	0.733
X_2	0.695	1,000	0.769
X_3	0,000	0,000	1,000

After analyzing the research data, the calculation results obtained are used to test the hypothesis and quantify the influence between variables. Inference hypothesis by calculating the lane value and the significant coefficient for each path which be examined. The decisions on all the proposed hypothesis is described as follows:

Positive direct influence of the organizational culture on the work satisfaction.

From the results of the value calculation of the path coefficient ρ_{31}= 0.38 with t_{hitung} = 3.09. At α = 0.05 was obtained t_{table} = 2.02. Because the value t_{hitung} (3.09)> t_{table} (2.02), then the path coefficient significantly. From these findings can be interpreted that the organizational culture affects positive on the work satisfaction directly.

Positive direct effect of the Leadership Styles on the work satisfaction.

From the results of the value calculation of the path coefficient ρ_{32}=0,504 with t_{hitung} = 4.07. At α = 0.05 was obtained t_{table} = 2.02. Because the value t_{hitung} (4.07)> t_{table} (2.02), then the path coefficient significantly. From these findings can be interpreted that Leadership Style affects on the work satisfaction directly. Furthermore, a summary of the results of the hypothesis testing can be described in Table 2 below:

Table 2. Summary of Results of Testing Hypotheses

No.	Hypothesis	Statistic test	Decision	Coefficient Value Effect	t_{hitung}	t table $\alpha=0.05$	Conclusion
1.	Organizational culture positive direct effect on work the Satisfaction	$H_{0:}\ \rho_{31} \leq 0$ $H_{1:}\ \rho_{31} > 0$	H_0 is rejected	0.38	3.09	2.02	Significant
2.	Leadership Style positive direct effect on the work Satisfaction	$H_{0:}\ \rho_{32} \leq 0$ $H_{1:}\ \rho_{32} > 0$	H_0 is rejected	0.504	4.07	2.02	Significant

Discussion

The Influence of the Organizational Culture on the work Satisfaction

Organizational culture affects positive directly on the work satisfaction of the study program chairman in Unimed. Based on the calculation results can be interpreted in a large positive influence of the organizational culture variables on the work Satisfaction, and contributed 53.7%. This study results support the Colquitt, Lepine and Wesson' statement (2009: 564) stated that the culture of the organization providing support to match the needs of the individual with the organization, is the degree to which the personality and the one's values appropriate) with the culture of an organization. This will increase the work satisfaction, reduce the stress and the impact on the commitment to the organization, but causes the work performance be weaker.

The results support the theory of Wheelen & Hunger were quoted Sopiah (2008) suggested that the company culture plays an important role in assisting the stabilization of the company as a social system, and make the directive conduct as a result of the norms of the creation of an effective organization. The results also support the research proposed by Kreitner and Kinicki (2005), which suggested a constructive culture is positively related positively to the work satisfaction, and a desire to don't get out of the enterprise and the innovation. This showed that the employees seem to prefer an organization that encourages the people to interact and the work with the others in a way to help them satisfy the necessary to grow and thrive. The final results showed that the fit between the individual values with the organizational values influence the organizational commitment, the work satisfaction, the intensity of the exit and the turnover. Further findings the revealed that the Sopiah Tepeci in the organizational culture affects the level of the work satisfaction. If the organizational culture is associated with the employees performance, it turns out the findings Wahyudi (2010) found no influence of organizational culture on the performance variables. This can be made possible because the values contained in the organization has not fully adapted in any decision-making.

The influence of Leadership Style on work Satisfaction

Based on the calculation results are interpreted have the positive influence on the leadership style variable to the work satisfaction. The leadership style contributed 59.1% of the work satisfaction. This study results research support the research of the University of Ohio and Michigan (Yousef), which found that the most productive working groups tend to have a leader-oriented rather than production-oriented employees. Further added the participative or the consultative leadership behaviors more committed to the organization, more satisfied with their work and their performance be better. The results support the findings of the research results Raharjo & Nafisa (2006), who found the five (5) types / styles of leadership provide a positive and significant effect on job satisfaction.

The results provide an understanding that the style of the leadership at the university should have to pay attention to the values that support for the fulfillment of the work satisfaction of the head of the study program, such as good communication, a comfortable working atmosphere and the *rewards* are obvious.

Conclusion

Based on the analysis of the research results can be delivered several research findings as follows:

1. Leadership style gives positive effect on the work satisfaction. It means that effective leadership style resulted in increasing work satisfaction of the head of the study Program in state university Medan.
2. Organizational culture gives the positive effect work work satisfaction. It means that the qualified organizational culture resulted in increasing the work satisfaction Chairman of the Program in state university Medan.

Suggestion

1. The leadership of the university should be able to maintain the dominant values, the norms, the rules of behavior, an understanding of the rules that apply in the university to the chairman of the study program. In order to maintain the values, the rules and the norms that support the perceived needs for one meeting in a semester between the leader of the university with the chairman of the study program.
2. In leadership in this regard the dean and the rector for taking decisions should be always oriented to the interests of the academic and the head of study program empowerment and it is not only oriented to the influence subordinates.
3. Due to the work satisfaction is an attitude and a response to the content of the work, the work conditions and the work environment, the foundation should consider the welfare of the head of the study program through paying salaries on time, work wage according to the workload, and the some awards which be given to the achievement of the head of study program to improve the quality of the faculty at the national level.

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Children Problem-solving by Female Lecturers in the *Tarbiyah* and Teaching Faculty (FTK) of UIN Ar Raniry

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Abstract

This paper discuss about the problems faced by each child in entering this era of globalization that is increasingly complex. Parents, especially mothers (female lecturers), who become companion for their children, have an extra task in solving any problems faced by their children. There are still many mothers who do not have enough time to solve their children's problems. This study used qualitative methods, by a naturalistic phenomenological approach. The main instrument was the researcher herself. Collecting data conducted by using these techniques: in-depth interview, participant observation and documentation. Data analysis: reduction data, display data, and conclusion drawing/verification. Checking the validity of the data: credibility, transferability, dependability and confirmability. Results of this study are: (1) The children problems faced by female teachers are relationship problem and the influence of friends, educational problem and parental attention problems. (2) To realize a good relationship, the female lecturers used these methods: developing a plan for improvement; implementing the plan; selecting the existing problems; delegating the task of problem-solving; forming a problem-solving team; discussing problems faced; limiting the list of existing problems; examining the results achieved; and making adjustments if necessary.

Keywords: *Problem-Solving, Female Lecturer*

Introduction

Every child who is in adolescence faced many problems in his life. There is a problem that is easy and can be solved alone, but sometimes the problem is difficult to solve. In this case, he requires the help from other people outside of himself such as parents, educators and counselors in every school. In general, the problem often faced by a child that cause delinquency is a problem concerning the physical, relationship problem with parents, religious, future, and social problems.

Delinquency problem is a problem that requires proper prevention and control. Delinquencies conducted by children should be countered fully, so the children can develop optimally in accordance with their potential and talents. These conditions provide a strong support to the parties who are responsible on this issue, particularly within the family environment, especially the mothers who have personally emotional closeness with the children.

Psychologically, the children who are approximately 12-15 years old experienced various changes such as the intellectual, reason and self-awareness rising. In this period, there are incredible energy and physical strength and their desire to know and to try something grow up. The principal challenge for children who are 12-15 years old in facing themselves when they start pueral phase (puberty phase) is experiencing any sexual maturity symptoms, which is often accompanied by anxiety, sentiment and others.

In family environment, parents play a major role in dealing with children's delinquencies as examplified above. Since the parents are the people who really understand the characteristics of their children. Then, in Islamic teaching, it was also confirmed that the child is a mandate entrusted by Allah to be educated and guided to the right direction and in accordance with the guidelines of Quran and Hadith.

In the era of globalization, the problems faced by each child become increasingly complex. The parents, especially mothers, who become a companion for their children, have an extra task in overcoming any problems faced by their children. It becomes a big problem, when the mother has another job outside the home to help the family income. The main task as a mother in solving the children's problem is always accompanied by a mother's job as a worker outside the home.

In the *Tarbiyah* and Teaching Faculty (FITK) that is located in UIN Ar Raniry, there are female lecturers who have early adolescence children as much as approximately 50 people. With their hustle and bustle of activities as lecturers, then each of the female lecturers should have particular expertises in managing time and being able to find the right way to solve their problems. Problems faced by children in adolescence are dominated by juvenile delinquency. In facing the adolescence delinquency problems, the reality that occurs today is: many mothers who work as lecturers do not have enough time to solve their children problems, so sometimes their children problem-solving submitted to the teacher even to the maid.

From the above explanation, it can be explained that a woman who has a teenage son, although she works as a lecturer, should also have enough time to resolve any problems that are faced by their children, so their children do not feel alone when facing problems. Thus, it is expected to be be balanced between her career and her role as a mother.

Materials and Methods

In accordance with the problem formulation and the aim of study, this study aims to obtain an in-depth description of children problem-solving by female lecturers in *Tarbiyah* and Teaching Faculty of UIN Ar

Raniry, by using a qualitative approach. This study was located in *Tarbiyah* and Teaching Faculty of UIN Ar Raniry. The choice of location was because of the nature of this study is naturalistic.

The main instrument and collecting data in this study was the researcher herself, who must present in the field directly to collecting the data. The data in this study were collected by using *snowball sampling*, the key informants pointed to the people who know the issues to be studied to complete his statement and those appointed will appoint another person if the information was inadequate, and so on.

Data source could be divided into two, the human data source and the non-human data source. The human data source has a function as a subject or a key informant and the data obtained through the informants were *soft data*. While the non-human data source were the relevant documents. Data obtained through the documents were *hard data*.

According to the theme of study above, the researcher collected the data by the three techniques: (1) in-depth interview; (2) participant observation; and (3) documentation. The main instrument in collecting data was the researcher herself by using *tape recorders*, *camcorders*, camera, interview guides, note book and other necessary tools incidentally.

Practically, the data analysis could not be separated from the data collection process. Both activities run simultaneously, it means that the researcher analyzed the data in conjunction with the data collection and the researcher continued it after the data collection was complete. The researcher analyzed and collected the data repeatedly in order to solve the problem. Furthermore, in analyzing the data, the researcher used three stages: (1) data reduction, which is classifying, directing, disposing of unnecessary data and organizing the data; (2) Data display (presentation of data), which is finding patterns of meaningful relationships and providing the possibility of conclusions making; and (3) conclusion drawing/verification. There are four validity criteria of the data to be conducted by the researcher: (1) credibility; (2) transferability; (3) dependability; and (4) confirmability (Lincoln & Guba, Egon B, 1985: 289-331)

Results and Discussions

1. Characteristics of children problems faced by female lecturers in the Tarbiyah and Teaching Faculty of UIN Ar Raniry

Data from some female lecturers in *Tarbiyah* and Teaching Faculty (FITK) showed that the characteristics of the children problems that arise in lecturers' families could be classified to:

a. The Problems Arise from The Association (Relationship) and Influence of Friends

Nowadays, the influence of relationships and friends play a major factor in the emergence of the problems of female lecturers children in *Tarbiyah* and Teaching Faculty (FITK). It occurs because almost full day they are interacting with his friends, both in the school and the neighborhood.

Among the problems arised as a result of the association and the influence of friends: they often follow their friends' lifestyle who have economic capability, the call of a friend for this often boast the teenagers although will burden their parents. But sometimes the parents are also happy and proud if their son had

friends from the certain circles. In fact, the pride is false in nature. In fact, if it is not controlled, the association will lead to disappointment later. Since the friends from certain circles certainly also have a certain lifestyle as well. If the children will try to follow thme but do not have money or their parents are not able to fulfill it, the children will become frustrated. If the frustration arises, then the teenagers will divert their disappointment to the narcotics, drugs, and etc.

b. Problems Relating to Education

Education also plays a role in child/juvenile delinquency. If the child has less education then they can not differentiate a good and right thing. Since in their education they are taught to do good and are taught how to have good friends. In fact, sometimes there is a lesson about personality taught by the teacher to the students in school. Providing appropriate education is one of the duties of parents to their children.

The female lecturers in *Tarbiyah* and Teaching Faculty (FITK) have educational problems that are not too bad. It is because most of female lecturers in *Tarbiyah* and Teaching Faculty (FITK) have children with good education. Problems that generally arise are in the selection of majors or the secondary school for children. Many of the children who choose majors in their school based on their friend opinion or to take part in it. Parents should help directing the child's future happiness. With the right direction and looking at suitability with their children background, then the possibility of problem arising will be small.

c. Lack of Attention and Knowledge about Religion

Religion becomes the most important role in juvenile delinquency. Because religion is our guide in life. In Islam, it is taught to do good thing, to obey His obligation and avoid His prohibitions. If a child is not introduced to religion since childhood, then the child does not know about the impact that would be obtained if they do not do good thing. They are also not afraid to sin which they will face in the hereafter. So, they are not afraid to behave as they please. Even they justifies the forbidden thing in the religion.

The full activity experienced by female lecturer in *Tarbiyah* and Teaching Faculty (FITK) who also plays a role as a mother for her children, leading to the lack of time to gather and interact with the children. Under these conditions, the children often appear uprising led to the problems arising. By providing insight and understanding to the children about the the mother's work and the mother holds the *quality time* principle at home, then the possibility of problem arising also will be small.

2. Method of Children Problem-Solving by Female Lecturers in *Tarbiyah* and Teaching Faculty of UIN Ar Raniry

Data from some female lecturers showed that problem-solving conducted by female lecturers assisted by male-parents (father) and the child himself to some simple problems. Female lecturers sometimes accompany their children and are directly involved in solving the problem. The methods in problem-solving is required by the parents, because with the methods in problem-solving, it is expected that the problem will be solved appropriately on target and will not raise new problems, or in other words to solve the problem completely.

From the collection of research data of some female lecturers, it is known that the problem-solving method performed by female lecturers included: they are as mothers develop a plan for improvement; the parents implement the plan; the parents select the existing problems; the parents delegate the task of problem-solving; the parents form a problem-solving team; the parents discuss about the problems encountered; the parents limit the list of existing problems; the parents check the results achieved; and the parents make adjustments if necessary.

When they solved the problem, the mother hoped the change in a positive direction. For the realization of these desires, then a mother as a leader for her children always develop plans for improvement when she solve the problems. After developing a plan for improvement, then the mother implemented the plan that has been thought and decided. The plan was implemented gradually, starting from the small scale during a specific time period. The mother told her children about her decision. By socializing in advance what has been planned, then the solved problem is expected to obtain maximum results and reduce new problems.

In playing her role as a mother, the female lecturer was often faced with the reality of arising simultaneous problem in one time. The mother as a responsible leaders to solve every her children existing problem, she tried to remain calm as possible and not to panic to face a number of problems that arise. The female lecturers selected any problems, because by selecting the existing problems, they as mothers felt the ease that arises when they solved the problems.

As the leader for her children, the mother has duties and other activities outside the home, for example, attending a meeting on campus, training, seminars or lecturer meetings held outside the city. From the exixting phenomenon, it is often the mother to leave his job at home. In order to make everything can go according to what has been agreed, then the mother often gave the children problem-solving tasks to the father, if the problem can be solved by the father, and to the teacher if the problems are light school issues.

With the delegation of problem-solving task, it is expected although the mother is not in school, but the problems can be overcome and resolved. The mother delegating the task of problem-solving to make all involved in the children activity, and as a form of cooperation between the father and the child's teacher as well. But as a mother, she keeo monitoring their children problem-solving process despite she is very busy as a lecturer.

To solve the big problem that occur on the children, then the formation of problem-solving teams could be a perfect solution. There are several major problems in school that can not be solved individually by the mother, by forming a problem-solving team, the difficult work will be light and resolved easily.

To produce a maximum problem-solving and as expected, then discussing any problems is a necessity. With the discussion about the problems faced, then everyone who knows the child has an obligation to think in order to resolve the existing problems. In addition, the discussion in the team can add to the cohesiveness in the team members and learn to cooperate in solving the existing problems. Discussion

about the list of problems encountered become a necessity that must be conducted according to the lectures in Tarbiyah and Teaching Faculty, because by conducting discussion it will avoid the arise of opinions or individual satisfaction in a problem-solving team.

In facing of many problems that arise during becoming a mother, the female lecturers should limit any existing problems. It is conducted in order to eliminate problem that lost from the mother's attention. During becoming a mother, the female lecturers always limit the list of problems to make it easier to know which problems that had to be resolved quickly and appropriately. Problem limitation is also conducted to make the existing problems will be solved and will not extend to other problems which have a negative impact to the children.

The final stage which is also very important to do by a mother is to examine the results achieved from the problem-solving performed. By examining the results that have been achieved, then the parents will be able to assess the success of the problems has been solved. The examination of problem-solving results achieved becomes a necessity to be conducted by female lecturers, it is conducted other than as a form of evaluation for herself and her responsibilities as a mother, as well as to determine if the problem-solving results are not as expected.

Each individual has his/her own perspective in view of a problem. Every child has a problem and different way to solve it each other. Because of the diversity of children individually who are under their care, then the result of problem-solving conducted by the mother is often protested or not approved by the children. If it happens, the parents should make adjustment on the improvements of problem-solving that has been conducted. In this case, the female lecturers in *Tarbiyah* and Teaching Faculty (FITK) who have children, also continue to make adjustments if a problem was not solved in accordance with what was desired. It happens today, if a child is not satisfied with what was solved by his mother, then the mother will explain as soon as possible why the decision was taken.

From the discussion above, two described methods of solving problems performed by female lecturer in playing her role as a mother. For confidential and incidental problem, the mother used *face to face* method with their problems. For solving general and big problems, it will be explained more details in the Figure 1.

In her life and doing her daily activities, a mother always faced with various problems because the problem is the dynamics of life. As long as humans are still alive, they must have a problem, not only a big but also a small problem. If a problem has been solved, then other problems will arise anyway. The problem-solving often arise a new problem.

To solve a problem faced by the children, then a mother should know the cause of the problem, thus the problem-solving conducted will be right and it will not arise a new problem. For parents, any problems can arise from non-fulfillment of several needs. The possibility of non-fulfillment needs could arise from school, home and community.
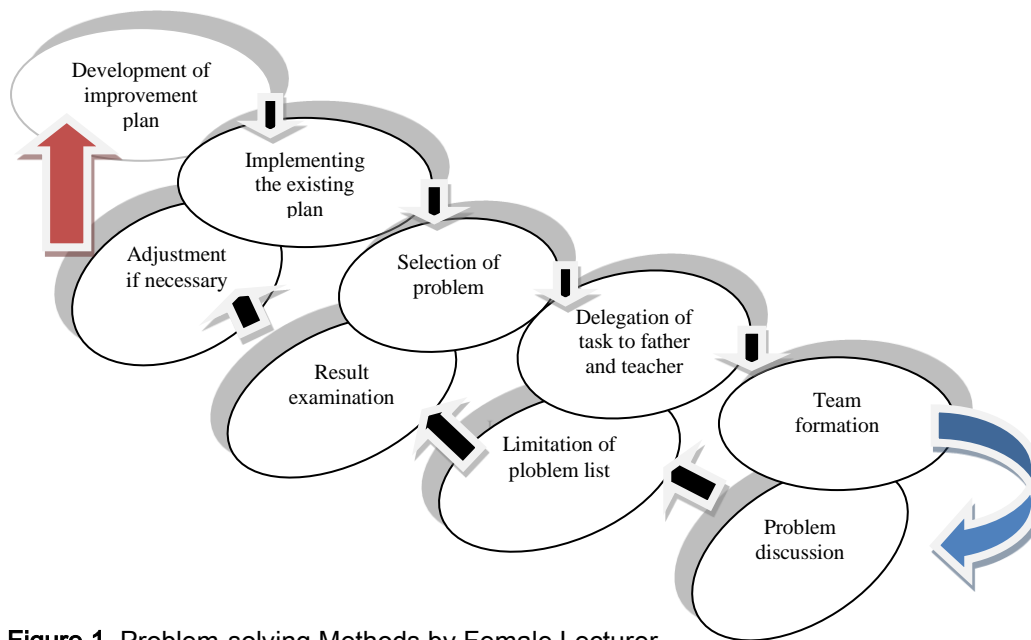
Figure 1. Problem-solving Methods by Female Lecturer

Each family can not be separated from problems. Problem is any situation that what's happening is not in accordance with what's expected. The greater the difference, the greater the problem. Problem-solving more emphasis on continual improvement in the family environment, in order to prevent the problem. In this case, there are two methods for problem-solving which also leads to continuous improvement. Both of these methods are:

1. The Deming Cycle
2. Perry Johnson's Method.

While problem-solving methods conducted by female lecturers in *Tarbiyah* and Teaching Faculty (FITK) who have children, from the data presented by researcher, those apllied *human relation* in each process taken. It can be seen from the involvement of fathers, teachers and even their children friends in any problem-solving methods conducted by the mother.

Conclusion

Based on the analysis and discussion above, we can make several conclusions:

1. If those are grouped, the characteristics of problem that often arises in children of female lecturers in *Tarbiyah* and Teaching Faculty (FITK) are: (a) The problems arising from the association and friends influence. (b) The problems relating to education; and (c) Lack of attention and awareness about religion.

2. To realize the *human relation* when the parents solve problems, the mother used several methods: the mother develops a plan for improvement; the mother implemens the plan; the mother selects the existing problems; the mother delegates the task of problem-solving; the mother forms a problem-

solving team; the mother discusses the problems encountered; the mother limits the list of existing problems; the mother checks the results achieved; and the mother makes adjustments if necessary. Problem-solving assisted by the father and sometimes the teacher in schools involved or only received the report.

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Instructional Media Management for an Effective Instruction

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Abstract

Instructional media management for an effective instruction is that which successfully conducts good teaching-learning process and the result of this process does meet expection. In addition, the teacher also always uses code of ethics in conducting their profession as an educator in the efffort to achieve the 8 (eight) content standards; process standard, graduade competence standard, education workforce standard, educational facility and infrastructure, management standard, expenditure standard, and evaluation standard. The use of educational media in the effort to explore science is most needed so that they become part of educational process standardization. Exploration of science is aimed at recognizing, discoving, finding and understanding as well as implementing the knowledge in the day-to-day life. Education is synonymous to the word instruction, which has a wider meaning than the word teaching. While the word 'teaching' is contextual to the 'teacher-student' relationship in a formal classroom, 'education' or 'instruction' includes the teaching-learning activity either with the teacher attending it physically or without. Further understood is that the functions of management are planning, organizing, guiding, and controlling. The functions of planning media are related to what forms of media characteristics are to be used in the instructional process in line with the level of learning hierarchy.

Key Words: Teaching-learning process, media management, instruction

Introduction

Professional teacher is a teacher who successfully implement the learning process well and learning results are as expected. So besides the teacher is always guided by the code of ethics professionalism in carrying out the work as educators in achieving 8 content standards, process standards, competency standards, standards of education personnel, standards of educational facilities and infrastructure, management standards, standards of financing, and standards assessment.

In line with the above description in the Department of Education Candy No. 41 of 2007 on a standard process for the unit of primary and secondary education stated that the implementation of the core activities in the learning process, a learning process to achieve basic competency (KD) performed interactively, inspirational, loving, challenging, motivating learners to participate actively, and provides ample space for innovation, creativity independence according to their talents, interests and physical and psychological development of learners.

This activity using methods adapted to the characteristics of learners and subjects, which may include the exploitation process, elaboration and confirmation. Exploration activities, teachers: (1) engage learners looking for broader and deeper information about the topic / theme of the material to be studied by applying natural principles takambang be a teacher and learn from a variety of sources; (2) using a variety of learning approaches, instructional media, and other learning resources; (3) facilitate interaction between all students and between students and teachers, environmental, and other learning resources; (4) engage learners actively in any learning activities; and (5) facilitating learners to experiment in the laboratory, studio, or field.

The use of educational media in order to explore the science is urgently needed so that a part of the educational process standardization. Pengertahuan science exploration aims to identify, explore, discover and understand and apply them in daily life.

The science is very varied type and depth, and certainly can be identified, explored, discovered and understood by using the media also varies. The use of the media requires planning, organizing, directing, and controlling the media and the content of science so that appropriate and aligned. This is what is referred to as management education. Media management education is the use of media and science so as to produce the effect of a high mastery of science.

Nature of Learning Media

The word comes from the Latin media and is the plural of the word medium, which literally means an intermediary or introduction. Sadiman (1986) says that the media is anything that can be used to deliver a message from the sender to the receiver so that it can stimulate thoughts, feelings, concerns and interests of students in a way that learning occurs.

Learning commensurate with the instruction word, which has a broader meaning than on teaching. If the word exists in the context of the teaching of teachers and pupils in the formal classroom, teaching or instruction includes learning activities attended or not attended teacher physically. When the instruction is emphasized is a learning process, namely the efforts planned in manipulating sources of learning that occurs in the student learning process is called learning.

In line with the description of learning media are all tools that can be manipulated in physical form, can be seen, heard and read that produce and distribute information to the learning process of students. Media learning helps students to more easily understand the information that is then processed into a science. Understanding of the information, knowledge depending on the student's ability to understand the level of reality and abstract. The more abstract information, knowledge, the more difficult to understand and the

higher the level of ability to understand it. Facilitate understanding of information, science abstract, then the learning media can help and can be manipulated so that the level of abstraction is reduced and the increasing level of reality.
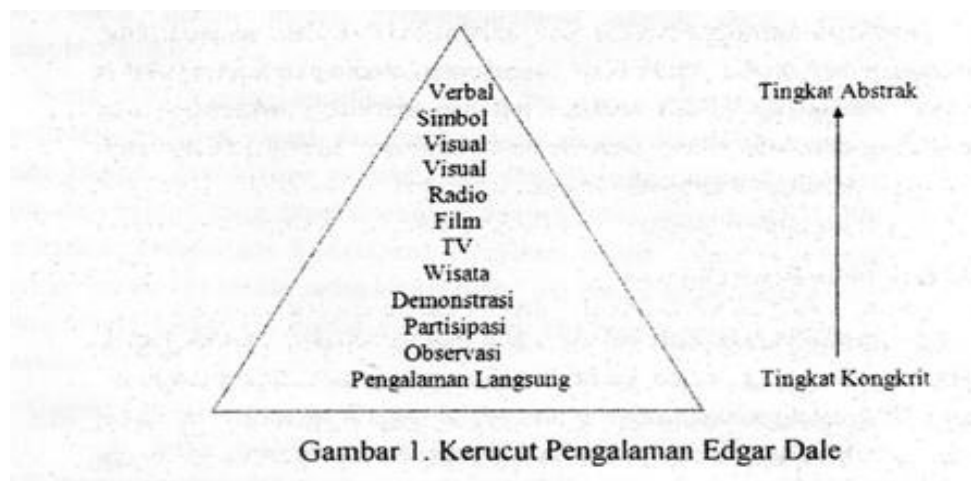
Gambar 1. Kerucut Pengalaman Edgar Dale

Based on the experience of E. Dale cone above it can be seen that the verbal information was the most abstract and direct experience is the most concrete. In line with this, the media function is learning how to manipulate the verbal information into a visual symbol and through direct experience. Not only just learning to manipulate the media into the experience according to its level, but equally important is how to manipulate the media in order to be able to manipulate the information.

Rose (2003) suggested eight human intelligence of Gardner who basically owned by each individual in a different intensity. If the intensity of one of the intelligence "A" is higher than the intensity of intelligence (eg "B"), the ease of one's understanding of the information form "A" will be higher than the information form "B". These eight intelligences are: logical mathematical, musical, interpersonal, intrapersonal, kinesthetic, visual spatial, naturalist, linguistics. If a student has the intelligence intensive in mathematical logic, and the model of instructional media is manipulating loika and mathematics. If in this case the musical, then the model of instructional media is media that manipulates music.

Bretz (1971) identifies the main characteristics of the media into three basic elements, namely sound, visual, and motion. Visual itself is divided into three, namely images, graphics (graphic line) and a symbol which is a continuum of forms that can be captured by the sense of sight. Further it is said that there are eight (8) the classification of media, namely: (1) The movement of audio-visual media; (2) The audio-visual media silence; (3) semi-motion audio media; (4) motion visual media; (5) The silent visual media; (6) semi media motion; (7) audio media; and (8) the print media.

Gagne (1986) made 7 (seven) kinds of media groupings, namely: (1) the object to be demonstrated; (2) oral communication; (3) the print media; (4) media images; (5) motion pictures; (6) sound film; and (7) machine learning. These seven media groups are then associated with its ability to fulfill the function according to the hierarchical level of learning that is developed, namely: (1) The stimulus thrower learning; (2) towing interest in learning; (3) examples of learned behavior; (4) members of external conditions; (5) guided way of thinking; (6) includes over science; (7) assess achievements; and (8)

provide feedback. Gagne described the relationship with the seven levels of hierarchy learn learning media in the form of a matrix shown in Figure 2.

Edling, Germany in Heidt (1978) says that the media is part of the six elements of the stimulation of learning, namely: two for the audio experience includes subjective codification objective visual and audio codification. Two to experience subjective visual codification includes audio and visual objective codification, and two three-dimensional learning experiences, namely: direct experience with people and direct experience with objects.

Seen from the many cues necessary, subjective experience, objective, and immediately a continuum or continuity of learning experiences that can be aligned with the cone experiences Edgar Dale.

	MEDIA						
Function	Demonstration	Oral Submission	Print media	Still Image	Motion picture	Movies with sound	machine learning
Stimulus	Yes	Limited	Limited	Yes	Yes	Yes	Yes
Directing Attention/ activities	No	Yes	Yes	No	Yes	Yes	Yes
Examples of the limited capabilities of the expected	Limited	Yes	Yes	Limited	Limited	Yes	Yes
External cues	Limited	Yes	Yes	Limited	Limited	Yes	Yes
Guidance Way of Thinking	Limited	Yes	Yes	No	No	Yes	Yes
Transfer Capability	Limited	Yes	Limited	Limited	Limited	Limited	Limited
Assessment Results	No	Yes	Yes	No	No	Yes	Yes
Feedback	Limited	Yes	Yes	No	Limited	Yes	Yes

Figure 2. Relationship with the Seventh Level Hierarchy Learning Media Learning Gagne

Learning Media Management for Effective Learning

Management according to Robbins (2007) is pengkoordinasikan and controlling the activities of many people working so that these activities efficiently and effectively resolved. Lussier (1997) says that the management of resources regarding human resources (human resources), financial resources (financial resources), physical resources (physical resources), and resource information (informational resources).

Based on the two above definition or expert opinion that it can be interpreted that the media management education is an effort coordination and control of financial resources, physical resources, and information

resources, for the purpose of successful learning, the linkage between financial resources with instructional media is related to funding, procurement and maintenance of instructional media is physical resources. The link between the information resources with instructional media is learning media is a tool to process and disseminate information to the students so that the learning process.

Further that the management functions are planning, organizing, directing, and controlling. Media planning function concerns the shape of media characteristics of how that should be used in learning, according to the hierarchical level of learning.

Organizing involves grouping the types and characteristics of students for customized use in accordance with the demands of teaching, directing is the efforts to implement the learning process by using the media, while the control is control of the assessment effort and learning media resulting in efficiency and effectiveness of the use of media in the successful achievement of learning.

Management learning media can be described as shown in Figure 4, in a one-sided form of media and its characteristics is a function of the accuracy and relevance of the use of the other side that is the hierarchy of learning, and student characteristics, to produce educational media management realm. The shape and characteristics of how the media should be designed and used in a hierarchy of learning is learning that demands a way of thinking, or rather capabilities, and so on, for more details can be observed in Figure 4.
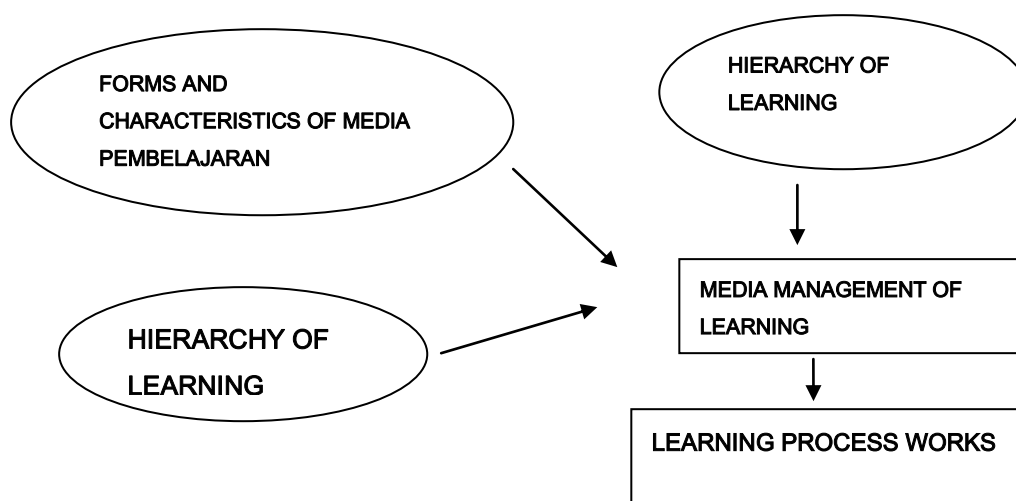

Figure 4. Learning Media Management for Successful Learning Process

The use of instructional media also need to consider the characteristics of the subjects. Math lesson with lesson course different technologies, as well as other subjects. Learning mathematics less in accordance with the use of audio media, but is in accordance with the language lessons using audio media. Math requires a medium that can facilitate understanding of the quantitative alisis. While the physics, is excellent when using audio-visual media, and biology is in accordance with the use of the media environment.

In detail can be explained that participatory learning is learning that engage learners optimally to contribute and participate in its ability to actualize the inside and outside of the classroom, while teachers act as facilitators and mediators.

In general, creative thinking has four stages as follows: (1) the preparation phase, which is a process of gathering information to be tested; (2) the incubation stage, which is a span of time to contemplate the hypothesis information to obtain confidence that the hypothesis of rational; (3) stages of illumination, which is a condition for finding the confidence that the hypothesis is true and right; and (4) the verification stage, namely back testing hypotheses to be used as a recommendation, concept or theory (Mulyasa, 2006).

Conclusion

Media management learning is learning media planning taking into account the type, form, characteristics of the media, and also considering the characteristics of the students to use in learning, so that the learning process and learning outcomes can achieve targeted and effective.

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Increased Student Motivation by Material Natural Appearance Social and Cultural Model Contextual Teaching and Learning (CTL) Multimedia Based

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Abstract

Models and methods of learning are indispensable based teaching materials that will be used every teacher to conduct classes. In general, learning social studies often use the lecture method in the learning process. This type of research used in this study is the PTK (Classroom Action Research). The approach taken is a qualitative approach. Qualitative data analysis technique consists of three main stages, namely data reduction, exposure data, and inference. Results of research on the use of models Contextual Teaching and Learning (CTL) multimedia based on the natural appearance of the material, social and cultural rights can enhance students' motivation. This is evident in the average number of students' learning motivation questionnaire scores indicating that students enjoy learning using electronic media. Final test results of students in the second cycle shows the learning process has been successfully percentage of successful tests have reached the end of the second cycle ≥80% based on the scores success in learning. Then on observations activity of 96.49% of teachers and students also showed good progress with the learning process with a percentage score of 96.66%. Results The results showed percentage score of 90% <SP ≤ 100% which means "Very Good". In observation of students' response to learning the appearance of natural, social and cultural model Contextual Teaching and Learning (CTL) multimedia-based researchers used questionnaires student motivation. The questionnaire results students' motivation by using models Contextual Teaching and Learning (CTL) multimedia based on the material the appearance of natural, social and cultural obtain a percentage of 79.8% belonging to the total score ≤ 80, which means a very good student motivation.

Keywords: Students' motivation, social science, Contextual Teaching and Learning (CTL) Based Multimedia

Introduction

Education is the important thing for the human being. In education, the teachers' role is needed. They are the dominant factors and have the important role in education. Because they are always be as good

model for their students. According to Iskandar (2009) says that, teacher must use many and various method in teaching because using the various methods in teaching can make the students interested in learning and the teaching learning process can run well. So, the teachers must be creative in choosing and using the learning methods. Furthermore, Trianto (2009) reiterated that: Learning occurs through many ways both intentional and unintentional and lasts over time and lead to a change in the learner. Changes in question are permanent behaviour change in the form of knowledge, understanding, skills and newly acquired habits of individuals.

Iskandar (2009) learning is an educational science component with respect to the objectives and reference materials interaction both visible and hidden." To grasp the content and the message of learning, the learning of the individual using the capability domains: a) Cognitive namely the ability refer with the knowledge, reasoning or thought consists of categories of knowledge, comprehension, application, analysis, synthesis and evaluation; b) the ability prioritizing Affective feelings, emotions, and reactions are different from the reasoning that consists of categories of admission, participation. Assessment attitude, organization and establishment of lifestyle; c) Psychomotor the ability that promotes physical skills consists of perception, readiness, guided movement, accustomed movement, complex motions, adjustments to the motion and creativity. Many teacher who do not care about the models and learning methods when carrying out the process of teaching. Whereas knowledge of the models and methods of teaching an important point in the strategy for teaching. Trianto (2009: 104) stated that Contextual Teaching and Learning (CTL) is "a conception that help teachers link the content of subjects to the real situation and motivates students to make connections between the knowledge and application in their lives as family members, residents of the country and employment". Otherwise, Blachart (2009) argues: Contextual learning is learning that takes place in close relationship with the actual experience. Contextual learning occurs when students apply and experience what is being taught and refer to the problems of the real world related to roles and responsibilities their responsibilities as family members, citizens and workers.

CTL learning model aims to motivate students to understand the meaning of the subject matter learned by linking the material in the context of their daily lives so that students have the knowledge or skills that can be applied reflection of other problems. This learning model is also intended that the learning is not just memorize but needs the presence of comprehension, emphasizing on the development of interest in the student experience. As well as CTL learning model aims to train students to think critically and skilled in processing knowledge to find and create something useful for themselves and others. By carrying out teaching and learning activities so students are expected to know, understand, apply and skilled in solving the problems present in everyday life. In general, learning social studies often use the lecture method in the learning process. The use of one model during the process of continuous learning will not bring an active student learning activities and creative. From previous observations and results from acquired learning school students implementation of teaching and learning activities taking place where the value obtained by the students have not reached the minimum value completeness criteria set in SD Negeri 4 Muara satu Blang Pulo is 65. Of course, with such completeness criteria will not be easy to

obtain if teachers are not able to raise students' motivation so that students can reach a certain value and even with an increase in student motivation in learning it will be able to assist students in achieving completeness criteria that have been set.

Teaching and learning in primary school 4 Muara satu Blang Pulo generally learning IPS always use the lecture method, so it is seen by the researchers is that students lack the desire to learn, and lack of hope and aspirations for the future and are not motivated to learn. Students tend to be monotonous and passive primarily on the material Natural appearance Social and Cultural Rights. The condition of students in the learning process only centered on the teacher so that students are not motivated to learn and less enthusiasm when students work on assignments. With the onset of the learning process with modelContextual Teaching and Learning (CTL) based multimedia, students will be more motivated, active, and an increase in learning outcomes without having to interact directly with nature, especially in the fourth grade / A Elementary School 4 Muara Blang Pulo. The learning model Contextual Teaching and Learning (CTL) based multimedia is a model of learning in which teachers can show examples of various purposes through multimedia on the material being studied in order to be able to show students real things learned in class without having to bother to go directly to the location of natural features and the students can apply their new knowledge in everyday life. There are seven main components of contextual learning by Trianto (2009: 107), namely: "constructivism, inquiry, inquire, community learning, modeling, reflection, and authentic assessment".

CTL approach in the classroom is quite easy. Broadly speaking, the steps that must be taken in the CTL according Trianto (2009) is as follows:

1. Develop the idea that the child will be learning more meaningful by working alone, and construct their own knowledge and new skills.
2. Conduct an inquiry activities as far as possible for all topics.
3. Develop students' curiosity by asking questions.
4. Create a learning society.
5. Present the model as an example of learning.
6. Do reflection at the end of the meeting.
7. Assess the truth in various ways.

Excess models Contextual Teaching and Learning (CTL) is a multimedia-based learning becomes more tangible and easier to learn without having considering directly to the location. Disadvantages of Contextual Teaching and Learning (CTL) is a multimedia-based teacher should be able to guide students and managing the class during the learning process takes place. At this learning process the teacher must be able to motivate students both in learning and in practice daily life of students. A motivation in learning is the desire to succeed, the urge to learn, their hopes and dreams of the future, the award in the study, the activity of interest in learning and the learning environment is conducive.

When the learning process has to meet the target by using Contextual Teaching and Learning (CTL) based multimedia can be motivated, then the teacher has succeeded in making students motivated to learn after the teacher applying the learning model Contextual Teaching and Learning (CTL) based on

multimedia in class IV / A SD State 4 Muara Satu Blang Pulo. Learning social studies using models Contextual Teaching and Learning (CTL) based on multimedia is suitable for use on material natural appearance of social and cultural without having to locations directly, because the students can be shown directly examples of natural features, social and cultural multimedia can expand students with insight can think creatively and be able to find yourself the latest information as teacher associate the subject matter with real-world students so that students can be serious in learning. After learning takes students get new information and can be applied in everyday life how we maintain and care for the natural, social and cultural.

The study aims to determine the increase students' motivation in learning model Contextual Teaching and Learning (CTL) multimedia based on the material social and cultural natural features in class IV / A Elementary School 4 Muara One Blang Pulo.Selain it, to know the activities of teachers and students as well as students' response to learning model Contextual Teaching and learning (CTL) multimedia based on the material social and cultural natural features in class IV / A elementary School 4 Muara Satu Blang Pulo.

Materials and Methods

The type of research is the PTK (Classroom Action Research). According Arikonto, et al (2006) "a study root of the problem appears in the class". This study occurred in class and felt directly by the teacher concerned that where action research related to issues of everyday teaching practices faced by teachers. This research were conducted with qualitative approach. According Moleong (2006) "research quality would generate descriptive data in the form of words written or spoken and behavior observed". (Arikunto, et al 2006) state the outline of this methods measures are commonly passed four stages, namely (1) Planning, (2) Implementation, (3) observation, (4) Reflection".

The research location is where the research will be conducted to obtain data or information required and the problems associated with the research. This research was conducted at the site of SD Negeri 4 Lhokseumawe Muara Satu Blang Pulo located in the Medan-Banda Aceh Blang Pulo village of Muara The city of Lhokseumawe, the academic year 2015. The research was conducted during the process of teaching and learning activities take place in the fourth grade / A semester , Judging from the location that is easily accessible by the researchers themselves, and because the students' motivation on the material the appearance of natural, social and cultural remains low in SD Negeri 4 Muara Satu Blang Pulo.

The data collected in this study were: 1) The results of cognitive tests students to see the ability of students to learn. 2) Results of observation sheets to measure the increase in student motivation. 3) The results of the students' motivation questionnaire and see the response of students to teachers based on the learning process. Sources of data in this study is the result of a collection of observations were done in SD Negeri 4 Muara Satu Blang Pulo.

The data collection techniques will be undertaken to gain robust data the researchers used the instrument of research which are: Tests, Observation, Questionnaire. Checking the validity in this classroom action research researcher using triangulation. Triangulation is a way of checking the validity of the data by using something outside of the data as a comparison, for example, consultation with teachers, homeroom

and subject teachers. Checking the validity of the data conducted several stages, namely: 1) Comparing the observed data with the results of the questionnaire. 2) Comparing observations with the contents of a document related. 3) Persistence observer by conducting observations accurately and continuously during the learning activities.

Qualitative data analysis technique consists of three main stages, namely data reduction, exposure data, and inference. Arikunto, et al (2006) says the model outline of research measures are commonly passed four stages, namely (1) Planning, (2) Implementation, (3) observation, (4) Reflection. The stages are carried out in order to carry out learning by using cooperative learning model of CTL (Contextual Teaching and Learning) is as follows:

1. Stage Planning (Planning), in the planning stage are follows: (a) teachers prepare lesson plan (RPP) material of social and cultural natural appearance; (b) The teacher prepares the subject matter of social and cultural natural appearance; (c) The teacher prepared several working groups for discussion; (d) Teachers prepare student worksheet (LKS) material of social and cultural natural appearance; (e) The teacher prepared a gift in appreciation for the work of the same group have a good cooperation; (f) Teachers prepare observation sheets that include observation activities of teacher and student activities; (g) The teacher prepared a test device which includes cognitive tests and tests at the end of the cycle; (h) Teachers prepare students learning motivation questionnaire on the material the appearance of natural, social and cultural.

2. Implementation Phase (Action), the activities at the implementation stage of this research tailored to the learning plan (RPP), which had been developed previously. The first step is to pretest to see and know the level of basic skills students. Further tests were adapted to the material studied by learning plan (RPP) for the cycle I. After the researchers to reflect and assess a level success of student learning. Suppose the first cycle tests students do not succeed in learning, then the test cycle II to revise the strategy in cycle I.

3. Phase Observation (Observation), Observations conducted by researchers to observe the activities of teachers and students for teaching and learning take place by using observations that have been provided. In carrying out observation in this study the author was assisted by two teachers observer who is fourth grade teacher / A Elementary School 4 Muara Satu Blang Pulo.

4. Phase Reflection (Reflecting), Implementation of Reflection in this study aims to investigate the implementation of the action has been successful or not by using the success criteria as proposed by Usman (2008), namely: "If the results of observations have achieved a score of ≥80%. While the criteria are the result if ≥85% ≥65% of students scored at the end of the test measures ". If the criteria set out above has not been achieved then the writer will perform the cycle until the predetermined criteria is reached.

Results and Discussion

Based on the research results of the implementation of the first cycle and the second cycle that is test student learning outcomes, teacher activity observation and student activities and student learning

motivation questionnaire showed that learning by using learning model Contextual Teaching and Learning (CTL) based multimedia in class IV / A primary school 4 estuary of the natural appearance of the material, social and cultural rights can enhance students' motivation.

At the end of the first cycle test data showed that students who scored ≤65 are as many as 10 students, and gets the value of ≥65 is 10 students. Having calculated the percentage of the success of the final test cycle I only reached 63.75%. While the criteria specified for the criteria generated if ≥80% of students scored ≥65. The test results of student learning at the end of the second cycle test data showed that students who scored ≥65 are as many as 17 students, and scored ≤65 is 3 students. Having calculated the percentage of the success of the end of the second cycle test has reached 83.25%. Thus it can be seen that the learning outcomes of students have started to rise well and it can be said that the learning process has managed to reach a score of ≥80%.

Teacher activity observation result obtained score percentage is 65% level of success criteria for the process of action I "Less". On the observation of student activity score of percentage is 66.66%. These results indicate the level of success criteria for the process of action I "Less". In the second act of observation obtained percentage score of 75.83% and 79.16% of student observation. These results indicate the level of success criteria for the process of action II "Enough". And the second cycle of the observation of the activities of students obtained a score percentage 96.49% and the observation of the activities of students obtained a score percentage 96.66%. These results indicate the level of success criteria in the cycle of process II "Very Good". On the observation of the activities of teachers and students, the first observer on the second cycle of the activity of the teacher obtained a score of 48 and an observer II obtained a score of 50. The maximum score is 52. Based on calculations using a percentage score (SP), the final result is 93.26%. The total of the results of scoring shows the percentage score of 90% <SP≤ 100%, which means "Very Good". From these results it can be seen that the learning process has been successful.

Analysis of observational learning students' response to the appearance of natural, social and cultural model Contextual Teaching and Learning (CTL) multimedia-based researchers used questionnaires student motivation. The questionnaire results student motivation in the first cycle of action I obtained a score of 44 which indicates 32 <Total score of ≤ 44 student motivation is lacking. In the second act of student motivation questionnaire obtained a score of 55.15 where the average score 44 <Total score of ≤ 56 student motivation enough. Then in the second cycle analysis of observations of students' response to learning using models Contextual Teaching and Learning (CTL) multimedia-based learning motivation questionnaire results gain percentage of 79.8%. So the percentage of these have been classified into a total score ≤ 80, which means a very good student motivation and success, which is based on the percentage of the students are very motivated to learn to say students have increased motivation in learning.

Conclusion

Based on the research finding and discussion in the previous chapter, it could be concluded that through the *Contextual Teaching and Learning* (CTL) method by using multimedia in subject of natural phenomenom, social and culture could increase the students' motivation. It could be proven by showing the result of the students' mean score in questionnaire showed that the students enjoyed learning through electronic media (79.8%). Furthermore, the result of the students' test showed that the students' mean score in cycle 1 had increased to be ≥80% in cycle 2. The percentage of teacher's performance was 96.49% and the percentage of the students' activity was 96.66%. So, it could be concluded that the result was in category 'very good'.

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Teachers' Pedagogic Competence Based On Types Of Certifications And Regencies

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Abstract

The objective of this research is to analyze the influence the pedagogic competence of teachers based on the types of certification and regency. The method used in this research is the 'expost facto' and 'experimental factor' (with factorial 2X2 experiments). The technique used for attaining samples was random multi-stage sampling in addition to gathering data through observation and documentation. The results of this research are: 1) those with PLPG pedagogic certification showed improved pedagogic competence, 2) those teachers who were competent in pedagogy were given jobs in cities and regency capitals or their nearby surrounding areas, 3) there was a relationship between the certification status on the one hand and the placements of teachers and their pedagogic competence on the other hand, 4) the group of teachers working in the city government who had PLPG certificates showed higher competence than that written in their portfolios, 5) the group of teachers working in the regencies who had PLPG certificates showed lower pedagogic competence than that written in their portfolios, 6) the group of teachers working in the city government who had PLPG certificates showed higher pedagogic competence than the group of teachers working in the regency governments who had PLPG certificates, 7) the group of teachers certificated by means of their portfolio in the city government showed lower pedagogic competence than those working in the regency governments.

Key words: pedagogic competence, type of certificate in the region

Introduction

National education functions to enhance the capability and to form highly esteemed national character and civilization in the efforts to develop the intellectual life of the nation, aimed at increasing human resource potential so that they become faithful and pious to the One God, highly esteemed in conducts, healthy, knowledgeable, brilliant, creative, self reliant, and become democratic and responsible citizens. In this respect, educational quality is influenced by systematic process of perfection of all educational

components such as increased quality and fair distribution of teachers, perfected curriculum, learning sources, sufficient facilities and infrastructure, conducive teaching-learning climate, and well supported by government policies, both at the central and at the regional governments.

The Regulation of the Government of the Republic of Indonesia No. 19 year 2005 on National Educational Standard (SNP), (Dirjen Dikti, 2006) stipulates that teachers are professional educators. Therefore a teacher is required to have academic profile minimally S1/DIV evidenced with certificate and relevant requirement based on the educational level possessed and the subject taught. Thus it is required that teachers and students be unseparable elements in the effort to achieve the expected goal. So teachers are one of the factors that can take all efforts so that all potentials/propensities of the students can be maximally attended in the teaching and learning process so that it can produce graduates with highest achievement. In order to enable the teachers to actualize such efforts, they should have well embeded competence. In Regulation No. 14 Year 2005 says as a professional, a teacher should have 4 (four) competencies; (1) pedagogic competence, (2) personal competence, (3) social competence, and (4) professional competence.

To look into the effectiveness of certification program, teahers have the view that professional teachers are those who have pedagogic, personal, social and professional competencies. However, if further detailed, pedagogic competence and professional competence are most important competencies and most determining for the teachers in conducting the teaching-learning process. The importance of pedagogic and professional competencies in the teaching-learning process have attracted the attention of researchers and institutions to do research on teachers' pedagogic competence.

Certification program as an effort to increase teachers' welfare must be placed within the framework to increase educational quality, viewed from both angles, the process and the results. Teachers are a determining important component in the implementation of effective instructional process, but mentality, motivation, and work discipline still influence a great number of teachers. This can be seen from the fact that the educational idealism has not yet nationally been achieved. There have been a variety of delinquencies and mentality weaknesses found in a number of teachers, among others are the inclination to neglect the educational quality, lack of self-confidence, poor work discipline, not oriented into the future and the penchant to ignore responsibility. Several facts found with the teachers in regencies and municipalities indicated that not all teachers profoundly and truly understood the importance their professionalism as teachers who are required to hold competence values as teachers in order to support the educational quality development at schools. Similarly, the result of the observation on the civil-servant status of the teachers indicated that certified teachers turned to be inclined to reduced competence capacity resulting from individual factor, that is as teachers they were not able to update their competence capacity, which is to be adaptable to science and technology development and to the current requirements in teaching-learning process.

The implementation of school autonomy, the headmasters as responsible persons to specifically determine fair distribution of teachers' needs and to increase their pedagogic competence and professionalism, schools must carry out phases of 1) identifying teachers' needs, 2) planning required

processes to increase teachers' competence, 3) implementing the activities, and 4) evaluating the activity programs. In order to make the schools' activities oriented to teachers' pedagogic competence workable, supports from the headmasters, teachers councils and all school components are required. Several initial data found in documentations of teachers indicated that almost all certificates and appreciation certificates received by the teachers were related to the concepts/materials on their fields of study, very few of the certificates or appreciation certificates were related to the teachers' increase in pedagogic competence. This would very much influence the teaching-learning process in the classroom, especially those teachers who have graduated from portfolio type certification; the condition was found to happen both at the municipality and at the regency governments.

Other problem found was there were teachers who taught irrelevantly to the certificates they held. This occurred due to the placements of teachers by the Education Offices without considering the equal and balanced distributions of teachers, and as the consequence schools often experience lack of teachers, whereas in city government areas the number of teachers was high but less relevant. Inter area placements of teachers have very much disturbed the teaching-learning processes in each of the schools mainly as the teachers reassigned to the school were irrelevant to the fields study; they just then taught for the sake to meet their duty as teachers rather than to meet the required fulfillment of targeted students' achievement.

It has become the expectation of the government from the certified teachers, both with PLPG type and with portfolio type certifications, wherever they are placed, that they are able to carry out their duties by making the learning participants (students) as a perfect future focus. A teacher with high competence could perform his duties effectively despite the lack of sources or teaching aids, and is able to surmount the paucities. Teachers without competence will not be triumphant even with all support gears being available. Whereas the expectation is that because they are teachers who have gained plenty of knowledge and experience both from seminars and from training, they as certified teachers must be able to make the students successful and having high quality

Problem Formulation

Based on the background of the problem of this research as mentioned above, the problem of this research is formulated as follows.

1. Are there any differences in pedagogic competence between PLPG certified teachers and portfolio certified teachers?
2. Are there any differences in pedagogic competence between the teachers placed in city government areas and those placed in regency areas?
3. Is there found an interactional influence between the type of teachers' certification and the job areas where they placed on the pedagogic competence of the teachers?
4. Are there any differences in pedagogic competence of certified teachers between those with PLPG type certification and those with portfolio type certification in the group of teachers placed in city government areas?

5. Are there any differences in pedagogic competence of certified teachers between those with PLPG type certification and those with portfolio type certification in the group of teachers placed regency government areas?

6. Are there any differences between pedagogic competence of certified teachers with PLPG type placed in city government areas and pedagogic competence of certified teachers with PLPG type placed in regency areas?

7. Are there any differences between pedagogic competence of certified teachers with portfolio type placed in city government areas and pedagogic competence of certified teachers with portfolio type placed in regency areas?

Research Methodology

This research is aimed to know teachers' pedagogic competence based on their placement areas. The period of the research was February 2011 through December 2013. The research method used was *ex-post facto* method. E*x-post facto* is a research conducted to study a past event, searching the sequential development of it to learn the factors that might have caused such event to happen. Therefore, in ex-post facto design there is no manipulation of treatment to independent variables like that in experimental research.

Population in this research is all certified teachers placed in the regency and city government areas amounting to 4881 teachers. Whereas the sample of the research was 160 teachers taken from six schools in the areas of city government and twelve shcools in the areas of regency government where this research was conducted.

The sampling process was carried out in three phases. *First*, determining sample of two areas, using multistage technique based on the consideration of the number of schools; *second*, determining school sample to every area of the types of the teachers' certifications, PLPG type and portofolio type; and *third*, deciding respondents sample for every school with PLPG type and portofolio type certifications who had passed certification process. The design used in this research was factorial design 2x2. Data collection techniques used are questionaires, documental study, and interviews. Questionaires was used to collect data on the planning of teaching-learning process and the implementation of the teaching-learning process. Documental study was used to collect data on portofolio documents, and interview was used to collect supporting data related to the planning and implementing of the respondents' teaching-learning process in the schools.

Data analysis in this research was conducted qualitatively and quantitatively. Qualitative analysis was done with the data collected through questionairs using statistic technique covering descriptive analysis, requirement test analysis, and inferential analysis. Qualitative analysis was done with the data collected through interviews with the headmasters of the schools.

Requirement Test Analysis

Data received from the results of data collection were treated in requirement test analysis, that normality test and homogenity test. Normality test was done by using Liliefors Tesa Test. If the test result shows

that $L_{counting}$ < L_{table} so the tested data would be from normal distribution. Whereas homogenity test was done by using Barlett Test and F test. If the results of the tests show $X2_{counting}$ < $X2_{table}$ so the data group under test would have homogen variant.

The testing of research hypothesis used analysis variants 2 Stripe (2x2) and continued with Tuckey Test. Testing with ANAVA (Analysis Variants) was conducted in several steps: (1) Counting the total quadratic number, (2) Counting degrees of independence, (3) Counting inter-quadratic average, (4) Counting the ratio, (5) Making Anava summary table, and (6) Taking conclusion with the criteria, reject H_0 if $Q_{counting}$ > Q_{table}. Whereas Tuckey would be conducted if at the hypothesis test on interaction of research variable rejects H_0. The steps of its testing were: (1) counting the average of every cell which is compared, (2) counting $Q_{counting}$, (3) comparing $Q_{counting}$ with Qtable, and (4) taking conclusion with the criteria rejecting H0 if $Q_{counting}$ < Q_{table}.

Results and Discussion

Table 1. Description of data resulting from the Research

Sources	JK	Dk	RJK	F$_{counting}$	F$_{table}$ α=0,05	α=0,01
Inter A	242,5562	1	242,5562	6,230528	3,840*	6,630
Inter B	31,50625	1	31,50625	0,809299	3,840*	6,630
Inter AB	2504,306	1	2504,306	64,32797	3,840**	6,630
Within (D)	6073,125	156	38,93029			
Total	8851,494	159				

Remarks:

A   : Through Teachers with Certification Status

B   : Areas of Teachers' Placements

AB   : Interactions

D   : Within the Groups

JK   : Quadratic Number

dk   : Degrees of Independence

RJK   : Average Quadratic Totals

*   : Significant

**   : Very significant

Hypothesis Testing

The first statistic hypothesis tested was $H_o : \mu A_1 \leq \mu A_2$ and $H_1 : \mu A_1 > \mu A_2$. Results of the Testing shows that $F_{counting}$ = 6,230 > F_{table} = 3,840 at α = 0,05 therefore Zero Hypothesis is rejected, thus the hypothesis that says "There is no difference in pedagogic competence between teachers with PLPG type certification and those with portofolio type certification" is regected. The average of pedagogic competence of the teachers with PLPG type certification is 144.25 whereas the average of pedagogic competence of teachers with portofolio type certification is 142.06. Thus pedagogic competence of teachers with PLPG type certification is higher than those with portofolio type certification, or there is a significant difference in pedagogic competence between teachers with PLPG type certification and those with portofolio type certification.

The second statistic hypothesis tested was $H_0 : \mu B_1 \leq \mu B_2$ dan $H_1 : \mu B_1 > \mu B_2$. The results of the testing shows that $F_{counting}$ = 0,809 < F_{table} = 3,840 at α = 0,05 therefore zero hypothesis is accepted, thus the hypothesis that says "There is no difference in pedagogic competence between certified teachers placed in city government and those placed in regency areas" is accepted. Average pedagogic competence of certified teachers placed in city government is 143.78 while average pedagogic competence of certified teachers placed regency government areas is 142.06. It is obvious then that there is relatively difference in pedagogic competence between certified teachers placed in city government and the certified teachers placed in regency government areas; statistically "not different". Thus pedagogic competence of certified teachers placed in city government is the similar to the pedagogic competence of the certified teachers placed in regency government areas.

The third hypothesis with statistic hypothesis that is $H_0 :$ Interaction A x B = 0 and $H_1 :$ Interaction A x B ≠ 0. The results of testing indicates that $F_{counting}$ = 64,327 > F_{table} = 6,630 at α = 0,01 therefore zero hypothesis is rejected. Thus the hypothesis that says "there is no interactional influence between the type of certification and the placement areas on teachers' pedagogic competence" is rejected. It means that there is interactional influence between the status of certified teachers and the placement areas on pedagogic competence of the teachers. From the hypothesis tests of the research it proves that there is interactional influence between the type of teachers' certification and the placement areas on pedagogic competence.

The fourth hypothesis with statistic hypothesis $H_0 : \mu A_1 B_1 \leq \mu A_2 B_1$ and $H_1 : \mu A_1 B_1 > \mu A_2 B_1$. The result of the test indicates $Q_{counting}$ = 6,440 > Q_{table} = 4,70 at α = 0,01, therefore zero hypothesis is rejected. Thus the hypothesis that says "there is no difference in pedagogic competence between teachers with PLPG type certification and the teachers with portofolio type certification" is rejected. This means, "with the teachers placed in city government, the pedagogic competence of the teachers with PLPG type certification is different from the pedagogic competence of the teachers with portofolio type certification". The average of pedagogic competence of the teachers with PLPG type certification is 148.70, while the average of pedagogic competence of the teachers with portofolio type certification is 138.88. Thus with the group of teachers placed in city government, the pedagogic competence of the teachers with PLPG type certification is higher than that of the teachers with portofolio type certification.

Table 2. Summary of Tuckey Test

No.	Group	$Q_{counting}$	Q_{table}	
			$\alpha = 0{,}05$	$\alpha = 0{,}01$
1	A_1B_1 with A_2B_1	6,440	3,79	4,70
2	A_1B_2 with A_2B_2	3,383	3,79	4,70
3	A_1B_1 with A_1B_2	5,462	3,79	4,70
4	A_2B_1 with A_2B_2	4,361	3,79	4,70

The fifth hypothesis with statistic hypothesis H_0 : $\mu A_1B_2 \geq \mu A_2B_2$ and H_1 : $\mu A_1B_2 < \mu A_2B_2$ The result of the testing indicates $Q_{counting} = 3{,}383 < Q_{table} = 3{,}79$ at $\alpha = 0{,}05$ therefore zero hypothesis is rejected. Thus the hypothesis that says "there is no difference in pedagogic competence of the teachers with PLPG type certification and the teachers with portofolion type certification of the group of teachers placed in regency government areas" is rejected. This means that of the teachers placed in regency government areas, the pedagogic competence of the teachers with PLPG type certification is different from the pedagogic competence of the teachers with portofolio type certification.   In number, the average of pedagogic competence of the teachers with PLPG type certification is 140.10 whereas the average of pedagogic competence of the teachers with portofolio type certification is 145.85. Thus with the teachers placed in regency government areas, the pedagogic competence of the teachers with PLPG type certification is lower than that of the teachers with portofolio type certification.

The sixth hypothesis with statistic hypothesis H_0 : $\mu A_1B_1 \leq \mu A_1B_2$ and H_1 : $\mu A_1B_1 > \mu A_1B_2$. The result of the testing indicates $Q_{counting} = 5{,}462 > Q_{table} = 4{,}70$ at $\alpha = 0{,}01$ and therefore zero hypothesis is rejected. Thus the hypothesis that says "With the group of teachers certified through PLPG type, the pedagogic competence of the teachers placed in city government areas is not different from the pedagogic competence of the teachers placed in regency government areas" is rejected. This means, "with the group of teachers certified through PLPG type, the pedagogic competence of the teachers placed in city government areas is higher than the pedagogic competence of the teachers placed in regency government areas." The average of pedagogic competence of the teachers certified through PLPG type placed in city government areas is 148.70 whereas the average of pedagogic competence of the teachers certified with PLPG type placed in regency government areas is 140.10. Thus with the group of teachers certified through PLPG type, the pedagogic competence of the teachers placed in city government areas is higher than the pedagogic competence of the teachers placed in regency government areas.

The seventh hypothesis with statistic hypothesis H_0 : $\mu A_1B_1 \geq \mu A_2B_2$ and H_1 : $\mu A_1B_1 < \mu A_2B_2$. The result of the testing shows $Q_{counting} = 4{,}361 > Q_{table} = 4{,}70$ at $\alpha = 0{,}01$ so therefore zero hypotheis is rejected. Thus the hypothesis that says "With the teachers certified through portofolio type, the pedagogic competence of the teachers placed in city government areas is not different from that of the teachers placed in regency government areas" is rejected. This means, "With the group of teachers certified through portofolio type, the pedagogic competence of teachers placed in city government areas is different from that of the teachers placed in regency government areas". The average of pedagogic

competence of the teachers with portofolio type certification placed in city government areas is 138.88 whereas the average of pedagogic competence of the teachers with portofolio type certification placed in regency government areas is 145.85. Thus with the group of teachers certified through portofolio type, the pedagogic competence of the teachers placed in city government areas is lower than the pedagogic competence of the teachers placed in regency government areas.

Conclusion

Based on the description and discussion from the results of the research in the previous chapters, it can be concluded as follows.

1. There is a difference in pedagogic competence between the teachers certified through PLPG type and that of the teachers certified through portofolio type. Pedagogic competence of the teachers with PLPG type certification is higher than that of the teachers with portofolio type certification.

2. There is no difference in pedagogic competence between the certified teachers placed in city government areas and the certified teachers placed in regency government areas. Pedagogic competence of certified teachers placed to work in city government areas is relatively similar to the pedagogic competence of the certified teachers placed to work in regency government areas.

3. There is interactional influence on the teachers' pedagogic competence between the status of the certified teachers and the areas where they are placed to work.

4. With the teachers who are from city areas, there is a difference in pedagogic competence of the teachers with PLPG type certification from the pedagogic competence of the teachers with portofolio type certification. The pedagogic competence of the teachers with PLPG type certification is higher than that of the teachers with portofolio type certification.

5. With the teachers placed in regency government areas, there is a difference in pedagogic competence of the teachers through PLPG type certification from the pedagogic competence of the teachers through portofolio type certification. The pedagogic competence of the teachers certified with PLPG type is lower than that of the teachers certified with Portofolio type.

6. With the teachers certified through PLPG type, pedagogic competence of the teachers placed in city government areas is different from that of the teachers placed in regency government areas. Pedagogic competence of the teachers placed in city government areas is higher than that of the teachers placed in regency government areas.

7. With the teachers certified through portofolio type, pedagogic competence of the teachers placed in city government areas is not different from that of the teachers placed in regency government areas. With the teachers certified through portofolio type, pedagogic competence of the teachers placed in city government areas is lower than that of the teachers placed in regency government areas.

Suggestions

From the conclusion of the research as mentioned above the following things are suggested.

1. Certified teachers, both those who are placed in city government areas and those placed in regency areas at present still show their good preparedness to perform their jobs at the schools. However, with the teachers certified through portofolio, there should be a review on their pedagogic competence.

2. For the teachers who have passed the PLPG type certification and portofolio type certification, they should be assigned a variety of activities in the forms of joint workshops carried out regularly every month such as on how to do the planning of teaching-learning activities and to do teaching practice using cooperative and innovative teaching methods so that the teachers will be able to improve their pedagogic competence.

3. If such workshops are to be conducted routinely, the schools or the education office should approve teachers' participation in the workshops as additional teaching hours for the teachers who until recently have not as yet fulfilled the required teaching hours. These workshops should be attended by all teachers, both those who are placed in city government areas and those who placed in regency government areas.

4. The education office (Dinas Pendidikan) shoud create a monitoring and evaluation body at city/regency level to whom all certified teacher are expected to submit reports on their activities at the end of each semester.

5. To the teachers who are above fifty years of age serious attention should be paid especially by the headmasters to review the obliged number of teaching houre, that is 24 hours, both by the teachers with Portofolio type certification and by the teachers with PLPG type certification.

6. To improve the educational quality, certification term of the teachers should be limited so that the teachers would take all efforts to improve the educational quality as shown in the table below:

No	Achievement	Certification Term	Evaluation Components	Remarks
1	A	4 tahun	4 competences	Portofolio Documents
2	B*)	3 tahun	4 competences	Portofolio Documents
3	C*)	2 tahun	4 competences	Portofolio Documents
4	D*)	1 tahun	4 competences	Portofolio Documents

*) Dapat dusulkan ke jenjang berikutnya

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Education Conceptual In Perspective Tan Malaka (Revolutionary Pre- Independence Figure)

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Abstract

Educational institutions face the complexities challenge, with the complexities of the problems in the 21st century that seem in our society. So that, the education in the country should have had the concept where it is appropriately to the Indonesian philosophy, and it began to degenerate where education leads to the practice of liberal, capitalist, authoritarianism and then the cultural Indonesian values education has been lost. Tan Malaka had laid a basic of education foundation namely: education is the foundation to release the societies from the shackles of backwardness, ignorance and Imperialism-Colonialism. Tan Malaka stressed on educational material and it can be concluded into three parts: Giving the sufficiently of weapons to seek of life in the world such as (mathematics, reading, writing, geography, foreign languages, Indonesian and local languages, Giving the rights to pupils through association, showing the liabilities through many millions of Kromo ethnic (*commoners*) .The thinking of Tan Malaka on education had been considered as a capital based on the progress of an independent state in the political, economic, social and cultural to become a country that similarity to other countries in the word. Based on Tan Malaka education can be called as a transformative pedagogy, namely the process of humanizing mankind to be able to form a new society and new knowledge which created by the involvement of themselves. So, this is an effort in order of public educations have the consciousness from exploited and under development education. After be aware, they are expected to be able to take apart public or unjust social relations and restore the human societies.

Keywords: Concepts, Education, *Tan Malaka*

Background

Nowadays, Educational institutions confront the complexities challenge, with the complexities of the problems in the 21st century that seem in our society. In the era competition is a necessity, because education based on the Indonesian philosophy as a way to face the highly competitive globalized so it

can be maintained values Indonesia. Education is an important to achieve successfully, equipment and spearhead the advancement of a nation, there are many people in higher education, of course, the expected of nation quality and value are higher.

Discussion about education in this country, Indonesia has own concept where it is appropriately with the Indonesian philosophy, and it began to degenerate where education leads to the practice of liberal, capitalist, authoritarianism and then the cultural values educationIndonesian have been lost. A variety of curriculum tried to apply but morality of the Indonesian was declining, the progress educational getting up as compared to the days pre independence and at the beginning of independence, properly, leaders, scientists, academics and other stakeholders sat down together how to redefine education where more appropriate with the values Indonesian philosophy.

Based on issues above, the writer excited to review the education had offered a revolutionary struggle figure, where the character began for pre independence to Indonesia's independence, and he spent his age in the struggle for independence with others. Although Tan Malaka is a figures freedom in struggle but interestingly he participated laid the foundations of education for the Indonesian.

Biography of Tan Malaka

Background of Life and Education Tan Malaka

Tan Malaka or Sultan Ibrahim as title Datuk Tan Malaka was from Nagari Pandan Gadang, Suliki, on Minangkabau, West Sumatra, was born on Juni 2nd, 1897 and died in East Java, February 21st, 1949. He's 51 years old. His parents was 'nobility' local, but in conditions of ownership and the position was not differently with others a resident. In line the *matriarchal* he inherited the title of Datuk Tan Malaka to Abraham (Harry A. Poeze, 2008: 10)

Ibrahim studied at preliminary school, and he was so smart until the teachers prepared to take the access of native school teacher examination (*Inlandsche Kweekschool voor Onderwijzers*) on Bukit Tinggi, which is the only institution for advance education in Sumatra. Ibrahim passed and continued successfully in 1908-1913 at teacher training school education. A Dutch teacher, G.H. Horensma is very interested in this young man, and tried to place the best the teacher of diploma. He managed to get a place to Ibrahim in Kweekschool in Haarlem, and also take care of funding for travel and learning, as well as contributed to a special fund of Suliki.

Tan Malaka grew up in the Islamic spirit modernist movements in Sumatra Barat. The Youth figure is also the man who masterminded the social disturbance in the region Surakarta after the announcement the Proclamation of Indonesia Independence, consequential in the loss of special status for the former Surakarta and Praja Mangkunagaran (Wikipedia, http://www.goegle.com)

In the end 1913 to middle 1915 Tan Malaka stayed in Haarlem due to disrupted by sickness, he managed to get a diploma teacher through difficulty. Tan Malaka moved to healthier residence in Bussum, and twice failed the test to get the head teacher diploma. World War I made Tan Malaka was not possible back home, and felt democracy and freedom in the Netherlands were differently from the colonial

categorized. Tan Malaka plunged active in student organizations and students of Indonesia, and always sympathetic to socialism and communism. Meanwhile, his debt more increase, as a way out he offered to leave for East Sumatera. On January 1920, Tan Malaka become a teacher for Airlines Senembah, who founded a school for children laborers in the company. In the middle of cultivated area that is truly capitalism and racism, the position of Tan Malaka got risky, the salary paid on the basis of European norms, but his fellow Dutch saw him with one eye, while on the job is always underestimated (Kuntowijoyo, 2003)

Believing of his political become more deep, and to be a conscious communist. Tan Malaka wrote the first piece of writing, an old-fashioned description of communism: Soviet or Parliament? Which also involved behind the scenes, the Dutch cultivated area workers strike? His position became difficult, so he resigned and went to Java on February 1921. Tan Malaka stayed in Semarang, the central activities of the Indonesian Communist Party (PKI), which recently established. Seriousness and skill instantly recognized and utilized his friends. Tan Malaka engrossed himself with establishing schools *proletarian*, where Tan Malaka will give lessons on the basics of communism. In a short time, the kinds of school stood here and there and as a guidebook Tan Malaka write essay *orderwijs* (education) and SI *Semarang* (Poeze, 2008)

Struggling

Tan Malaka is a founder of the Murba party, derived from *Sarekat Islam* (*SI*) Jakarta and Semarang. Tan Malaka grew up in the spirit of Islamic modernist movement *Youth in West* Sumatra. In 1921, Tan Malaka had been plunged into the political arena. On the spirit from a poor shack, Tan Malaka collected many communist youth gather. Many intelligent young men also discussed with Semaun (*vice ISDV*) the revolutionary movement in the Dutch East Indies. It is also planning an organization in the form of education for members of the PKI and SI (*Sarikat Islam*) to construct a system of cadre courses and communist teachings, movements of communist action, speaking skills, journalistic skills and leading the people. But the Dutch government banned the formation of such courses to take decisive action for its participants (Poeze, 2008).

The struggling of Tan Malaka is not only limited to the efforts intellectual to Indonesian at the time, but also in movements against injustice as do the workers against the government to the Dutch East Indies via VSTP and striker actions, leaflets as a tool propaganda to addressed for people so that the people can see the injustice that is accepted by the workers.

As said Tan Malaka in his speech before the workers, " All labor movement to issue a general strike as an expression of sympathy, if later fails then the employee will be laid off will be pushed to fight strongly in the revolutionary movement "(Poeze 2008).

The struggling of Tan Malaka to the communist party in the world was clearly. Tan Malaka not only had the right to give suggestions and make criticism but also the right to express its veto over the actions undertaken communist parties in their work area. Tan Malaka also must conduct oversight to the basic budget, program and tactics of the *Komintern* (*Communist International)* and *Profintern* as prescribed in

congresses Mosk followed by the world communist. Thus, the responsibility as a representative of the *Komintern* was heavier than membership in the PKI (Wikipedia, http://www.goegle.com).

As younger leader, he puts heavily responsibility on his shoulders. Tan Malaka and most of his friends broke away and then separated in the PKI, Sardjono-Alimin-Musso. In 1926 revolution from the resulting decision *Prambanan* suicide for the national struggle of the Indonesian people against invaders at that time. Rebellion in 1926 had just a small commotion and disturbances in several regions in Indonesia. So easily in a short time the Dutch colonialists could end it. As a result, thousands of political fighters were arrested and detained. There were suffering, some killed and many were thrown into Digoel, Irian Jaya. This occurrence is used as a cause by the Netherlands to arrest, to detain and to dispose who stand against with them, although non PKI. Then the national straggling got heavily responsibility, suffering and paralyzed for several years.

Tan Malaka who was abroad at the time, gathered with some friends in Bangkok. In the capital city of Thailand, Soebakat and Djamaludddin Tamin. on June 1927, Tan Malaka proclaimed the establishment of the Republican Party of Indonesia (PARI). Two years earlier Tan Malaka had written "*Towards the Republic of Indonesia*". It was pointed out to the fighter's intellectuals in Indonesia and in the Netherlands. The first time of the book was published in Kowloon, Hong Kong, on April 1925 (Kuntowijoyo, 2003).

A phenomenon, on July 3th, 1946, prior events were preceded by the arrest and detention of Tan Malaka and the leaderships of the Union of Struggle, in prison never verified for two and a half years. After the rebellion erupted of FDR / PKI in Madiun, on September 1948 with the leadership of Muso and Amir Syarifuddin, Tan Malaka just released from prison as a result of the incident. Outside, after evaluating the situation was badly for the Republic of Indonesia as a result of the Agreement Linggadjati 1947 and Renville, 1948, which was the fruit of the diplomacy Sutan Sjahrir and Prime Minister Amir Syarifuddin, Tan Malaka pioneering Murba Party, on November 7th, 1948 in Yogyakarta (Articles, From http; // www.google.artikel.com. 2010).

Conceptual of Tan Malaka

The awareness of Tan Malaka was the importance of intellectual movement and then to the physical struggle be a compelling reason for him to pour revolutionary ideas in the form of paper. His conceptual have inspired many leaders struggle for independence, including Sukarno when reading the conceptual of Tan Malaka*, Naar de Republic of Indonesia (1925*) and the *Aksi Massa* (1926). The story of the life journey and struggle as outlined in his work. From Prison to Prison provide further encouragement for the young freedom fighters. conceptual of Tan Malaka was identified as *the Parliament or Soviet (1920), SI Semarang and Onderw ys (1921), Primary Education (1921), Naar de Republic of Indonesia (1924), Semagat Young (1925), Massa Actie (1926), Manifesto Bangkok (1927), Pail and hitenviional (1927), Pan and PKI (1927), Pail and Nasionalisten (1927), Aslia Registration (1943), Madilog (1943), Manifesto Jakarta (1945), Politics (1945), Plan Struggling Economy (1945), Deception (1945), Thesis (1946), Speech Purwokerto (1946), Speech Solo (1946), Islam in Review Madilog (1948), Worldview (1948),*

Kuhandel in the Ground (1948), Speech Kediri (1948), Gerpolek (1948), Content and Implementation (1948), and From Prison to Prison (3 vols, 1948), (Asral, 2007: 95)

Based on the conceptual above that Tan Malaka revolution not only as a integrity figure in the movement but also as a formidable intellect and it can be seen from the conceptual of not less than twenty-six essays.

Conceptual of Education Tan Malaka

Education is guidance in the life of his children. This means that education will lead all the forces of nature in children so that they are as human beings and as members of the public safety and happiness it can achieve the highest possible. Growing and development the children depend on the competence or the willing of the educator. Children as human beings, as a living thing, and grow to their nature. Natural strengths for the children are powerfully in the internal and external of live (Fridiyanto, http: //www.academia)

Based on statement above, children grow through to nature. Educator as guide and development the potential of children through to nature and then as educators will not enforced to reach the desire of learners.

Rahardjo, Soeparto. (2009) said that Tan Malaka viewed educating of Indonesian is significant for achieving the nation's development in the future. Tan Malaka viewed in the future should to establish schools as a priority. Education is fundamental to free the nation from the shackles of backwardness, ignorance and Imperialism-Colonialism. Tan Malaka emphasized on educational material can be concluded into three parts:

1. Giving adequate weapons to seek for living in the capitalist world (mathematics, reading, writing, geography, foreign languages, Indonesian and local languages).
2. Giving human rights to the students that should be with the friendship (*Vereeniging*).
3. Showing the liabilities to many millions of Kromo (commoners).

Three objectives above has been applied to the school that was established previously as in Semarang, Java, Suka Bumi and Surabaya is a school of Islamic States. Unfortunately however, these efforts cannot be continued because a few months after the school was growing Tan Malaka had to leave because of it punished the Dutch colonial government. In this case, Tan Malaka criticized Indonesian intellectuals who received Western education but do not want to pay attention to the chance of The Kromo (commoners) that is part of them as well. According to Tan Malaka education is considered as a capital base on the progress of an independent nation in the political, economic, social and cultural to become a nation that is parallel each other nations.

According to Wahyu, (http://mjeducation.com) that the nation's development through education has been well thought out and executed Tan Malaka in the objectives. Education should be constructed as follows:

1. Obligatory of education to children Indonesian and free of cost until 17 years old. Indonesian language as instruction and English as a major foreign language.

2. Remove the current lesson system and construct a system which is directly based on the interests of Indonesia that already exist and to be built.

3. Improve and increase the amounts vocational schools, agriculture, trade, and so on. Improving and expanding the number of schools for high officials in the field of engineering and administration.

Tan Malaka in educational practice can be called as a transformative pedagogy, namely the process of humanizing mankind to be able to form a new society and new knowledge created by own involvement. That's education in position in order that the public has the consciousness of the oppressed and underdeveloped education. When aware, is expected to be able to dismantle public order or unjust social relations and restore the humanity of man.

When Tan Malaka revealed, "So do not be dismayed seizing independence if you want to be disciples of the West". And do not forget that you are not a student, even not as human if you do not want to be independent and work by personality. Pedagogic transformative emphasis on reflection on all things that exist inside and outside in the real classroom. As a result, education is part of a socially transformative process that means in the form of political work of liberation. In the educational context of Tan Malaka, *SI* as the school system may be an instrument of exploited Indonesia human liberation (Syahrul, Ahan. Http://kritis-pendidikan.blogspot.com, 2012). From the above explanation that a student are not independence of our nation before becoming completely and free from intervention independently so that education is a very important tool in releasing the suppressions, and the means of achieving progress in the Indonesian nation according to Indonesiaan absolutely.

Syahrul, Ahan (http://kritis-pendidikan.blogspot.com, 2012). Mentioned that Tan Malaka established public school named *SI* School or School of Islamic States. The school is addressed to the all society, education is the foundation to bring the people from the shackles of backwardness, ignorance and Imperialism-Colonialism.

Furthermore, Syahrul, Ahan. http://kritis-pendidikan.blogspot.com, 2012) mention, especially for children and activities committee of Islamic States as well as the children of the Kromo. Afterward, the school was known as Tan Malaka. Briefly, according to Tan Malaka that's equivalent what is spoken in Semarang and *Oderwisj* SI article are:

1. At basic school (S)I established and managed their own share-like *Vereeniging*, which is useful for inner and outer (the power of body and intelligence).

2. At school told the fate of the destitute in the Indian and other world, and also causes the misery it brings. In others than we get up sympathy in the hearts of humiliation, and related to this, we showed obligation when he returned later, is going to defend the millions of the *Proletariat*.

3. In *Vereeniging* SI and Labor, students had understood invited to viewer with his eyes the sound of the Kromo, and invited to sound the issue thingking or feeling that is appropriate with age, invited his short speech. So it would become a school link SI with defending the people's initiative is not in the book or reminder alone

Although the school of lack of facilities, which is the mainstay of school SI Tan Malaka was freedom children' Kromo to school and culture to the nature and spirit of oriental than other eastern schools. Tan Malaka and his friends desire, the established school aims to prepare and reach prospective future leaders with a revolutionary anti-colonial educational practice. Indonesian must learn as a student intelligent, must act and think rationally (Syahrul, Ahan. Http://kritis-pendidikan.blogspot.com, 2012). It can be concluded that the school's founder Tan Malaka SI, where the school is expected to prepare a visionary leader and revolutionary, eastern rational thinking and anti-colonialism in other words that in this era can be summed school characterized Pancasila, anti-liberalist and capitalist.

Nevertheless, Tan Malaka don't forget the principles taught in Western schools, the ability to live in the more developed world such as reading, mathematics, writing, language, geography. Tan Malaka still teach a wide variety of students, and problem-solving method. Therefore Tan Malaka in organization the program, only emphasize three things, namely providing a way for children to provision of livelihood, giving the right for students to experience hobby or talent with container associations and leads attention to the students that her later they have a responsibility to millions Kromo. Three main ideas Tan Malaka education has a humanist dimension. He realized, in the capitalistic world that is advancing each human child should have the ability or skill to survive (Fridiyanto, http://www.academia.edu).

Critical educational thinking and implementation initiated by Tan Malaka in pre-independence should be the inspiration and foundation of national education appropriate character Pancasila and Indonesian culture away from practices that liberal education and thus make changes or damage capitalist education based on the philosophy of the nation Indonesia namely Pancasila.

Conclusion

Tan Malaka is a revolutionary struggle who loves the education world, because he is very aware that in order to become an independent nation, education is the main capital. According to Tan Malaka in the future of the Indonesian forward to be achieved through education. Because education means of liberating the people from backwardness and ignorance, for the schools to be established for the people. Education for the people of Indonesia should be in accordance with the interests of the Indonesian people. Educators not only to make the simple smart, but smart in applying it in everyday life. Educational model to be applied is aimed at creating an independent complete man, smart, intelligent and want to know the suffering of the people. He thought about education is considered as a capital base for the progress of an independent nation in the political, economic, social and cultural to become a nation that is parallel each other nations.

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Upgrades Affective Capability With Application Portfolio Assesment In Lesson Science on Department of Primary School Teacher Education Almuslim University

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Abstract

The concept of ideal education is expected to develop the potential of learners well, to achieve the desired quality of the need for innovations in the learning process, of course, a reference primary learning outcomes in the learning process. Good assessment system involves not just one aspect of assessment only, but must be balanced between the intellectual and emotional social abilities of children. The main learning objectives to see the development of children both: cognitive, affective and psychomotor. However, the reality in the learning process at this time cognitive still a major component in the assessment, so it is necessary to develop the assessment of learners can develop the skills of the affective domain. Assessment affective has several characteristics that their interests, attitudes, self-concept, and value. To increase affective abilities of learners can be done by applying a portfolio assessment. The use of portfolio assessment makes students especially prospective primary school teachers are better able to develop interest and motivation in learning, so that later can apply the learning outcomes in the workplace . Affective assessment process can be done through the use of the scale, observation, interviews and questionnaires. Obviously with developing the affective domain assessment through portfolio assessment would be easier for educators to evaluate the ability of learners as a whole of courses, educators can choose the right strategy to be able to improve the quality of learning for the better again.

Keywords : Portfolio Assessment, Affective Abilities

Introduction

Education is very important for the progress of a nation, with education can change people's lives for the better. Over the development time, the more visible breakthroughs that can be designed by humans, especially in the field of technology. Therefore, with the development of the times, then education must

also be able to create innovations in the learning process, which is expected to produce graduates who can compete in the era of globalization. Primary education is the most basic levels of formal education in Indonesia, therefore the government continue to develop better programs for later quality can be better educators. To improve the quality of a good educator can certainly begin to produce graduates who are competent candidates and qualified educator at the university level, this can be done by continuing to develop a variety of learning and assessment systems appropriate.

The quality of graduates is determined by how they can master and apply the knowledge that has been in getting out of the learning process that has been in the travel. The learning process in primary schools requires the involvement of learners actively and aims to mastery of cognitive, affective, and psychomotor formed on students, gauge the results of his study is not enough if only the objective or subjective test only. By way of the assessment of student skills in activity, both when experimenting and creating the work yet to be revealed. Similarly, the student's activity during the task of the teacher, either in the form of tasks to perform experiments , demonstrations and observations

With a variety of problems that exist at the level of basic education is needed alternative assessment system which is not only seen from cognitive domains only, but can also develop affective and psychomotor domains learners. In the learning process is currently still prioritize, cognitive educators in assessing the ability of learners. Though many things that can be developed from the affective and psychomotor. One form of performance test that can develop the three domains is the assessment portfolio, which according Stiggins (1994) with the performance test can improve the ability of students and the students the opportunity to demonstrate its domain expertise, and also the teacher can monitor the students' abilities through work The resulting product of students, of course, this is not obtained with tests that rely solely on paper and pencil. Various problems that exist at the level of basic education is needed alternative assessment system which is not only seen from cognitive domains only, but can also develop affective sphere and psychomotor learners. In the learning process is currently still prioritize cognitive educators in assessing the ability of learners. Though many things that can be developed from the affective and psychomotor. One form of performance test that can develop the three domains is the assessment portfolio, which according Stiggins (1994) with the performance test can improve the ability of students and the students the opportunity to demonstrate its domain expertise, and also the teacher can monitor the students' abilities through resulting work of students, of course, this is not obtained with tests that rely solely on paper and pencil.

Assessment form a portfolio assessment of course requires competence and creativity as well as broader initiatives of students. As stated by Khattri (in Mulyadi, 2005), that an assessment of the various aspects of the performance of the students have a positive influence in the classroom, because equip teachers with pedagogical reference that helps develop effective instructional techniques. Besides the valuation also provides comprehensive information about the students' progress, including their strengths and weaknesses. Of course by using a portfolio assessment in learning, especially learning science for prospective elementary school teachers are expected to be affective abilities prospective primary school teachers. By developing affective abilities can make students more motivated in learning , this is in line

with the opinion put forward by Sudjana (2009) that analyzes affective competence is important in the learning process , especially in changing the behavior of students towards educational goals expected. The affective domain that can be developed on the learner associated with the behavior of learners that includes reception, response, awards, organizing and value characteristics.

Formulation of the problem

Based on the existing problems, it can be formulated: a) How does an expert opinion on the importance of affective abilities in assessing learning?; b) How does the application portfolio assessment for affective abilities of students in learning science?.

Discussion

The concept of affective assessment

Assessment is the most important in the learning process, with the assessment process educators can evaluate the ability of learners during the learning process takes place , of course, the ultimate goal of assessment is able to develop the ability of learners either cognitive , affective and psychomotor . Reality that seen in the current study, the cognitive still be the main reference in evaluating the learning outcomes of children. Whereas affective and psychomotor assessment also has an important role in the assessment, according to Pophan (in Haryati 2008) suggests that the affective domain is determined someone learning success, people who have no particular interest in the subject is difficult to obtain an optimal learning success

Application of portfolio assessment in the evaluation of the learning process of course can be a solution for educators to be able to analyze the ability of learners through the affective domain. The process of analysis of the affective domain competencies in learning can be done by arranging a special design to be able to assess the attitude of the learners during the learning process, using a portfolio assessment educators can more easily analyze the ability of learners to the rubric that had been prepared before the lesson.

In the process of learning science affective domain is very important because the process of development of science skills children will be more easily seen by educators through this realm. With affective traits - traits learning outcomes will be more easily seen such attention to the material , and also discipline in learning motivation and interest in the learning process , of course, it is difficult to see if educators only assess learners of cognitive domains only. According to Andersen (in Haryati, 2008) there are two behaviors or criteria are classified in affective domains, behavior involves feelings and emotions , as well as to be typical behavior of a person

To develop affective competencies prospective primary school teachers, especially in science learning process, educators must understand what aspects can be assessed in the affective domain . According Karthwohl, Bloom and Masia (in Nasution, 2006) divides affective in five criteria, namely:

1) Acceptance, the sensitivity of a person to receive external stimuli that comes to him in the form of problems, situations and other symptoms.

2)   Response, namely the ability to respond openly to a symptom.

3)   Assess, which gives credence to an assessment or symptoms consistent basis.

4)   The organization, which brings the difference value to form a new universal values.

5)   Characteristics, which is held synthesis and internalizing value system - value in a way that is sufficiently aligned and consistent.

According to Nana Sudjana (2008) affective learning outcomes can be the result of learning psychomotor if students exhibit behavior or certain acts in accordance with meaning contained in the affective domain as seen below:

Affective learning outcomes	Psychomotor Learning Outcomes
Willingness To receives Lessons from the teacher	immediately entered the classroom at time teachers come and sit Front
Students' attention to what Described teachers	Noting teaching materials properly and systematically
Student appreciation against teacher	Polite , friendly and respectful to the teacher when the teacher explains the lesson
Willingness to learn Further learning materials	Studying in the library to look for more information
Willingness to implement Learning outcomes	Doing exercises themselves to solve the problem based on the concept of matter
Glad to teachers and eyes Lessons are given	Can socialize well, it is easy to communicate with teachers

The main objective to develop the affective domain in the learning process on prospective primary school teachers , especially in science lesson certainly expected to increase interest and motivation to learn , and can facilitate educators in choosing appropriate learning strategies based on evaluations conducted in the assessment of the affective domain. To get the maximum results in increasing the affective domain competence, educators must prepare an assessment instrument by using appropriate methods. According to Andersen (in Chotimah, 2010) to measure affective methods of observation and self-report with the assumption that affective characteristics can be seen from the behavior displayed or psychological reaction. So the process of assessing affective domain using the instrument in the form of scale and have a category that rated range, but it also can be used through observations, questionnaires and interviews.

Portfolio assessment

Etymologically, the portfolio is derived from two words, namely port (an abbreviation of the report), which means the reports and folio which means full or complete, so the portfolio is a complete report of all activity undertaken someone (Afif, 2010). While Paulson (in Sugiyarti, 2000) suggests that the portfolio is a collection of student work that demonstrates significant efforts, progress and achievements of students

in one or more fields. Where should contain a collection of student participation in selecting materials, selection criteria, the criteria for determining the value and evidence of student self-reflection. So based on some expert opinion and some of these results can be indicated that the portfolio is a component that can be used as an alternative in the assessment because it is a collection of student work that demonstrate the business and the development of students' progress and provide complete and objective so as to make the students motivated to improve learning outcomes.

The purpose of the utilization of the current portfolio is increasingly widespread, it is constituted by the principle of meaningfulness and humanism , that every person who learns both children and adults should be able to demonstrate what they already know , further stated that the implementation of the assessment portfolio can be improve the measurement process by showing a level of skill and understanding of learners , supports the learning objectives and can reflect the changes by learners, teachers and parents. In a portfolio assessment, learners have an important role in the initial planning to implementation, therefore, teachers should have a basic understanding of portfolios before applying.

In practice, the portfolio is applied not only refer to the competence standard, basic competence and indicator of achievement of learning outcomes, but also have to refer to various destinations, such as some indicators of achievement of learning outcomes. With the implementation of the assessment portfolios in learning are expected to find effective a program and also at the same time be able to evaluate the development of the individual or group as a community of learners, and also can serve as a good communication tool between students with parents, teachers and community members, Thus, the assessment portfolio which is a collection of student work should be prepared on a certain standard which types of tasks are grouped into several sections. In its application in the learning process, the application of the portfolio would have various advantages, especially it easier for teachers to understand their students in understanding the conditions of a given concept.

The impact of the application of the portfolio against affective abilities of students in learning science

Affective abilities are already being developed in the process of learning, especially learning science on students teachers, educators have designed the right instrument to assess the learning outcomes both: cognitive, affective and psychomotor. By applying a portfolio in the learning process, it makes students able to develop himself to be better. Results of the analysis in the learning process, especially IPA overall look more disciplined students in the learning activities, can appreciate a well, other than that students can better control his emotions better appreciate educator and a good friend when learning takes place and out of the learning process.

The principle of overall assessment of the portfolio can develop the capabilities of students to be better affective, affective assessment process can be done by observation, interview and assessment using a certain scale. The use of scale and look more effective observation, one example of the use of scale seen in the presentation of activities in which students in learning science, more objective assessment given and students are able to motivate each other. The end result can be an evaluation materials for educators to improve the quality of learning and the ability to innovate to develop students' science process skills.

Conclusion

The learning process is still oriented to the cognitive, based on the results of student assessment prospective elementary school teachers appear that the affective and psychomotor yet well developed. Affective abilities is indispensable in order to later be able to produce quality graduates, to develop affective capabilities make educators can find out their interests, attitudes, self-concept and motivation of students to the learning process. One it is assessment system can be implemented that portfolio assessment because with this assessment of students involved in the learning process from the beginning to the end of the lesson, learners can also develop social emotional well. So the assessment of the portfolio can be expected to improve the ability of student teachers not only cognitively, but also can activate the affective domain, the results of the evaluation during the learning process can be used educators to become even better innovate

Acknowledgements

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