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DAFTAR ISI

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Code Switching For Male And Female Students Of Smpn 37 Bandar Lampung

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Abstract:
This study was to find out which students (male or female) use more communication strategies especially code switching for the students of SMPN 37 Bandar Lampung when they described names of animal. The participants were eight persons of eigth grade. The researcher took eight grade because eight grade has better english ability compared to the first grade. The Data which was taken was from audio recording. Thefindingsshowed that male students use more code switching compared to female studentswhen theywerehavingEnglishconversations describing names of animal.
Key word: *Communcationn strategy, and code switching*

I. Introduction

Speaking is a productive skill. It means if we want to master this skill, we must actively use ths skill. It is important skill in English language learning that the students have to master. There are four skills in english. They are listening,speaking,reading and writing. Chaney (1998, p. 13), explain the concept of speaking. Speaking is somenone's ability to use symbol both verbal and non verbal in different context to build and share the meeanig.

Speaking is also a means of communication. When we want to talk also when we want to express our ideas to our friend or other people we use our speaking ability. The students need to master speaking ability because the students successful in learning a language when they are able to use the language in a real communcation (Nunan, 1999).That is why it is important for students to learn speaking. The person can be assumed successful in language learning when he/she is able to speak in the target language. Therefore it is a must for students to learn speaking.

However, the students ability in speaking are still limited. Huang(2010) stated thatstudents'problem in speaking beacuse they seldom practice their english. It happens because of many reasons. The main reason is the students are reluctant to practice because they are shy to practice in english.

If non native English speakerstalk in English,theymight find some difficulties to express what they mean.It happens because speaking english in their environtment still is not their habbit. Therefore, they use some strategies in their speaking. Muho and

Kurani (2011),The students of foreign and second language learners will use strategies in their speaking. This strategy will help them to communicate to other people.

According to Oxford (1990), the students must have strategies in ther learning. So the students can improve their competence, intelligence, cofidence. Nunan (1989),also stated about the how important language learning strategies are. The students must realize what their best way to learn lnguage. So they can master the target language

Communication strategies, on the other hand, as Maleki (2007) points out are referred to as individuals' attempts to find some techniques to close the gap between their communication objectives and the current linguistic resources.

II. Literature Review

a. Communication startegy

Selinker(1972) proposesthenotion of communication strategies to address certain classes of errors made byfirst/second language learners. The stdents are difficult to communicate because the students do not learn the target languge seriously. Tarone(1980) offersa concept of communication strategiesas mutualefforts between two speakers who agree on a meaning in situations where the same meaning is not shared.

Table 1: The classification ofthe most common communication strategiesadapted from Tarone (1977), Faerch and Kasper (1984), and Willems (1987)

Avoidance or Reduction Strategies		
1	MessageAbandonment:theinterlocutorsstarttheirtalkbutfail tokeeptalkingbecauseoflanguagedifficulties,sotheygiveit up.	Avoidance
2	TopicAvoidance:thelearnersrefrainfromtalkingaboutthe topics which they may not be able to continue for linguistic reasons.	
Achievement or compensatory strategies		
3	Literal translation: the learners literally translate a word, a compound word, an idiom, or a structure from L1 into L2. Transate	Interlingual Strategies (strategies
4	codeswitching;thelearnersuseanL1wordor phrase with an L1	
5	Foreignizing: the learners use the word in native language But pronuce it ike English.	thatinvolve transfer from L1 to L2)
6	Approximation: The use an alternative term (ship) to express the meaning of the target word as closely as possible, the learners use of a target language vocabulary item or structure, which the learner knows is not correct, but which shares semantic features with the desired item to satisfy the speaker (e. g. "pipe" for "water pipe")	Intralingual strategies (strategies thatinvolve L2)
7	Word coinage: the learners coin a non-existing L2 word by Overgeneralization	

8	Circumlocution : the learners describe or exemplify the action or object instead of using the right L2 structure or item	
9	Useofall-purposewords:thelearnersuseageneralwordtofill the vocabulary gaps.	
10	Self-repair orrestructuring:the learnersestablisha newspeech plan when their first attempt fails.	
11	Appeals for assistance: the learners turn to partners for assistance (e.g. Doyou understand?; Can you speak more slowly?what do you call?).	
12.	StealingorTime-gainingstrategies:thelearnersemploysuch hesitation devices as fillers or gambits to gain time to think.	

2.2 code switching

2.2.1. Definition of Code Switching

Code switching is the language which bilingual use in the conversation as the alternative languages in the conversation" (Milroy & Muysken, 1995: 7). That's why when speakers have a problem in a conversation, they use code switching. By using this code switching, this one will help learners to undertsand each other. For Gumperz (1982: 59), code switching is as the juxtaposition within the same speech or exchange of passages of speech belonging to different grammatical systems or sub systems. Milroy and Muysken also states that code switching has important aspect in bilingual speech.

Poplack (1980, 53) view code switching as —*the alternation of languages within a single discourse sentence or constituent*. "Myers-Scotton also see it as the selection by bilinguals or multi-linguals of forms from different languages in the same conversation.

As a conclusion, code switching is the alternation between languages, where the speakers use to switch between two or more languages for many reasons and contexts.

III. Method

3.1 Research Design

This research is aninterlanguage study, in which the data will be collected from students'utteranceswhentheyare communicatingin the target language (English).thisstudy isdesignedto find out which students (male or female) that use more communication strategies especially code switching for the students of SMPN 37 Bandar Lampung when they describe names of animal.

Selinker (1972) states that " in interlanguage research, the data can be taken from the utterance recorded during the research."(p.749).

3.2 ResearchParticipants

The participants were eight persons of eigth grade of SMPN 37 Bandar Lampung. The researcher took eight grade because eight grade students have better english abiliy compared to the first grade.

3.3 Instruments

One typeofresearchinstrumentwasused in research.Datawascollected through the audio recordings to record their dialogue.

IV. Findings

More male students use code mixing and code swithcing compared to female students.
The data as follows :

Group 1: Name of animal : buffalo
Male : it is di sawah
Pakai hewan ini untuk membajak
It has body kuat
Group 2 : Name of animal : Cow
Male: this animal memproduksi milk
This animal putih putih
Group 3 : Name of animal : Tiger
Female: this animal is big
It is big cat
It eat deer
Group 4 : Name of animal : elephant
Female: this animal has long nose
This animal has big ear
This animal has big body

V. Conclusion

Male students use more code switching compared to female studentswhen theywerehavingEnglishconversations describing names of animal.

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Quality Management of Elementary School

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Abstract

This study aims to analyze and describe quality management planning in primary schools, organizing quality management in primary schools, implementing quality management in primary schools, and evaluating quality management in primary schools. The method used in this research is qualitative with a case study design. The informants of this research are the principal, curriculum waka, school committee, teachers, students, and parents. The results showed that 1) planning the objectives of planning as a reference for quality management in primary schools included efforts to guarantee school quality, mechanisms and systems of school quality, school quality development teams, and procurement of facilities and infrastructure in schools. 2) arrange an effective behavioral relationship about quality management in primary schools including academic programs for school quality management, involvement related to school quality management, organizing school facilities and infrastructure, and distribution of school facilities and infrastructure. 3) implementation of school quality management programs, targets for implementing school quality management achievements, utilization of facilities and infrastructure in school quality management, and constraints related to school quality management. 4) the school management process takes place for school quality, what obstacles are faced with school quality, how to evaluate the implementation of school quality management, and the efforts made to follow up on school quality management.

Keywords: management, quality, elementary school

I. INTRODUCTION

mproving the quality of education is a target of development in the field of national education and is an integral part of efforts to improve the quality of Indonesian people as a whole. National Education System Act 2003 [1]. Effective schools are schools that carry out their functions as the best place of learning that provides quality learning services for students. Satisfying learning outcomes for all parties with the comprehensive learning outcomes obtained by students or schools that address the desired level of performance in the implementation of the learning process by showing quality learning outcomes to students in accordance with the objectives set [2].

School quality is not necessarily measured using the achievements of a student.

But the correlation and collaboration of the learning system in schools is also an important point in managing school quality. There are also other factors that are more important to be measured in school quality assurance. Teaching and learning process is the core of the overall education process with the teacher as the main role holder. The teaching and learning process is also a process that contains a series of actions by the teacher and students on the basis of reciprocal relationships that take place in educational situations to achieve certain goals. Meanwhile learning is an effort that intentionally involves and uses the professional knowledge possessed by the teacher to achieve curriculum goals [3].

II. LITERATURE REVIEW

A. *School Management*

Schools become an institution, will never be separated in relation to management science. Because, in a school institution will certainly have a plan to achieve a predetermined goal. From here, management is here to accommodate all administrative-related activities in an educational institution that is the school. School Management is the process of managing schools through planning, organizing, directing and supervising schools in order to achieve the stated educational goals. The principal as a school manager occupies a predetermined position within the school organization. One of the principal priorities in school management is learning management [4].

School management is the application of general management principles that are applied in a school by using its general rules. Therefore, school management is as special as it has management characteristics and can be seen from its objectives, processes and orientation. Based on its objectives, school management must always lead to the goals of the school or the vision and mission of the school, namely the development of personality and basic abilities of students. Based on the process, school management must be based on an educational nature with regard to the human element which is based solely on the principle of effectiveness and efficiency, but based on the principle of educating. According to, the orientation, school management is oriented or centered on students [5].

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B. *School Quality*

The characteristics or indicators of quality schools can be classified in three perspectives, namely: (1) the existence of school organizations that are influenced by internal and external factors; internal factors include leadership of the school principal, teacher professionalism, support of competent staff, adequate funding, good facilities and infrastructure, and a conducive school climate; external factors include community support, parents, school boards, and other education stakeholders; (2) the process of all activities or learning processes that lead to educational goals, which involves skilled teachers, curriculum, student readiness, and adequate learning facilities; and (3) student achievement, measured from academic, non-academic achievements, behavior, religion, and personality of students [6].

Strategic plans made to improve the quality of output aspects are; (1) Increase non-academic achievements at school as optimal as possible; (2) Improving learning that emphasizes the character building of students to build a positive image;

(3) Developing more effective and organized alumni networks; (4) Making breakthroughs to accelerate the achievement of academic achievement. (Sujoko.2017: 95). Then education quality management can be understood as a directing process to use the resources that have to reach the highest good standards both in the fields of work in education, both in the fields of 1) students' work, 2) education personnel,

3) curriculum, 4) facilities infrastructure, 5) finance, 6) partnership, 6) special guidance and services [7].

III. METHOD

The research approach is reviewed in terms of objectives, so this research is a qualitative study conducted to answer research questions that have been formulated in research questions. Qualitative research is research that intends to understand what phenomena are experienced by the research subjects [8].

The research design used in this research is descriptive qualitative. Qualitative descriptive research when data is collected in the form of words or images, is not concerned with numbers, but rather in the process. The purpose of this study is to reveal the facts, circumstances, phenomena, variables and circumstances that occur when the research is running and present what it is. Descriptive qualitative research defines and informs data related to the current situation, attitudes and views that occur in society, contradictions between two or more conditions, relationships between variables, differences between facts, effects on a condition, and others [9].

IV. RESEARCH RESULTS AND DISCUSSION

In planning an activity carried out to achieve the goal, that planning contains elements: 1) a number of activities that have been determined previously, 2) the process, and 3) the results to be achieved. Planning in quality management is an initial process based on the aim of improving quality. The development of school programs is based on designs proposed by the heads of their respective fields of expertise that are tailored to the curriculum and needs. Planning requires the support of both social and

budgetary resources as well as human resources. The planning sub-system itself is integrated into the quality management system continuously. planning of the researcher's findings on quality management in primary schools including efforts to guarantee school quality, mechanisms and systems of school quality, school quality development teams, and procurement of facilities and infrastructure in schools. Then the plan states which approach should be taken. In particular planning should answer the question of what activities are needed to achieve the objectives, when these activities should be carried out, who is responsible for carrying out the activities, where the activities should be carried out, then when actions should be achieved.

Organizing includes determining the resources and activities needed to achieve organizational goals, the process of planning and developing an organization that will be able to bring these things towards the goal, assigning certain responsibilities, how managers share tasks that must be carried out in the department and delegating authority to do the task. Organizing the researchers' findings on quality management in primary schools including academic programs for school quality management, involvement in school quality management, organizing school facilities and infrastructure, and distributing school facilities and infrastructure. Organizing is to form an effective behavioral relationship between personnel, so that they can work together efficiently and obtain personal decisions in carrying out tasks in environmental situations in order to achieve certain goals and objectives.

Implementation of a program that has been determined must be in line with existing conditions, both in the field and outside the field, which in its activities involve several elements accompanied by efforts and supported by supporting tools. After placing the right people for a particular task, it is also necessary to coordinate and integrate the full potential of the HR in order to work synergistically to achieve organizational goals. The implementation of the researchers' findings regarding quality management in primary schools includes the implementation of school quality management programs, the target of implementing school quality management achievements, the use of facilities and infrastructure in school quality management, and obstacles related to school quality management. Implementing activities must feel confident and able to do a job, believe that the work has added value to themselves, not be burdened by personal problems or other more important or urgent tasks, the tasks given are quite relevant, and harmonious relationships between colleagues.

The evaluation function includes four activities: (1) determining achievement standards, (2) measuring achievements so far, (3) comparing achievements that have been achieved with achievement standards, and (4) making improvements if there are deviations from the achievement standards that have been determined. Then, return to the planning function for the next period. Evaluation of researchers' findings on quality management in primary schools includes the ongoing school management process for school quality, what obstacles are faced with school quality, how to evaluate the implementation of school quality management, and efforts made to follow up on school quality management. Evaluation is a systemic process to determine the level of success of a program. In the field of education, evaluation is a process of collecting data to

determine the extent, in what terms, and what parts of the educational objectives have been achieved. The evaluation process is not just to measure the extent to which objectives are achieved, but is used to make decisions.

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The Influence of Using Group Investigation Towards Students' Reading Comprehension on Recount Text on English as a Foreign Language (EFL) Learners: A case study in Indonesia

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Abstract:
This research was aimed to investigate the influence of student reading comprehension achievement. Reading Comprehension plays an important role in English skill to get information from the text. This research was quantitative research, in order to gather the data from the students the researcher used reading comprehension test. Therefore, the author chooses eighth grade student at MTs Hasanuddin Bandar Lampung as the research sample. The students' reading comprehension of MTs Hasanuddin Bandar Lampung is still low especially in reading recount text. It can be seen from the students' reading score in preliminary research. There were 78% of the students who got the score under 72 as the criteria of minimum mastery. To solve the problem, the researcher applied Group Investigation. Group Investigation is a very simple strategy that emphasize student to make a group and Group Investigation make sure that each student has something of value to contribute by giving students their own areas of expertise. The objective of this research is to know whether there is a significant influence of using Group Investigation towards students' reading comprehension on recount text. After that, the data collected are analyzed by SPSS, a statistical software. From those data.
Keywords: *Reading Comprehension, Recount Text*

I. Introduction

English has four skills which have the same important part in communication, namely listening, speaking, reading and writing. One of the important language skills is reading. Reading is an activity of a reader to get information from the information consist on the text. According to Patel and Jain (2008), reading means to understand the meaning of printed words i.e. written symbols. It means that reading is an activity to understand the meaning of words and symbols printed in the form of writing text. However, Patel (2008) states that reading is an active process which consists of recognition and recognition and comprehension skill. In other word, reading is a process of finding idea of a text to comprehend the meaning of the text which is done

by the reader, so that the reader can understand the messages conveyed by the writer in the form of text.

Nowadays reading becomes activities that must be mastered by human being, because in this modern era all information comes to us in the form of text. According to Grabe (2009), we read throughout the day in modern societies because print is all around us. It means that human in this modern era always get the information through the reading process and it becomes human daily activity in this modern times, such as we read magazines during the day, whether relaxing and waiting in some office. We read newspaper, flayers, and ads. We read much more than this. We read when we online on Facebook. We read when we receive and sent a text message on BBM, WA, and LINE, and when we search information on Google. We read advertisement when we watch movie at TV, computer or mobile phone. We read (reread) whenever and wherever in this modern era.

Reading is an incredibly active occupation. To do it successfully, we have to understand what the words mean. Thus, reading is an activity that is very active and reading is important in the process of getting meaning, the readers should be able to understand the meaning of each vocabulary and the meaning of each word. It can make the readers easier to get ideas of the text.

Reading text also provides opportunities to study language: vocabulary, grammar, punctuation, and the way we construct sentences, paragraphs and texts. It means that reading is not just get knowledge about reading but we also get opportunities to know about various ability in other skill such as vocabulary, grammar, punctuation, and the way we construct sentences, paragraphs and texts. Brown stated that reading would best be developed in association with writing, listening, and speaking activity. In other word, reading would be better if the process is combined with other skills and reading is not only improve one aspect of skill but other aspects too.

Støle, Mangen, and Schwippert (2020) stated that reading is the ability to understand and use the written language required by society and/or valued by the individual. As stated by Namaziandost, Gilakjani, and Hidayatullah (2020) reading comprehension refers to the thinking and constructing information before, during, and after reading by integrating the various information written by the writer with the reader's background knowledge. It means that reading is a process of integrating the various information to get new information.

Based on those descriptions, the researcher concluded that reading comprehension is a complex interaction involving various aspects such as extracting of meaning, construction of meaning, and the process of understanding the meaning and reading comprehension has a lot of criteria to assess the student's ability to read and understand the meaning of the text they read such as main idea, phrases in content/expression/idioms, inference, grammatical features, detail, excluding fact not written, supporting idea and vocabulary content.

As language learners, the student should be able to construct the various information from the text. But in fact, in several countries in Asia in which English taught as a foreign language (EFL), most of the students get more time and get some

problems to construct the information from reading text. One of the proofs is revealed by Nezami (2012) who classified reading problem into four categories, (1) Importance of Vocabulary in Reading Comprehension in English, (2) Incompetence in Skimming and Scanning of the Reading Material, (3) Difficulty in the Prediction of Passage with Prior Knowledge, (4) Deficiency in the Skill of Summarizing of Text.

Based on those problems, Group Investigation is the solution for students' reading comprehension problems in selecting and designing reading comprehension activity. Group Investigation focuses on group interaction and peer interaction. It is a strategy for classroom instruction in which students work collaboratively in small groups to examine, experience, and understand their topic of study. The students work together with their friends to achieve the goal so that it will help the students in achieving reading comprehension more completely (Sharan and Sharan in Ahsanah: 2015).

The result of previous research stated that group investigation has an effect to increase the students' reading comprehension. It has been applied by Zulkifli et.al., at SMAN 2 Banko, on their research entitled the use of group investigation to improve reading comprehension showed that in teaching reading this strategy makes the students more active in reading activity, because in this strategy, the students will be active readers. The students who are taught by using group investigation have the improvement score in reading comprehension.

Group investigation is also effective to be implemented in teaching learning reading comprehension. It has been applied by Girsang at SMA Singosari, on her research entitled the effect of applying group investigation on students' achievement in reading comprehension showed that in teaching reading the previous research found that the students' achievement taught by using group investigation is higher than the students' achievement taught by without group investigation. It is proven by the score of the students the mean score in experimental group of pre-test was 50.13 while the post-test was 74.53. It means that the students' scores in experimental group of post-test are higher than that in experimental group of pre-test.

Further, Group Investigation is an effective strategy to improve reading comprehension. It has been applied by Herlina at SMPN 1 Belitang, on her research entitled the effect of cooperative group investigation technique and motivation towards the Eighth Grade Students' Reading Comprehension showed that using group investigation has positive motivation that can make the student more enthusiastic in reading process. It is proven by the score of the student the average score in taught by using group investigation was 78.67 while the average score in taught without using group investigation was 62.89. It means that using group investigation student' scores were higher than not using group investigation in reading process.

Based on the previous research, the researcher concluded that all of the previous research showed the great results of the use of group investigation toward reading comprehension that have an effect to improve reading comprehension of the students. By using group investigation, students have positive motivation that can make

students more enthusiastic in reading process, so it can increase the student score of reading and their abilities in reading.

There are some differences between the previous research and the current research. The previous research did not use specific genre of text to teach reading comprehension meanwhile the current research used specific genre of text which is recount text to teach reading comprehension. Furthermore, many studies have been conducted their research on the effect of cooperative learning strategy but the use of group investigation is still are explored. Based on those explanations, this research proposes the use of Group Investigation as an alternative strategy that can be used for teaching English especially for teaching reading comprehension. Finally, the researcher entitled this research was The Influence of Using Group Investigation Towards Students' Reading Comprehension on Recount Text on English as a Foreign Language (EFL) Learners: A case study in Indonesia.

II. Material and Methods Participants

In this study used cluster random sampling for data collection technique. The population of the current study were eighth grade student at MTs Hasanuddin Bandar Lampung.

Sample is part of population. According to Fraenkel, a sample is any part of a population of individuals on whom information is obtained. Based on the definition above, sample is part of population that used in this research. The eighth grade consist two classes that were VIII A and VIII B. one class as experimental class and another class as control class.

Instrument

In this current study, the researcher used reading comprehension test to collect the data as an instrument in this research.

Research Procedure Planning

Before the researcher applied the research procedure, the researcher made some planning to run the application well. There were some steps that were planned by the researcher. The procedure of making planning of the research can be seen as follows:

Determined the subject of the research

The subjects of the research were the students of the Eighth grade of MTs Hasanuddin Bandar Lampung.

Preparing reading comprehension test

The researcher prepared reading comprehension test that would give to the students. Before and after giving the treatment, the data was analyzed by using SPSS.

Data Collecting Technique

After conducting the reading comprehension test, the researcher analyzed the data based the score of the students by using Statistical Package for Social Science (SPSS)

18.0. They were analyzed to measure the improvement after and before the implementation through independent sample t test.

III. Result

The normality test was used to measure weather reading comprehension test are normally distributed or not. Table 1 present the Result of normality test reading comprehension test.

Table 1 The Normality Test

Class	Shapiro-Wilk		
	Statistic	Df	Sig.
Experimental	.959	19	.555
Control	.916	17	.125

a. Lilliefors Significance Correction

Based on Table 5, it can be seen that Pvalue (Sig.) for experimental class was 0.555 and Pvalue (Sig.) for control class was 0.125. Because *Sig.* (Pvalue) of experimental class > α 0.05. So, H_o is accepted and *Sig.* (Pvalue) for the control class > α 0.05. So, H_a is rejected. The conclusion is the data in the experimental class and control class had normal distribution.

The researcher tested Homogeneity Test after we got the score of students' reading comprehension in experimental class and control class (pre-test and post-test of student' reading comprehension by using SPSS).

Table 2 The Homogeneity Test

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	.001	1	34	.981

Based on the results obtained in the test of homogeneity of variances in the column, it could be seen that *Sig.* (Pvalue) = 0.981 > α = 0.05. It demonstrated that H_o was accepted because *Sig.* (Pvalue) > α = 0.05. It means that the variance of the data was homogenous.

Table 3 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Gain	Equal variances assumed	.001	.981	4.368	34	.000	25.36223	5.80664	13.56172	37.16274
	Equal variances not assumed			4.388	33.960	.000	25.36223	5.78018	13.61497	37.10949

Based on the results obtained in the independent sample t-test in Table 3, that the value of significant generated Sig. (Pvalue) = 0.000 < α = 0.05. So, Ha is accepted and Ho is rejected. Based on the computation, it can be concluded that there was a significant influence of using Group Investigation toward student reading comprehension on recount text.

IV. Discussion

From the result, we can see that the result of students' post-test is higher in pre-test. Besides that, group investigation can improve each aspect of students reading comprehension including main idea (topic), expression / idiom/ phrases in content, inference (implied detail), grammatical feature, detail (scanning for a specifically stated detail), excluding fact not written, supporting idea, vocabulary in content. The result of pre-test and post-test also showed that the students who taught by using Group Investigation got better result than the students who taught by using Reading Aloud.

Based on the analysis of the data and the testing of hypothesis, the result of T-test null hypothesis (Ho) is refused and alternative hypothesis (Ha) is accepted. It means that the treatments had influence of using Group Investigation towards students' reading comprehension on recount text, hence alternative hypothesis is accepted. It had been supported by the previous research conducted by Zulkifli et.al., about The Use of Group Investigation to Improve Reading Comprehension of the Second Year Student at Sman 2 Bangko, this strategy makes students give idea and share their idea to their friend. Hence students can get new idea from their friend, student can make a discussion, connection, and comment, ask a question and clarify something. Therefore, they need help the teachers work to motivate and in support them to increase their comprehension in reading and science to make them interest about it. group investigation also gives the students a chance to work with a group discussing what will happen next in the text, if the students share their ideas with the friends in reading class, it will help their friends who are not understand the content of the text.

This study examined the reading comprehension achievement of Indonesian students to learn a foreign language and to find the improvement after the implementation of group investigation. Two interesting findings emerged from the study. Firstly, it is encouraging to know that Indonesian students were high score of reading comprehension test. This finding is supported by information gathered from

score of student reading comprehension test that has been conducted in this study. The score shows that most of student in Indonesia has potential ability to learn English as a foreign language in this country.

The second interesting finding of this study relates to the improvement after and before the implementation. We conducted this research want to know is there any significant influence by using group investigation. From the result of analyzing the data by using independent sample t test through SPSS, the result indicates a significant influence (0.00 < 0.05).

V. Conclusion

At the end of the research, the post-test was given to measure the influence of Group Investigation towards students' reading comprehension on recount text in both classes after treatments done. The mean score of post-test in experimental class was 80.6 and the mean score of post-test in control class was 78.22. It showed that the students' post-test score in experimental class was higher than students' post-test score in control class.

The result can be seen from sig. (2-tailed) of the equal variance assumed in the independent sample test table where the sig. (2-tailed) is 0.000. It is lower than $\alpha = 0.05$ and it means that Ho is rejected and Ha is accepted. Based on the result of data analysis, the researcher concluded that there was significant influence of group investigation towards students' reading comprehension on recount text.

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Impovement of Writing Speech Text Using the Group Cooperative Investigation Method

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Abstract:

Background: *This study aims to improve the ability to write speech texts in class XII Accounting at SMK Muhammadiyah Ambarawa with the Group Investigation (GI) of cooperative learning method. This research is a Classroom Action Research (PTK). The subjects of this study were 37 students of class XII Accounting at SMK Muhammadiyah Ambarawa. This research was conducted in two cycles with four stages of implementation, namely planning, implementing, observing, and reflecting. The data collection techniques of this research were observation and questionnaires. The research instruments were in the form of observation sheets and questionnaires. The data analysis technique in this research is descriptive quantitative.*

Materials and Methods: *Writing is a language skill that is used to communicate indirectly, not face-to-face with other people. Writing is a productive and expressive activity Tarigan (2013: 3) One of the productive activitu is Speech Text. Speech Text is the activity of expressing thoughts, ideas, ideas orally in the form of a series of words or sentences to many people with a specific purpose. Speeches are usually carried out in formal events, ceremonies and scientific meetings. Language and speech content are adjusted to the audience based on their level of thought or education, age, and topic of conversation.One of the learning model that can be used to speech text study is cooperative learning model. Cooperative learning model is one of the learning models in which students work in small groups to help each other in learning subject matter. In the cooperative learning method, students will sit together in groups of four to master the material presented by the teacher. The approach used a collaborative classroom action research. The research was conducted in a collaborative way, namely researchers working together with peers. Collaborative classroom action research conducted in class with the aim of improving / improving the quality of learning practice. The subjects in this study were students' learning outcomes in writing speech texts with the learning model using the cooperative group investigation type learning method in class XII students of SMK Muhammadiyah Ambarawa.*

Results: *Based on the results obtained at the time of pre-research on writing speech from 37 students, there were 17 students who got a score above the KKM (minimum criteria), namely by a percentage (48.57%) and as many as 20 students got a score below the KKM*

(not yet complete), namely by the percentage (53.05%). The average obtained during the pre-research was 71.78. Related to the low pre-cycle test to measure initial ability by using the cooperative learning model group investigation, cycle I was carried out by looking at the indicators to be achieved by students, the assessment aspect scores included indicators: topics, framework, systematics, punctuation, capital letters. Among the five indicators that students must master, only the topic and framework indicators that almost meet the minimum completeness limit. The results of learning to write speech in cycle II on average the students obtained have increased drastically to reach the KKM (minimum criteria). From the results of the pre-cycle, cycle I and cycle II, the ability to write speech was increased by using the cooperative group investigation type learning model. The following is the recapitulation result of increasing per cycle.

Conclusion: *The investigation group cooperative learning model could improve students' speech writing skills. This success can be seen from the learning outcomes of students' speech writing skills, especially in speech writing by paying attention to topics, frameworks, systematics, capital letters, and punctuation. The increase in the ability to write speech was marked by an increase in student learning completeness in each cycle, namely pre-cycle 45.94%, cycle I 59.45%, cycle II 83.78%.*

Keywords: Cooperative Group Investigation, Writing; Speech; Improvement.

I. Introduction

Language skills consist of four aspects, namely listening skills, speaking skills, reading skills, and writing skills. One important aspect of learning Indonesian is writing. Writing is an activity to express information received from the listening and reading process. So, the more people listen or read, the more information will be obtained or expressed in writing. Hery Guntur Tarigan (2013: 3) states that writing is a productive and expressive activity. In this writing activity, a writer must be skilled at utilizing graphology, language structure and vocabulary. Writing skills are used to take notes, record, convince, report, inform, and influence readers.

Based on observations and interviews with Indonesian language subject teachers in class XII SMK Muhammadiyah Ambarawa, Pringsewu Regency, it is known that the expected minimum completeness criteria (KKM) is 72 or more in the subject of writing speech texts from the results of daily tests given that have not been achieved. The cause of the low ability of students in writing speech texts based on observations is that learning carried out by the teacher still uses direct learning, so that the teacher looks active in explaining but students look less enthusiastic and it is also found that there are students who do not pay attention to the material presented. In the direct learning process, one-way communication is dominated by one-way communication from teacher to student, and very little reciprocal two-way communication, namely teacher to student, student to teacher, or student to student.

One alternative to solving problems in improving writing skills in class XII students of SMK Muhammadiyah Ambarawa Pringsewu Regency is to apply the cooperative learning model type Group investigation. Group investigation is a cooperative learning

model that places students into groups heterogeneously. According to Tarigan (2013: 3) writing is a language skill that is used to communicate indirectly, not face-to-face with other people. Writing is a productive and expressive activity. Writing according to Dalman (2016: 3) is a communication activity in the form of delivering written messages to other parties using written language as a tool or medium.

As a creative process that takes place cognitively, writing includes four stages, namely (1) pre-writing,

(2) the idea search stage, (3) the idea discovery stage, and (4) the idea development stage. At the pre-writing stage, the writer prepares materials, collects information, formulates problems, determines focus and processes information. According to (Nurhadi, 2017: 424) speech is one of the speaking skills in front of an audience of people who often make speeches called orators. Speech is general speaking delivered by a unit orator for specific purposes. These objectives include (1) making listeners aware of a problem, an event issue, (2) conveying knowledge accurately, (3) generating interest, (4) encouraging change or influencing audiences to behave in a certain way, (5) providing skills, (6) encouraging and providing support to audiences, (7) influencing audiences directly or indirectly to take action, (8) instructing to behave in certain ways, (9) stimulating imagination and creativity. As an effort to improve summary writing skills, the researcher conducted a Classroom Action Research using the cooperative group investigation method.

Based on the background of the problems above, the problem in this study can be formulated, namely *How to improve students' ability in writing speech texts in class* XII SMK *Muhammadiyah Ambarawa, Pringsewu district through the cooperative learning model type Group investigation*? The purpose of this study was to improve the ability to write speech texts using the cooperative group investigation method on the XII grade students of SMK Muhammadiyah ambarawa.

II. Material And Methods

2.1 Writing

According to Tarigan (2013: 3) writing is a language skill that is used to communicate indirectly, not face-to-face with other people. Writing is a productive and expressive activity. Writing according to Dalman (2016: 3) is a communication activity in the form of delivering written messages to other parties using written language as a tool or medium. In line with the expert opinion above, Morsey in Guntur Tarigan (2013: 4) writes that is used, reports / notifies, and influences, and such purposes and objectives can only be achieved properly by people who can compose their thoughts and express them clearly, this clarity depends on thought, organization, use of words, and sentence structure.

The writing process is a series of activities that occur. In fact, the disclosure of a goal in a writing cannot be strictly, but often intersects with other goals. However, it can usually be worked out that there is one dominant purpose in an article which gives the name of the whole article or essay. D'Angelo in Tarigan (2011:

25) what is meant by the intent or purpose of the author (the writer's intention) is

"The response or answer that the writer hopes will get from the reader". Based on this limitation, it can be said, that:

1. Writing that aims to inform or teach is called informative discourse.
2. Writing that aims to convince or urge is called persuasive discourse (persuasive discourse).
3. Writing aimed at entertaining or pleasing or containing aesthetic purposes is called literary writing (literary discourse).
4. Writing that expresses strong or fiery feelings and emotions is called expressive discourse.

As a creative process that takes place cognitively, writing includes four stages, namely (1) pre-writing,

(2) the idea search stage, (3) the idea discovery stage, and (4) the idea development stage. At the pre-writing stage, the writer prepares materials, collects information, formulates problems, determines focus and processes information. The idea-seeking stage takes place when the writer processes the information he has to solve the problem or solution he is looking for. This process occurs in the subconscious, so it is often unconscious. This process can take several seconds to years. Writers who go through this process usually experience confusion and don't know what to do. An impatient writer will be frustrated because he can't find an idea to write about. The idea discovery stage is the sudden arrival of ideas and jumping in the writer's mind. At that time, the writer found a solution or a way out and the problem he encountered. The next stage is the development of ideas. At this stage, the ideas that emerge are selected, compiled, and developed according to the focus of the writing.

The preparation stage is a series of activities carried out before writing activities are carried out. Pre- writing is an important activity and usually takes a long time. At this stage the authors carry out activities (1) selecting topics, (2) determining objectives, (3) considering the form of writing based on the characteristics of the readers, and (4) generating and organizing ideas to be translated into a writing. From the experience of senior writers, more than seventy percent of the time spent in writing is consumed for prewriting activities.

Based on the description above, it can be concluded that writing is a conscious and planned process that requires complex skills. As a conscious and planned process, writing activities are carried out with careful preparation. Writing cannot be done in one activity. In writing, the topic to be written about, how to develop it, and how to express it need to be considered by the writer. In addition, the suitability of the topic with the social reality of the reading community also needs to be considered. In the process, the author can replace or add ideas. (Nurhadi, 2017: 8).

2.2 Speech Text

Speech Text is the activity of expressing thoughts, ideas, ideas orally in the form of a series of words or sentences to many people with a specific purpose. Speeches are usually carried out in formal events, ceremonies and scientific meetings. Speech is a form of one-way communication because it consists of one person speech giver and

many people as listeners. Language and speech content are adjusted to the audience based on their level of thought or education, age, and topic of conversation (Indonesian Language Book Class 12th, 2008: 37).

According to (Slavin, 2017: 424) Speech is one of the speaking skills in front of an audience of people who often make speeches called orators. Speech is speaking general delivered by the orator which is unitary for specific purposes. These objectives include (1) making listeners aware of a problem, an event issue, (2) conveying knowledge accurately, (3) generating interest, (4) encouraging change or influencing audiences to behave in a certain way, (5) providing skills , (6) encouraging and providing support to audiences, (7) influencing audiences directly or indirectly to take action, (8) instructing to behave in certain ways, (9) stimulating imagination and creativity.

2.3 Cooperative Learning Model

According to Slavin (2016: 4) The cooperative learning model is one of the learning models in which students work in small groups to help each other in learning subject matter. In the cooperative learning method, students will sit together in groups of four to master the material presented by the teacher. For example, in a method called Student Teams-Achievement Division or STAD (Slavin, 198a) - A teacher could deliver a lesson on maps, then give students time to work with the map and answer questions related to that question together. his team members. Heterogeneous team members consisting of high, medium, and low achieving students, male and female, and come from different ethnic backgrounds.

Based on the definition of cooperative learning above, the researchers concluded that the cooperative learning model is a learning model carried out by students learning and working in small groups collaboratively whose members consist of 4-5 people. This model can help improve student success in learning and train students to be skilled in thinking and working together. This group learning requires teamwork so that learning can be directed, integrated, effective, and efficient.

Cooperative learning model has different characteristics from other learning approaches. Rusman (2012: 207) suggests there are four characteristics of cooperative learning, namely (1) team learning, (2) based on cooperative management, (3) willingness to work together, and (4) cooperative skills.

2.4 Cooperative Learning Model Type Group Investigation

Cooperative learning model is a learning method in which students learn in groups, study groups are formed based on the topic chosen by the student. This approach requires more complex norms and structures than a more teacher-centered approach. In GI cooperative learning students are divided into several groups with 2-6 heterogeneous students. The group selects the topic to be investigated and conducts an in-depth investigation of the chosen topic, then prepares and presents the report to the class.

Group investigation is the most complex cooperative learning model and the most difficult to implement (Trianto, 2012). This model was first developed by Thelan. During

its development this model was expanded and sharpened by Sharan from Tel Aviv University. In contrast to STAD and Jigsaw, students are involved in planning both the topics to be studied and how their investigations will proceed. This learning requires more complex classroom norms and structures than a more teacher-centered approach. This approach also requires teaching students good communication and group process skills.

The cooperative learning type of group investigation has several stages. Slavin (2016: 218-226) stated that in the implementation of group investigation learning students worked through six steps, namely:

1. Identifying Topics and Organizing Students into Groups
2. Planning Tasks to be Learned
3. Carry out an investigation
4. Presenting the Final Report
5. Evaluation

Methods

The research was conducted in a collaborative way, namely researchers working together with peers. Collaborative classroom action research conducted in class with the aim of improving / improving the quality of learning practice. Collaborative classroom action is an action research conducted in class with the aim of improving / improving the quality of learning practices (Arikunto, et al, 2013: 58). The subjects in this study were students' learning outcomes in writing speech texts with the learning model using the cooperative group investigation type learning method in class XII students of SMK Muhammadiyah Ambarawa.

This study used a classroom action research procedure (PTK) with a cooperative group investigation- based approach. Classroom Action Research Design as follows, 1) planning, (2) execution of Actions, and (3) observation. This research using quantitative data in the form of classical cognitive learning outcomes were analyzed using descriptive analysis techniques by determining the mean or mean. The analysis is calculated using simple statistics, namely:

1. To obtain the value of the results of the observation of teacher and student activities, then it is formulated with.

$$Final\ Score = (Score\ obtained) / (Maximum\ Score)\ x\ 100$$

2. Student Completeness Data

Sudjana stated that to find out the percentage of learning completeness using the following formula:

$$P = F / N\ x\ 100\%$$

Information:

P: The percentage of learning completeness that will be sought. F: Frequency (many students who passed).

N: The total number of students.

3. Class Average

Meanwhile, the class average is calculated using a formula as follows :

$$\pi = (\sum x) / N$$

Information:

π: Average (mean).

x: The sum of all student grades. N: Number of students.

III. Result

This pre-research was conducted on November with Indonesian language subject teachers at SMK Muhammadiyah Ambarawa class. After doing the pre-research, before it is applied using the cooperative learning model Group Investigation. Based on the results obtained at the time of pre-research on writing speech from 37 students, there were 17 students who got a score above the KKM (complete the criteria minumum) by a percentage (48.57%) and as many as 20 students got a score below the KKM (not yet complete) by the percentage (53.05%). The average obtained during the pre-research was 71.78.

Related to the low pre-cycle test to measure initial ability by using the cooperative learning model group investigation, cycle 1 was carried out by looking at the indicators to be achieved by students, the assessment aspect scores included indicators: topics, framework, systematics, punctuation, capital letters. Among the five indicators that students must master, only the topic and framework indicators that almost meet the minimum completeness limit. Here are the results of Cycle I:

Table 1 Recapitulation of Cycle I Test results

No.	Value Range	Criteria	Number of Students	Precentage	Category
1	93-100	Very good	0	-	-
2	84-92	Good	2	5,40 %	Pass
3	75-83	Quiet	20	54,05 %	Pass
4	0-74	Kurang	15	40,54 %	Not Pass
	Number of Students		37		

The results of the learning in cycle I are still lacking because many students still find it difficult to improve learning to write speech so it is necessary to do cycle 2.

Table 2 Percentage of Completeness of Cycle II Students

NO	Value Range	Criteria	Number of Students	Precentage	Category
1	93-100	Very good	5	13,51 %	Pass
2	83-92	Good	3	8,10 %	Pass
3	75-82	Pretty Good	23	62,16 %	Pass
4	66-74	Not Good	6	16,21 %	Not Pass
5	54-65	Worse	0	-	-
	Number of Students		37		

The results of learning to write speech in cycle 2 on average of the students obtained have increased drastically to reach the KKM (minimum criteria). The cooperative learning model Group Investigation was success to motivated the students to be enthusiastic about doing assignments in any case. From the results of the pre-cycle, cycle 1 and cycle 2, the ability to write speech was increased by using the cooperative group investigation type learning model. The following is the recapitulation result of increasing per cycle.

Table 3 Number of Students who Pass

	Pre-research	**Cycle 1**	**Cycle 2**	**Category**
Number of Students	17	22	31	Pass
	20	15	6	Not Pass

Table 4 Student Completeness

No	**Cycle**	**Frequency**	**Presentage**	**Category**
1	Pre-research	17	45.94%	Pass
2	Cycle 1	22	59.45%	Pass
3	Cycle 2	31	83,78%	Pass
Number of Students		37		

IV. Conclusion

The investigation group cooperative learning model could improve students' speech writing skills. The investigation group cooperative learning model was a success learning model to solve the writing skils especially writing speech text by paying attention to topics, frameworks, systematics, capital letters, and punctuation. The increase in the ability to write speech was marked by an increase in student learning completeness in each cycle, namely pre-cycle 45.94%, cycle I 59.45%, cycle II 83.78%. The improvement of the cooperative type learning model group investigation on learning to write speech made the learning process interesting, fun, and useful. The cooperative group investigation type learning model developed better cooperative behavior and relationships between students and developed academic abilities to improve learning achievement.

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The Role Of The School Library Collection In Efforts GrowingA Student's Reading Attitude Sman 1 Pekalongan Lampung Timur

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Abstract:

This research aims to determine the role of school library collections in an effort to increase the reading attitude of students of SMAN 1 PEKALONGAN LAMPUNG TIMUR. *The method used in this research is qualitative descripte, with 100 respondents, consisting of 32 respondents from class* X, *32 class* XI, *32 class* XII, *1 librarian, 2 teachers, and the principal. Data analysis techniques in this research are using questionnaires, observation, question and answer and literature study. The discussion focused on the benefits ofthe library collection at SMAN 1 Pekalongan in an effort to improve reading attitudes and constraints faced by the library of SMAN 1Pekalogan, East Lampung. The results of the study were obtained from interviews, namely. Based on the results of filling out the questionnaire by students, most of which answered "not enough" is relevant to their needs, 100 respondents said that the textbook collection available in the library was still "inadequate", 90 out of 100 respondents stated " did not know "there were non-printed collections such as tapes in the library and most of the respondents stated that they had never browsed through special collections and made use of them with a total of 80 respondents.*

Keywords: *Role of Library Collections, School Libraries, Love to Read*

I. Introduction

The library is an information center that is growing according to the development of information technology, which functions as a vehicle for delivering information to visitors. So far, the library's collection books are only print-based, then technological developments have changed the appearance of the printed collections to digital ones. To provide the best service to readers, currently the majority of libraries in cities and universities have made use of IT (Kahar, 2009).

The role of libraries is very important in the efforts of educators to foster students' interest in reading. The factors that can encourage someone's reading interest, namely: 1). Libraries that have complete collections will help information users or library visitors to find the information they need. 2). Librarian as library manager also plays a role in fostering the desire to read information users. 3). Library management, this is related to human resources who manage it. 4) Layout, comfort is the responsibility of the librarian, a comfortable library will make readers feel at home so that it can play a role in

increasing students' reading interest (Rahardian, 2014). However, the majority of school libraries are still treated as book stores. The collections of some school libraries do not suit students' interests and needs. The books in the school library are outdated books that do not suit their interests, so that they do not attract students to read them.

Each school library has a different vision and mission, but the library will be said to be successful ifthe collections that are owned are in accordance with the interests of its users because it will have an impact on the number or at least of user visits to the library. This is in accordance with the main task of the library, namely providing collections according to the interests and interests of library users (Kosasih, 2009).

Libraries will also be able to provide good service for users if they have a complete collection according to their needs and available budgets. Based on the explanation above, it can be concluded that efforts to arouse reading appetite and reading habits will be successful if the library provides a diverse and varied collection of interesting, adequate and quality libraries. This is a simple way to develop reading interest so thatit will enable the school community to be more creative and innovative about the development of existing life (Umar, 2013).

SMAN 1 Pekalongan Kab. East Lampung is a public school that has a library with a small collection but the library still tries to create convenience for library users, so that they are comfortable in the library, even though the library and collections are modest, students can still excel (Interview with Mr. Satriyo Adji Prabowo, dated March 25, 2019) Based on observations that have been made, it is known that the number of visitors to the library at SMAN 1 Pekalongan is only 17.5% or 5 to 10 students per day so that only 150-300 students visit the library in one month.

Based on the results of a UNESCO survey, 2011 on reading habits, that the lowest rank with a value of 0.001 is Indonesia. This means that out of 1000 Indonesians, only 1 person has a high reading habit. Therefore, the Government and society carry out various innovations on an ongoing basis in the effort to develop reading interest. in order to form a society with a reading culture.

For this reason, the library needs to evaluate the collection periodically so that it is known whether the goal has been achieved? Is the collection complete? And is it in accordance with the provisions? Library assessment of the usefulness of collections by users and completeness of collections needs to be done. The library collection assessment guide used in this research is a guide from the American Library Association (ALA).

"According to Hamakonda (1987: 2) that the library collection should consist of: 1. Recommended textbooks for each subject 2. General books in the form of case study books, bibliographies, encyclopedias, yearbooks, catalogs and so on in order to complement and enrich knowledge. users other than the subject being occupied. 4. Periodical publications such as magazines, journals, and good newspapers; 5. Government publications, both general products, research results and so on. 6. Special collections, both related to the specifics of subjects, as well as things of a local nature, such as regional cultural collections and so on. 7. Non- printed collections in the form of films, video recordings, paintings and so on ".

II. Research methodology

This research is a type of qualitative descriptive research where this research is to show the role of library collections in fostering reading attitudes of students at SMAN 1 PEKAONGAN LAMPUNG TIMUR. The data is then obtained from the description of the data during the question and answer session. In addition, the author also directly visits the school library visitors as the object of research. This research was conducted from March 25 to April 25 2019 and was carried out in the library of SMAN 1 PEKAONGAN LAMPUNG TIMUR. This research uses the following data collection techniques:

1. Questionnaire, carried out by asking a list of questions to the informant
2. Observation, carried out by direct observation of the object of research, namely students of SMAN 1Pekalongan Kab. East Lampung.
3. Interviews, conducted with questions and answers to several respondents.
4. Literature study, supporting data collected from library materials.

The instrument is used as a tool for collecting research data. "Arikunto (2005: 101) states that the data collection instrument is a tool chosen and used by the author in his research to collect data so that these activities become systematic and made easier by him". Instruments used:

1. Interview, namely activities undertaken to obtain complete research data. Where there will be questions and answers to the librarian about the library collection and students' reading habits.
2. Questionnaire, which is a table that contains questions that must be answered by the respondent

The method used to analyze this research is qualitative. "According to Afrizal (2004: 176) in qualitative research, data analysis will be carried out continuously as long as the research is ongoing. Where the analysis will start from the data collection stage to the proposal preparation stage. Qualitative data analysis techniques were used in this research to analyze the results of interviews with students by asking questions about the library collection of SMAN 1 PEKALONGAN LAMPUNG TIMUR.

III. Result And Discussion

Awareness of the results of questions and answers with the principal, librarian and, some students of class X-XII SMA N 1 Pekalongan Kab. East Lampung, that the reading habits of students are still low, this is due to incomplete collections in the library so that the motivation from themselves is still lacking, compared to reading books in the library students will prefer to stay silent in class joking with their peers.

It was concluded that the reading habit is a strong motivation to get reading material according to one's desire. "According to Rahim (2008) Reading interest is a person's efforts to read. This can be overcome by developing a collection "according to opinion Sutarno, (2003: 75) states that someone's reading interest can develop if there is a collection relevance, the completeness of the collection, and the latest collections in the library.

the same is true of opinion Hamakonda, (1987: 2) that the library must consist of a printed collection in the form of text books, reference books, magazines, journals,

newspapers . Meanwhile, non-printed collections are in the form of films and videos. The results of this study are as follows:

1. The relevance of print collections

Based on the results of filling out the questionnaire by students, most of which answered "not enough" is relevant to their needs. This shows that library students still have difficulty finding the books they need, but must be improved to make it more relevant. According to Sutarno, "The relevance of collections should be tailored to the needs of library users."

2. Complete textbook collection

Based on the research results, a total of 100 respondents said that the collection of textbooks available in the library was still "inadequate" and "incomplete" with their needs.

3. Search a collection of periodicals such as magazines

Based on the results obtained, it shows that 50 respondents stated that they "sometimes" browse collections of periodicals such as magazines and use them in the library and some respondents "never" use them. This shows that the collection of periodicals such as magazines available in the library of SMAN 1 Pekalonan East Lampung has not been fully utilized by library students. Therefore, to attract students' attention to read, the library must always try to meet the needs of students.

4. Their knowledge of nonprinting collections such as tapes

Based on the results of research on non-printed collections such as tapes in the library of SMAN 1 Pekalongan, East Lampung, it shows that 90 out of 100 respondents stated that they "did not know" that there were non- printed collections such as tapes in the library. This shows that there needs to be socialization from the library or teachers so that students can take advantage of these non-printed collections.

5. Search for special collections

Based on the results of research on the use of special collections in the library of SMAN 1 Pekalongan, East Lampung, it is proven that most students have never used this special collection with a total of 80 respondents. This means that the special collections available in the library of SMAN 1 Pekalongan, East Lampung have not been fully utilized by library users.

Benefits of the Library Collection at SMAN 1 Pekalongan In an effort to improve reading attitudes

The use of collections and the availability of complete facilities in the library greatly support learning activities, help efforts to improve the quality of education and foster a low reading habit. The types of collections that are very useful are collections of books related to subjects that are applied in SMAN 1 Pekalongan, East Lampung. Basically, the collection of books related to fields of study at school or in completing school assignments can be said to be quite adequate. Although in this case still have to add the

number of collections for each subject at SMAN 1 Pekalongan, East Lampung.
The interview data regarding the use of library collections in supporting learning activities and efforts to foster students' reading habits are as follows:
"The reading collections in the library are not complete, however the subject books are up to date according to the curriculum so that they are very helpful for students when given assignments by teachers who are required to answer in the library" (Putri students March 27 2020) " "The library facilities are very lacking, as well as the collection of readings but it was very helpful when we were given the assignment to work on questions from the teacher (Meilani student, 4 April 2020)"
Based on the results of interviews with several students, it can be concluded that the library can support learning activities because in the library there are various reading materials that can provide the information needed by teachers and students.

The factors are low service and minimal collection in the library of SMAN 1 Pekalogan, East Lampung Some of the factors that cause low services and minimal collections in the library of SMAN 1Pekalogan, EastLampung, are:
a. Funds for school library operations are minimal.
b. Lack of librarians who can manage the library and make it a learning resource for students and teachers.
c. The availability of collections is incomplete, due to a lack of care for the school, teachers and all schoolmembers
d. Inadequate school library facilities.

The internal factors that affect the desire of library students include
a. Family is the main supporter in motivating and fostering the desire to read because without guidance fromparents, children are difficult to manage.
b. The community or students 'social environment also greatly influences motivation efforts and fosters students' desire to read.

Library visitors depend on the library collection, if the library collection is incomplete, the number of library visitors will decrease. If the budget for library development is minimal, then library activities will be slower to rotate and the existence of the library will disappear. As for efforts that can be made to overcome this problem, namely schools need to make various efforts so that the library continues to run according to the conditions of each school and refers to the standards of the Ministry of National Education.

The library of SMA N 1 Pekalongan East Lampung can be said to be good at providing reading materials, although it is still incomplete. So it is necessary to develop library collections to meet the information needs of SMA 1 Pekalongan students in East Lampung. The main thing that must be complete and develop according to the development of students' information needs is a reading collection. The development of the collection can be seen from the increase in various types of collections which librarians always take into account. In essence, collection development needs to determine a collection that is current, complete, student- oriented, and the collection must be relevant. The addition of the collection is to meet the various needs of the students. The availability of collections in the school library also reflects the

achievements of students becauseif all the information needs of students both inside and outside the school are met, it is possible that the students' insights will be broader. In other words, the effectiveness of using the school library by students really depends on what is available in it

IV. Conclusions and Recommendations

Based on the results of the research obtained, as a whole some conclusions can be drawn, including the following: 1. The collection of textbooks at the Library of SMAN 1 Pekalongan, East Lampung is quite relevant and in accordance with the needs of students, however, the collection of text books and reference books is still incomplete. and according to the needs of students. Non-printed collections such as tapes in the library of SMA N 1 Pekalongan, East Lampung are incomplete and students also do not know.

Therefore, most of the cassette collections were not utilized by the students, in addition there were no supporting facilities for the use of non-printed collections (cassettes).

As for the suggestions of this research, based on the findings in this research, several suggestions can be made, namely:

1. To overcome students' lack of interest in reading, the library should be willing to ask students for input or suggestions regarding the reading material they need so that it will be relevant to their needs. In order to increase students' reading interest, it is necessary to add library collections such as text books and reference books according to their needs, so that the library can provide the latest collection of library materials to library users.
2. In order for non-printed collections to be maximally utilized by students, the Library of SMAN 1 Pekalongan East Lampung can add computers as a means for the use of non-printed collections such as tapes by students, and it is hoped that the Library

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Do the Transformation Leadership Style have a Massive Influence on Teacher Job Satisfaction?

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ABSTRACT:
In school organizations, principals and teachers have a very important role. This study aims to determine the effect of the principal's transformational leadership style on teacher job satisfaction. The population in this study was a junior high school teacher in Lampung province, Indonesia. The research sample was determined randomly. Data collection uses questionnaires distributed to teachers. Data were analyzed using normality, homogeneity, simple linear regression and T-test. Based on the results of the analysis, it is known that the transformational leadership style does not affect teacher job satisfaction with a 95% confidence level. Then, based on the results of the T-test, there was no difference in the satisfaction of teacher job between male and female teachers.
Keywords: Transformational Leadership Style, Job Satisfaction, Principal, Teachers

INTRODUCTION

School is an educational organization. Like all organizations, there is someone who is responsible for all affairs of the school and always responsible for management and other activities of school, called the Principal (Ch, Ahmad, Malik, & Batool, 2017). The principal is an important figure where his behavior is always a concern for students, teachers, and all employees (Musringudin, Akbar, & Karnati, 2017). The principal is a manager and a leader at school, so he/she is to merely supply the materials needed by the group he/she is leading (Kimathi, 2017; Wachira, GIitumu, & Mbugua, 2017). The behavior of a principal will show the leadership style he adheres to. Leadership is considered an important element in directing the process. To get things done by other people, principals are asked to guide and lead different activities. Leadership is the ability to influence others (Nazim & Mahmood, 2018). Leadership style can facilitate change, increase commitment and labor performance, and improve overall organizational performance and approaches in most fields, this raises the awareness that the leadership capacity of educational staff has become increasingly important in educational research (Anderson, 2017).

Leaders are needed in an organization to bring the organization to achieve its

goals. The principals' leadership style is the attitude of principal to lead employees to reach the educational goals (Ch et al., 2017; Omeke Faith & Onah Kenneth, 2011). Leadership style is an important aspect to give effects on school effectiveness, among others are teachers' satisfaction and teachers' job performance (Aunga & Masare, 2017; Ch et al., 2017; Kimathi, 2017; Nadarasa & Thuraisingam, 2014). The importance of leadership style is very significant and is related to the job satisfaction of the teachers. Individual consideration, charisma, ideal influence and intellectual stimulation have a positive effect on teacher job satisfaction (Karabina, 2016). In organizations leaders can adopt the appropriate leadership style, and will influence job satisfaction, productivity and commitment of an employee as a result (Voon, Lo, Ngui, & Ayob, 2011) Job satisfaction is how content a teacher is with his or her job which culminates in satisfactory interpersonal relations, financial rewards, fringe benefits, training and promotion, decision-making and free channels of communication among others (Nadarasa & Thuraisingam, 2014; Omeke Faith & Onah Kenneth, 2011).

When teachers are not satisfied with the job, students are the ones who suffer because their academic is likely to deteriorate, because it is widely assumed that school leadership directly influences the effectiveness of teachers and the achievement and motivation out comes of students (Ch et al., 2017; Kimathi, 2017; Nadarasa & Thuraisingam, 2014; Raziq & Maulabakhsh, 2015). Principals can therefore encourage effective performance of their teachers by identifying their needs and trying to satisfy or meeting them, also teachers' level of performance involves the skillful control and guidance of teachers in order to achieve the school desired outcomes (Aunga & Masare, 2017; Shamaki, 2015; Wachira et al., 2017). Job satisfaction leads to recognition, income, promotion and achievement of goals as a result of general feelings fulfilled. This has a good influence on the emotional state of the worker and he has a positive attitude towards his work because satisfied workers tend to be more loyal, creative and innovative. Job satisfaction is a product of the events and conditions experienced by people in their work (Adeniji, 2011; Nazim & Mahmood, 2018).

In China, it was found that decision making by principals had a positive effect on teacher job satisfaction. Decision making by the principal is a mediation of the leadership style used by the principal with teacher performance satisfaction (Hui et al., 2014; Leykin & DeRubeis, 2010).

There are some of leadership styles commonly used by previous researchers, but this literature review would be focus on transformational leadership style. Transformational leadership style stimulates and inspires followers to achieve beyond expectation and both have the same vision and objectives they try to achieve. Transformational leadership style could improve their early job experience and gives positive effect on teachers' performance (Aunga & Masare, 2017; Nyenyembe, Maslowski, Nimrod, & Peter, 2016). Transformational leadership refers to leadership that increases awareness of organizational members through the creation of collective interests and helps them in their achievement (Hui et al., 2014).

Transformational leader; have integrity, set clear goals, communicate vision clearly, set a good example, expect the best from employees, encourage, inspire and

support, recognize work and good people, provide jobs that are able to stimulate and help people to surpass themselves and more focused on the interests and needs of the team (Avolio & Bass, 2004; Eyal & Roth, 2011; Wilson, 2017). The focus of transformational leaders in challenging the status quo shows that unexpected performance can produce a higher level of creativity and innovation among followers (Wang, Oh, Courtright, Colbert, & management, 2011). Transformational leaders have formed a clear image of the future and affected others to implement and share the image despite the resisting and restraining conditions (Mahdinezhad & Suandi, 2013).

Some research proves that transformational leadership has a positive and strong effect on job satisfaction which shows that transformational leaders are able to transform society and culture within the organization and are important for the success of reform efforts (Al-Omari & Sharaah, 2012; Amin, Shah, Tatlah, & Education, 2013; Knab, 2009; Masumoto & Brown-Welty, 2009; Pepper & Changing, 2010; Pugh, Fillingim, Blackbourn, & Thomas, 2011). The study shows that teachers are satisfied if their principal uses a transformational leadership style, this indicates that the transformational leadership style used by the principal becomes an important role in increasing teacher job satisfaction in the school (Gkolia, Belias, & Koustelios, 2014; Nazim & Mahmood, 2018). In addition, transformational leadership style is considered to have a positive effect on psychological conditions and is able to enhance innovative behavior possessed by employees (Pieterse, Van Knippenberg, Schippers, & Stam, 2010).

Transformational leaders can move educators to accomplish progressively and turn out to be more dedicated to their work and the mission of the organization. With the end goal to accomplish this, it is important for authority arrangement projects to improve the transformational capability of people trying to become school leaders. (Eliophotou-Menon & Ioannou, 2016). Transformational leadership behavior is important for the dimensions of identification and internalization that express deeper commitments (Aydin, Sarier, & Uysal, 2013). Based on several studies, transformational leadership style is very suitable to be applied in schools.

Based on the many studies that have been conducted, it was found that the leadership style used by principals had positive and significant effect on teacher job satisfaction. These results are the results of research outside Indonesia, then what about the situation in Indonesia? In Indonesia, especially Lampung, there was a study states that at the junior secondary level, the decision-making style used by principals impacts on teacher performance satisfaction (Hariri, Monypenny, & Prideaux, 2012). Therefore, this study aims to look at the effect obtained from the transformational leadership style by principals on teacher job satisfaction at the senior secondary level. This research is very important because whatever results are obtained from this research, it can be a reference and consideration in determining education policy, especially by the principal. Specifically, we ask two research questions:

1. Do the principal's leadership styles have massive influence on teacher's job satisfaction?
2. What are the influence of the principal's leadership style on teacher performance satisfaction with demographic factors (gender) in the research?

METHOD

Research on the Indonesian school context was specifically conducted in the province of Lampung. The population in this study were teachers and principals in senior high schools in the province of Lampung. The sample in this research was determined by stratified random sampling technique. This study uses a quantitative approach using three questionnaires as a medium for data collection, the questionnaire regarding the principal's leadership style was based on the theory of Bass and Avolio, questionnaires regarding teacher performance satisfaction by Spector (Spector, 1994) , and the demographic factor questionnaire consisting of an individual's gender, age, educational background, teaching subjects and job experience among others (Bolin, 2007), but in this research will using only gender. Questionnaire is an instrument for collecting data outside the observer's physical range. The questionnaire contains questions that will be used to gather information from respondents about their attitudes, feelings about the problem under study (Kothari, 2004). There are two types of variables used in this study, namely the independent variables consisting of transformational leadership style (X) and the dependent variable is teacher performance satisfaction (Y). Analysis of the relationship between independent variables and the dependent variable using regression analysis through SPSS.

RESULTS AND DISCUSSIONS

Research has been conducted on senior high school teachers in Bandar Lampung by involving 42 teachers, with 13 male teachers and 29 female teachers. This research is a preliminary study which will then be continued for research on teacher populations spread across Lampung Province, Indonesia. In this study, there was no validity and reliability test because the questionnaire used by the researcher was a questionnaire that had been tested for validity and reliability in measuring the results of the study. The researcher only gave a question to the teacher randomly whether the questionnaire provided could be understood or not. Based on the statement given by the teacher, it is known that the teacher can understand well the questions in the questionnaire provided so that the research can be continued.

This study aims to determine whether there is a major influence between the transformational leadership style possessed by principals on teacher job satisfaction, and then, the researcher want to know whether other factors such as gender can influence teacher job satisfaction. To find out this, based on data obtained through questionnaires, researchers continued the research by analyzing the data obtained using the SPSS program assistance. The first step taken by the researcher is to see whether the data obtained is normally distributed. Based on the results of the calculation of the normality test, it is known that the data obtained are normally distributed and it can be seen on Table 1. Furthermore, based on the homogeneity test results, it is known that the sample comes from a homogeneous population variant with a significance value of 0.599 > 0.05 or H_0 is accepted. Then to see the relationship and the influence between transformational leadership styles possessed by principals and teacher job satisfaction, researchers conducted a simple linear regression test.

Table 1. The Result of Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
TRANSFORMASIONAL LEADERSHIP STYLE	.123	42	.113	.966	42	.233
TEACHER JOB SATISFACTION	.081	42	.200*	.977	42	.540

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 2. The Result of Homogenity Test

ANOVA

TRANSFORMASIONAL LEADERSHIP STYLE					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1031.884	23	44.865	.900	.599
Within Groups	897.025	18	49.835		
Total	1928.909	41			

Before conducting a simple liner regression test, a classic assumption test was carried out, namely residual normality test and linearity test. Based on the table 3, it can be seen that the residual value in the research data is normally distributed with a significance value of 0.978 > 0.05 and linear in Tabel 4 with a significance value of 0.339> 0.05 and Fvalue < Ftable which is 1.231 < 4,050, so H0 is accepted. Thus, researchers can carry out simple linear regression tests.

Table 3. The Result of Residual Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		42
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	7.06598972
Most Extreme Differences	Absolute	.073
	Positive	.066
	Negative	-.073
Kolmogorov-Smirnov Z		.474
Asymp. Sig. (2-tailed)		.978

a. Test distribution is Normal.
b. Calculated from data.

Table 4. The Result of Linearity Test

ANOVA Table

				df	Mean Square	F	Sig.
TEACHER JOB SATISFACTION * TRANSFORMASIONAL LEADERSHIP STYLE	Between Groups	(Combined)		25	53.718	1.195	.362
		Linearity		1	15.062	.335	.571
		Deviation from Linearity		24	55.329	1.231	.339
	Within Groups			16	44.948		
	Total			41			

Table 5. The Result of Regression Test

	Value of Pearson Corelations	Sig.	R	R Square	T	Sig.	Conclusion
Correlation	0,089	0,295					H_0 Rejected
Model Summary			0,085[a]	0,007			H_0 Rejected
Coefficient					0,543	0,590	H_0 Rejected

Based on the Table 5 above, it can be seen that there is no relationship between transformational leadership style (X) with teacher job satisfaction (Y) as evidenced by the acquisition of a significance value of 0.295 > 0.05 so the decision of H_0 is rejected. Furthermore, based on the value of R square, it is known that teacher job satisfaction (Y) is only influenced by 0.7% by the transformational leadership style (X) of the principal. Then, based on the coefficient table, it is known that there is no significant effect between transformational leadership style (X) on teacher job satisfaction (X) as evidenced by a significance value of 0.590 > and $T_{value} < T_{table}$ about 0.543 < 2.021 so the decision of H_0 is rejected.

After knowing that there was no significant relationship and influence between transformational leadership style (X) on teacher job satisfaction (Y), researchers looked at whether other factors such as gender influence the job satisfaction that the teacher has. Therefore, the researcher conducted an Independent Sample T-Test to see the difference in job satisfaction felt by male teachers with female teachers. Based on the table above, it can be seen that there is no significant difference in job satisfaction between male and female teachers with a significance value of 0.090> 0.050 and $T_{value} < T_{table}$ about -1.779 < 2.021 so the decision of H_0 is accepted.

Based on the explanation above, it is known that in this study the transformational leadership style possessed by the principal does not have a relationship and a significant effect on teacher job satisfaction. Similarly, gender differences do not have a significant difference in teacher job satisfaction. This result is completely different from the results of previous research, which states that transformational leadership style has a positive and significant effect on teacher job satisfaction (Abdul Wahab, Fuad, Fuzlina, & Ismail, 2014; Al-Omari & Sharaah, 2012; Amin et al., 2013; Knab, 2009; Masumoto & Brown-Welty, 2009; Pepper & Changing, 2010; Pugh et al., 2011). Then it is not indicated that the transformational leadership style possessed by the principal is evidenced in the calculation results that transformational leadership style only affects teacher job satisfaction by only 0.7%. This is different from the statement of Gkolia and Nazim which revealed that the principal's transformational

leadership style plays an important role in increasing teacher job satisfaction (Gkolia et al., 2014; Nazim & Mahmood, 2018).

The results of this study can have implications for the next study that other factors besides transformational leadership style must be known that can affect teacher job satisfaction. The researcher realizes that the weakness in this study is that the researcher only focuses on the transformational characteristics of the principal as a whole so that in subsequent studies it is expected to analyses one by one the characteristics that exist in transformational leadership style.

CONCLUSION

Based on research that has been done, it is known that the principal's transformational leadership style does not have a large influence on teacher job satisfaction. Then, there is no difference felt in both male and female teachers in the principal's transformational leadership style towards teacher job satisfaction.

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Development Of Project Assessment Instruments To Measure Science Literation Abilities In Integrated Learning At The Four Grade Of Elementary School

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Abstract:
The purpose of this research is produce a project assessment instrument product to measure students' scientific literacy skills theoretically and empirically feasible on the theme of always saving energy. This research used research and development, refers to the theory of Borg & Gall. The subjects of this research consisted of 6 students and 2 educators. The data collecting technique used expert validation questionnaire, practitioner questionnaire and students. The data analysis technique was carried out in a mixed manner between qualitative and quantitative. The results of this research indicate that the project appraisal instrument is feasible theoretically and empirically to measure students' scientific literacy abilities. The theoretical feasibility of the project appraisal instrument to measure students' scientific literacy skills is based on the assessment of 3 experts who obtained an average score of 81.43 in the "very good" category. The empirical feasibility of the project appraisal instrument to measure students 'scientific literacy skills was based on the teacher usability questionnaire which received an average score of 90.5 and the students' readability questionnaire obtained an average score of 89.6 in the very good category. Based on the results of all analyzes, it shows that the project appraisal instrument is suitable for measuring students' scientific literacy skills.
Keyword: Instruments, Project Appraisal, Science Literacy.

1. Introduction

Education is a necessity needed to improve the quality of human resources. The quality of education is largely determined by the learning process that occurs both inside and outside the classroom. Education in schools is an effort to bring students to a state of the process which is carried out not carelessly but a process that aims. One form of learning that can train students to carry out investigations in order to solve problems faced in real life is project-based learning. This is learning that organizes students to build their knowledge independently through in-depth investigation to solve problems in a planned manner (Tseng, Chang, Lou, & Chen, 2013). Improving the quality of education can be achieved through improving the quality of learning and the quality of the assessment system (Mardapi, 2012). : 12). Learning and assessment are inseparable parts of teaching and learning activities. Assessment is a major component in the duties and work of an educator. If educators are able to make good assessments,

it can be ascertained that the educators have good teaching skills as well. This indicates that that if you want to be good educators, educators must have sufficient knowledge about assessment (Kusaeri, 2014: 14).

Assessment is the task of finding students' beliefs, strategies, strengths, and weaknesses in learning (Earl & Giles, 2011). Assessment is an important component in learning, this is also important when scientific literacy is the main goal of learning (Shwartz, 2006). Assessment activities cannot be separated in the learning process. Assessment of learning outcomes is an effort or action to determine the extent to which the predetermined learning indicators have been achieved, assessment is also one of the activities carried out to measure and assess the extent of curriculum achievement. In addition, assessment can be used to determine the advantages and disadvantages of the learning process. Maba W. & Mantra I.B's research (2016) shows that elementary school educators should use various assessment models based on aspects of attitudes, knowledge, and skills. Assessment of students' attitudes includes observation, self-assessment, peer assessment, and educator notes. Assessment of learners' knowledge includes written tests, oral tests, and assignments. Assessment of student skills includes performance, portfolios, and projects. Project assessment according to Majid (2014: 10) is an assessment of tasks that contain investigations and must be completed within a certain time. These duties include planning, implementing and reporting. The project will also provide information about the understanding and knowledge of students in certain subjects, the ability of students to apply knowledge and the ability of students to communicate information. Project assessment is highly recommended because it helps develop students' critical and creative thinking skills.

Scientific literacy according to Echols & Shadily in Hilman (2015: 41) "Literally literacy comes from the word literacy which means literacy / illiteracy eradication movement. Science literacy according to PISA (OECD, 2006) is defined as the ability to use scientific knowledge, identify questions, and draw conclusions based on evidence, in order to understand and make decisions regarding nature and changes made to nature through human activities. Another definition views scientific literacy as multidimensional, not just an understanding of scientific knowledge, but more than that. Assessment of students' understanding of the characteristics of science as well as scientific investigation, awareness of how science and technology shape the material, intellectual and cultural environment, and the desire to engage in science-related issues, as reflective human beings. In line with the four pillars of universal education such as those formulated by UNESCO, namely "learning to know, learning to do, learning to be, and learning to live together" which makes students have to explore more of their potentials to be developed. Liu et al. (2011) which states that literacy skills are important to be analyzed according to developed countries such as the United States and China. According to the Chinese government, people with scientific literacy will be able to contribute to welfare both from social and economic aspects. So in developed countries, scientific literacy is a top priority in science education (Lau, 2009).

Regarding the results of observations made, the problem of assessment that often occurs in schools is the dominance of the use of written tests. The use of written tests

can be in the form of multiple choice, matching tests, and essays are more frequently used. In fact, it is well known that the written test is a means of collecting assessment data. Making and using written tests is easy, causing educators to prefer this written test, rather than using authentic assessment which is more complicated in its manufacture and use. Assessment of the learning process of students in class is ignored, gets less attention compared to learning outcomes that are often done, namely the use of tests written. In particular, project assessment to measure students' scientific literacy skills is still very rarely carried out by teachers. Project assessment provides more opportunities for educators to recognize their students, because in reality not all students who are less successful in objective tests or essays can automatically said to be unskilled or uncreative. Thus the project assessment complements other assessments such as measuring scientific literacy skills for learning outcomes that are rarely done by educators.

The following are the results of the needs analysis obtained from distributing questionnaires from 10 educators about the project assessment instrument used to measure scientific literacy skills after preliminary research. Based on the results of the needs analysis questionnaire, it shows that 60% of teachers measure literacy skills, but only 10% show instructions for using project appraisals in books and 30% who understand how to develop assessment instruments. All teachers have not used project appraisals to measure scientific literacy skills and no teacher has developed project assessments to curate scientific literacy. Based on this, the researcher intends to develop a project appraisal instrument to measure scientific literacy skills in integrated learning in class IV of 1 Parerejo Elementary School. This is to improve the quality of the assessment instrument and the quality of students' scientific literacy.

2.Method

The research used Research and Development (R&D), which adopted from the Borg and Gall model. According to them, R&D is a development model that used to design new products and procedures that are field tested, evaluated, and refined to meet certain criteria. Conceptually, the research and development approach includes 10 general steps, as described by Borg & Gall.

The subjects of this research were divided into two, namely the product trial subject and the use test subject. The subject of product trials is expert validation. The subjects of the used test were class IV teachers and students of SD N 1 Parerejo. This research was conducted in 1 class with a sample of 2 high-ability students, 2 moderate-ability students, 2 low-ability students. The object of research in this development research is a project appraisal instrument to measure students' scientific literacy skills.

3. Results and Discussion

3.1 *research and development of the Project Assessment Instrument to measure scientific literacy*

The results of research and development of the Project Assessment Instrument to measure scientific literacy skills in integrated learning obtained the following results.

3.1.1 *Research and Information Collecting*

The results of observations through preliminary research obtained data that: (1) Project assessment instruments in the teacher's book are still unclear and difficult to use. (2) The project appraisal instrument in the teacher's book does not yet contain clear assessment and scoring guidelines. (3) the teacher has never conducted an assessment using the project assessment. (4) Assessment of student learning outcomes is still focused on results not on the process so that students are still passive and less creative. (5) The skill process has not yet assessed scientific literacy. Based on the description above, it can be seen that there are potentials and conditions that support the development of project appraisal instruments to measure scientific literacy skills in integrated learning in fourth grade elementary schools.

3.1.2 *Planning*

At this stage, prepares materials and makes product designs. This planning stage begins with determining a theme, assessing core competencies, basic competencies, indicators, formulating materials, and compiling a grid of instruments to be developed.

3.1.3 *Develop preliminary*

Product development is manifested in parts that have been planned to be compiled and designed so that it becomes an initial product draft including the initial stage of drafting an assessment instrument, there are 6 steps according to Subali, namely as follows: (a) mapping the instrument, (b) compiling a grid, (c) compiling instruments, (d) analyzing to assess the quality of the instruments qualitatively, (e) testing measuring instruments. (f) implementation of measurement. The instrument mapping plan is modified by Nurgiyanto's (2013: 30) opinion, namely (1) determining standards, (2) determining project tasks, (3) making criteria, and (4) making rubrics. The design results in the form of a prototype are then validated by experts. Design validation is carried out by experts, namely material expert lecturers, evaluation experts, linguists, and practitioners.

Tabel 1. Results of Validation by Experts

No	Validator	Nilai
1	Material Expert	79,17
2	Linguist	88,46
3	Evaluation Expert	76,66
Average		81,43

Tabel 2 Results of Validation by Practitioners (Educators)

No	Validator	Nilai
1	**S**	92%
2	**DYA**	89%
Average		**90,5%**

Based on tables 1 and 2.The results of the 3 expert validation test, namely (1) the expert material test obtained an average score of 79.17, (2) the validation test language expert received an average score of 88.46 and (3) the expert evaluation test obtained The average score is 76.66, in the validation test 3 experts are categorized as very feasible to use.

3.1.4 *Premilinary Field Testing*

The preliminary preliminary trial was carried out after expert validation, the initial preliminary trial was carried out by a small group to assess the feasibility of the product developed, namely in the form of a project assessment instrument to measure scientific literacy skills in integrated learning based on the responses of educators and students in class IV SDN 1 Parerejo. The number of respondents was two educators, namely one class IVA educator and one class IVB teacher. While there were six students consisting of 2 high category students, 2 medium category students and 2 low category students. The aspects assessed by students are the feasibility of content and language appropriateness, while what is assessed by educators is the feasibility of construction, language feasibility, and feasibility of writing rules.

Tabel 3. Results of the Value Questionnaire for Educators.

No	Rated aspect	Teacher 1	Teacher 2
1.	Construction	18	19
2.	Language	12	10
3.	Writing Rules	14	14
	Total score	44	43
	Maximum Score	48	48
	Score Percentage	92 %	89%
	Score Range	84%-100%	84%-100%
	Average Percentage	90,5%	
	Criteria	*Very Good*	

The results of the usability test by educators showed that the mean value of 2 educators was 4.6 with a percentage of 90.5% belonging to the "very feasible" category.

Tabel 4. Readability Value Questionnaire Results for Students at SD Negeri 1 Parerejo

No	Rated aspect	Student					
		1	2	3	4	5	6
1.	Instrument Contents	16	16	15	14	14	15
2.	Language	16	15	13	13	13	13
	Total score	32	31	28	27	27	28
	Maximum Score	32	32	32	32	32	32
	Score Percentage	100%	96%	87%	84%	84%	87%

	Score Range	84%-100%	84%-100%	67%-83%
	Percentage Mean			89,6 %
	Criteria		*Very Good*	

The results of the student readability test showed that the mean value of 6 students with high, moderate, and low abilities was the percentage included in the "Very feasible" category.

3.1.5 *Main Product Revision*

After the initial product design is carried out to find out whether there are still discrepancies or errors in the product design to be repaired and as improvements to the product to be developed. At this stage the researcher then corrects or revises the validated assessment instruments based on suggestions for improvements from the design validation. Looking at the results of the scores obtained by the validation and test experts in small groups, it can be concluded that the project assessment instrument for measuring scientific literacy was not revised and was feasible to be tested in the main field test.

3.2 Discussion of Research Results

3.2.1 Development of Project Appraisal Instruments

The development of a project assessment instrument to measure scientific literacy skills in integrated learning is focused on grade IV and adapting from the R&D steps by Borg & Gall (1983: 784) using five out of ten steps due to limitations in the current Covid-19 pandemic era. The first stage is research and preliminary information collection, after the researcher knows the problem that occurs the researcher plans to develop a project assessment instrument that will be used by educators to measure students' scientific literacy skills. Furthermore, the researcher compiled the initial product development of the assessment instrument, in this step the researcher drafted the assessment instrument referring to the 6 steps according to Subali, namely as follows: (a) mapping the instrument, (b) arranging the grid, (c) arranging the instrument, (d)) studying to assess the quality of the instrument qualitatively, (e) testing the measuring instrument. (f) implementation of measurement.

3.2.2 Project Assessment Instruments to Measure Theoretically Appropriate and Empirical Scientific Literacy Abilities.

The results of this Research and Development show that the product of the project appraisal instrument is theoretically feasible to measure students' literacy skills. The development of project skills assessment instruments is based on the theory of project appraisal instruments so that the resulting products are more meaningful for students and teachers in terms of understanding project skills assessment instruments, because this instrument is an alternative assessment carried out to assess students authentically.

Furthermore, the process of developing the project skills assessment instrument goes through the validation stage by experts before the instrument is tested. This aims to determine whether the quality of the instrument is appropriate or not. Design validation was carried out by 2 lecturers as material, evaluation, and language experts who assessed three aspects: each aspect of the assessment was then interpreted into 4 categories, including the very good category getting a score of 4, good category getting a score of 3, enough category getting a score of 2, and the less category gets a score of 1.

Validation sheets from validator 1, validator 2, and validator 3, and expert practitioners show that the project appraisal instrument on integrated learning that is developed is suitable for use as an instrument in learning with several revisions of improvements, so that revisions must be made according to suggestions and comments from each. each validator first before moving on to the next stage. The validity of the project skills assessment instrument can be seen from each validator with the percentage of the assessment which shows the average percentage> 80%. The results of the percentage show that each validator gives a score with the criteria "very feasible". The score of material experts was 76.66%, linguists were 88.46%, evaluation experts were 79.17%, and practitioners were 100%. According to Majid (2014: 10) project appraisal is an assessment of tasks that contain investigations and must be completed within a certain time. These duties include planning, implementing and reporting. The project will also provide information about students' understanding and knowledge in certain subjects, students' ability to apply knowledge and students' ability to communicate information. Project appraisal is highly recommended because it helps develop students' critical and creative thinking skills. Arikunto (2013: 3) adds that project appraisal is an assessment of an investigative process to find meaningful benefits for human life that must be completed within a certain time. Project appraisal is carried out starting from the planning, working process to the final project result.

Based on the results of the study, it shows that the project skills assessment instrument developed has advantages when compared to the skills assessment instrument contained in the teacher's book. The following is the difference between the performance appraisal instruments resulting from development with existing instruments.

Table 5. Differences in the Performance Appraisal Instruments developed with those in the Teacher Book.

Project Assessment Instruments in Teacher's Books	**Product Assessment Instrument Development Results**
The instruments are presented globally / in general, yet the ability to be assessed is neither process nor product detailed.	The instrument is presented in detail about the capabilities of the aspects being assessed, both the process and the product.
Has not included instructions for use so the teacher has difficulty using it	The instructions for using the book are clear
Rubric is always the same in every lesson	The rubrics are more varied
The criteria in the aspect assessed are not clear	The criteria used are clear to assess student projects, so they are easy to use.
There is no scoring rubric to measure scientific literacy	There is a rubric to measure scientific literacy skills

Based on the differences in the table, it is clear that the advantages of the developed product are different, so that they have the potential to be used and continue to be developed in other themes.

Then in the next stage after the validation test is carried out, feasibility can also be seen in small group trials, based on the responses of educators and students, the number of respondents is 2 class IV educators. There were 6 students consisting of 2 students in the high category, 2 students with the medium category, and 2 students with the low category. Small group trials were carried out to assess the instrument developed in the form of an assessment instrument. The aspects assessed by students were content and language, while what was assessed by the teacher were aspects of the feasibility of the content of linguistic feasibility and presentation feasibility. The results of the usability trial by 2 investigators and the readability of 6 students, in this test the results were in the "very feasible" category. This response is in line with the results of Walsh's (2010) research on teacher pedagogical abilities regarding literacy which will have a positive effect in classroom learning.

According to Haryati (2007: 50) Project assessment as one of the learning evaluation models in class-based assessments that prioritizes project work, of course also has functions and objectives as well as several advantages over other evaluation models, including: a) Project work is an internal part of the standardized learning process, has pedagogic content and is meaningful for students, b) Provide opportunities for students to express their competences in full, c) More efficient and produce products that have economic value, d) Generate accountable competency mastery values.

Therefore, the use of project appraisal instruments is important to carry out in order to really know the students' abilities, especially the scientific literacy skills that the author will research, not only the results but also the learning process, so that there is no tendency for subjective assessments. Educators not only judge right and wrong answers without any reason, but educators must also assess the ability of students when practicing / skills during the learning process at home. The instrument developed has gone through several stages, starting from fulfilling the rules of writing instruments, validating theoretically and validating empirically. The results showed that each item in the project assessment instrument in integrated learning for grade IV elementary school students that had been validated by a team of experts was declared fit for use for measure the scientific literacy skills of students.

This research supports and continues the research of Lies Wahyuni (2018) who developed a project assessment model in the form of an assessment matrix or rubric only. The instrument developed has gone through several stages, starting from fulfilling the rules for writing instruments, validating theoretically and validating empirically. The results showed that each item of the project appraisal instrument in integrated learning for fourth grade elementary school students that had been validated by a team of experts was declared fit for use to measure students' scientific literacy skills. The result obtained from this research is a project appraisal instrument product in the form of an assignment. The product development has never been tested in a large group of

products. The product is only based on the results of expert validation analysis and small group tests. So that it becomes a recommendation for further researchers to carry out the development to a further stage.

4.Conclusion

Based on the results of the research and development reports, it can be concluded that the product of the project assessment instrument developed is theoretically and empirically feasible to measure scientific literacy skills in integrated learning at the five grade of elementary school, especially on theme 2, sub-theme 4. This is evidenced from the test expert validation from the assessment of 3 experts, namely material experts, evaluation experts, and linguists, who stated that the project assessment instrument developed was in the category of "very feasible". The teacher's usability test was carried out stating that the project appraisal instrument developed was in the very feasible category. In addition, this assessment instrument was also tested by practitioners on the responses of students with "Very High" results. Based on the results of the analysis of the project appraisal instrument carried out at the small group trial stage in the fourth grade of elementary school.

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Development of Chemical Teaching Materials for Acid and Base SolutionsBased Chemo Edutainment for State High School Students of Class 6 of Bandar Lampung

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Abstract:

The aim of this research is how to overcome the problems in teaching and learning at SMA N 6 grade X in mastering chemistry. The researcher developed the material teaching about computer-based learning media with a chemo edutainment (CET) approach. The research was development using a model ADDIE (Analysis, Design, Development, Implementation and Evaluations).The measurement results show that learning motivation is better after using CET chemical teaching materials on acid-base solution with an average of 77.92 while in the control class with an average of 63.78. The average value of the percent increase in learning outcomes in class X experiment was 63.26% while the average value of the control class was 46.95%.

I. Introduction

Learning resources and media are two inseparable terms. The use of the term source and learning media can be used interchangeably. There are times when something can play a role as a source of learning, but other times it becomes the media, this depends on the context of its use (Akbar, 2013). Technology Associations Learning resources include all sources of data, people or objects that can be used to facilitate learning for students. This means that learning resources covering all instructional components, specifically designed and by their nature, can be used or utilized in learning activities, including one of them is teaching material (Prastowo, 2012).

Teaching materials are all forms of materials used to help the teacher or instructor in carrying out teaching and learning activities in class. The material in question can be either written material or unwritten material (Amri, 2010). Teaching materials are all materials (be it information, tools or texts) that are arranged systematically that displays a complete figure of the competencies that students will master and are used in the learning process with the aim of planning and studying learning implementation, for example textbooks, modules, worksheets, models or markets, audio teaching materials, interactive teaching materials and so on (Prastowo, 2011). There are several reasons why teachers need to develop teaching materials, including: the availability of materials according to curriculum demands, target characteristics and demands for problem solving learning. Development of teaching materials must pay attention to curriculum demands, meaning that teaching materials

to be developed must be in accordance with the curriculum (Ministry of National Education,2008).

The use of computer-based learning media with a chemo edutainment (CET) approach is one alternative to the chemistry learning process that is varied and can improve student chemistry learning outcomes. Based on the results of the analysis of the influence of the use of computer-based learning media with the CET approach produces a positive influence on learning outcomes (Prasetya, et al., 2008). Teaching materials that are equipped with CET can help students understand the subjects and obtain good learning outcomes. The desire to create fun teaching and learning activities, with the demands of the many materials that must be mastered by students to make learning outcomes unsatisfactory. To help overcome these obstacles need to be made teaching materials with adequate and fun media. Chemistry learning with teaching materials equipped with CET adds to the learning experience. CET-based teaching materials do not have to mimic reality, but have fun challenges for students so they can achieve the desired competencies and create a pleasant atmosphere.

Teaching material is a set of subject matter that refers to the curriculum used in order to achieve predetermined standard competencies and basic competencies (Lestari, 2013). Teaching materials function as;1) guidelines for teachers who will direct all their activities in the learning process, as well as being the substance of competencies that should be taught to students; 2) guidelines for students who will direct all their activities in the learning process, as well as being a substance of competencies that should be learned or mastered; 3) evaluation tools for achievement or mastery of learning outcomes (Ministry of National Education,2008).

All innovative and fun media that is appropriate in chemistry learning can be said to be chemo- Edutaiment (CET) media. Some research related to CET states that CET is a fun learning media, so that it can motivate and make students interested in learning chemistry (Tanrere and Sumiati, 2012). CET is an interesting chemistry learning concept, one of which can be realized through learning media. CET is an innovative and entertaining learning media (Nurhayati, 2009). CET is a media that can help students to learn independently in class (Nurfitrasari, 2014). CET is a learning medium that serves as entertainment with the principles of active, innovative, creative, effective and fun education in learning chemistry.

II. Method

The research used was research and development. In the Research and Development design proposed by Borg & Gall (1996: 715-716 in Hashim, 2016) includes 10 stages: research and information collecting, planning, developed preliminary form of product, preliminary field testing, main product revision, operational field testing, final product revision, operational product testing, dissemination and implementation.

The population in this study were all students of class X of SMA N 6 using the 2013 curriculum. Basically, the characteristics of each class X semester 2 in 2018/2019 school year had the same ability characteristics. Samples were selected

using a purposive sampling technique. The sample of the study was 32 students of the X-level majoring in Natural Sciences. The research instruments include a standardized analysis format of the textbook content that aims to find out the book to be analyzed, a questionnaire containing the feasibility standard of teaching material developed to find out the instructional material developed has been suitable for use, a questionnaire containing the feasibility standard of the teaching material developed, a motivation questionnaire to see student motivation after using chemistry teaching materials based on CET-based acid solutions, and objective test questions to find out the improvement in student learning outcomes and the percentage increase in learning outcomes on CET-based chemistry teaching materials.

III. Results And Discussion

At the analysis stage there are two books used. Based on the analysis of textbooks in schools used there are advantages and disadvantages. In teaching materials for publishers X and Y, the feasibility of teaching materials is carried out using BSNP assessment standards. Based on the results of this analysis can be identified deficiencies found in teaching material X material solutions of acids and bases. In the scope of material the breadth and depth of the material is still lacking, the prowess in the quotation is not up to date, it does not stimulate the curiosity of students and in the development of life skills, examples are less motivating students to develop their abilities.

Based on the results of this analysis can be identified deficiencies found in teaching materials Y material acidic and basic solutions, namely in the aspect of presentation. In terms of content, language and graphic suitability, the average is quite decent but can still be a feasible category.

Design Stage

After completing the analysis phase on the teaching materials of publishers X and Y, the development is carried out. In the design phase, the researcher prepares the initial product (prototype) or product design. Then the feasibility was tested using the BSNP assessment standards. What is done by high sc hool teachers who use the curriculum 2013.

Development Stage

The weaknesses of the 2 books were corrected in teaching materials developed and then integrated with interactive CET media using multimedia assistance. The media is packed with attractive and easy-to-understand animated displays and uses sound and music to further enhance student learning. CET -based teaching materials developed are equipped with learning CDs that contain all the material and quizzes in the form of soccer games.

At the development stage the results of the teaching material are flushed and the development activities carried out at this stage are preparing softwere which will be used to make the design into a teaching material product. The software used is

Macromedia Flash. Components included or added in the developed teaching material include: core competencies, basic competencies, indicators, learning objectives, concept maps, acid and base tables, tables of some acid and base compounds, internet sites for acid and base solutions, chemical info, practicum , quizzes, questions packaged in the form of games, summaries, glossary answer keys, indexes and periodic tables. Standard for teaching material assessment uses BSNP assessment standard.

Implementation Stage

At the implementation stage, it aims to see the weaknesses and advantages of chemo-edutainment- based teaching materials. At this stage the activity carried out is to start using teaching materials developed in real learning or environments, reviewing the objectives of product development, interaction between students and the evaluation process. After the application of teaching material is then carried out an initial evaluation in the form of a quiz.

Standardization of research instruments

Before conducting the study, twenty questions were prepared in the form of multiple choices of 30 questions with 5 options (a, b, c, d, e). In order to be used as a research instrument, an analysis of the problem was carried out. The test was tested on 32 class X high school students. From these tests the following results were obtained:

Test validity

The validity of the test instrument is calculated using the moment product correlation with the provisions if $r_{count} > r_{Table}$ at $\alpha = 0.05$ with $n = 32$ then the problem is said to be valid and vice versa if $r_{count} < r_{Table}$ then the problem is said to be invalid. Of the 30 questions that were tested there were 22 valid questions and 8 invalid questions.

Different power

The ability of a question to be able to distinguish between students who have high ability and students who have low ability can be measured by the distinguishing power of test instruments. Based on the calculation of the distinguishing power of questions categorized by the excellent difference of 1 question, 19 questions are good, 4 questions are enough and 6 questions are bad.

Reliability

Reliability is the ability or reliability of a measurement so that if the tool is used it always gives consistent results. This reliability test was determined using the Kuder& Richardson formula (KR-20). Based on the overall reliability test, the reliability of the test (r count) was 0.9035. After compared with rTable = 0.349. So r count>rTable. At $\alpha = 0.05$ with $n = 32$ thus the questions in the research test instrument are reliable.

Before the two samples are given a different treatment first given an initial test that

aims to determine the initial abilities of each student in both classes. Furthermore, a different learning is carried out, namely the experimental class in the learning process using teaching materials from the development and the control class in the teaching process using teaching materials without development. At the end of the learning process a final test will be obtained to determine student learning outcomes.

Normality test

Normality test was performed on pretest, posttest, and gain data using Kolmogorov-Smirnov with a significance level @ = 0.05. Data are normally distributed if the probability or sig. > 0.05. Based on Table 4.6 it can be seen that the entire data (pretest, posttest data) is normally distributed with a significance value> α (0.05). The complete data normality test results can be seen in appendix 20.

Homogeneity test

Homogeneity test data is performed to determine whether the two groups of samples come from homogeneous populations or have the same initial ability or not by testing students' pretest data with the Levene Test at a significance level of 0.05. Based on Table 6 homogeneity test results, the data are homogeneous with a significant value> 0.05. Descriptive data on homogeneity testing results using SPSS 21 for Windows.

Evaluation Stage

At this evaluation stage competency is measured in the form of a final test and questionnaire. The evaluation result data states that the final test results in the control class has an average value of 68.28, this means there are still some students who score below the KKM value. Whereas the experimental class had an average value of 78.28. As for the motivation in the control class has an average value of 63.78 this means moderate motivation. In the experimental class has an average value of 77.91, this means high motivation. This means the media of teaching materials helps in learning and increases student motivation.

The average value of the percent increase in learning outcomes in class XI experiment was 63.26% while the average value of the control class was 46.95%. Based on the percent results that the increase in learning outcomes in the experimental class is higher than in the control class. Factors affecting the improvement of student learning outcomes are in the implementation of learning the role of teaching materials and instructional media support many theoretical understandings or to the questions contained in the evaluation paga. Chemical teaching materials based on acidic and basic solutions based on CET emphasize an active, creative and enjoyable learning process. In the developed chemical teaching materials equipped with media there are evaluations that are packaged in the form of games. Thus the implementation of learning can be done in a pleasant atmosphere but the learning objectives are still achieved well.

IV. CONCLUSION

Based on the formulation, objectives, and results of research discussions on the development of chemical teaching materials for acid and base solutions based on chemo-edutainment (CET) conclusions are obtained as follows: (1) Development of chemical teaching materials for acidic and basic materials based on chemo-edutainment (CET) has been concluded meet the eligibility standard referring to BSNP (National Education Standards Agency) and is appropriate to use. (2) The teaching material developed is equipped with an evaluation in the form of an animated game that meets the standard of eligibility and is suitable for use. (3) There is a significant difference in student learning outcomes given the learning with chemo -edutainment-based chemistry-acid edutainment (CET) chemistry materials developed in this study is better than student learning outcomes without chemical teaching materials of acidic and basic solution materials that have been developed. And (4) learning motivation of students who learn chemistry teaching materials using acid-based and chemo-edutainment (CET) -based materials is better than without chemical teaching materials of acidic and basic solution materials can be seen from the results of learning.

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STEM-based multimedia design for stimulating HOTS on water and wind energy topic: Physics teacher perception

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Abstract.
The aims of this research is to design a STEM-Based Multimedia Design for stimulating HOTS on water and wind energy topic. The method in this research is Research and Development using the ADDIE model from Reiser and Mollenda, which consists of five stages, specifically: analysis, design, development, implementation, and evaluation stages. This study describes the results up to the Analyze and Design stages by descriptive qualitative analysis. Analyze Stage is done by distributing questionnaires product needs analysis on senior high school students and teachers of physics in Lampung Province by google form. Design Stage made with sheet validation by the practitioner using a Likert scale Validator product design consisting of ten professional physics teachers with qualifications Master of Physical Education. The research results obtained that it is needed the development of STEM- Based Multimedia Design for Stimulating HOTS on Water and Wind Energy topic. The multimedia design that has the potential to stimulate HOTS on the water and wind energy materes consists of videos and animation of water and wind energy power plants that contain all components of STEM. Because the design was obtained valid to used, so, further research to develop STEM-based multimedia for stimulating HOTS on water and wind energy materials is needed.

1. Introduction

The development of the Internet of Things, which was followed by the emergence of new technology in data science, artificial intelligence, robotic, cloud, three-dimensional printing, and nanotechnology are characteristics of the industrial revolution 4.0 [1]. This era requires every human being to prepare themselves to realize a quality golden generation of Indonesia. One form of self-development to create quality human resources is through education [2,3,4].

Education in the 21st century (4.0 industrial revolution era) requires students to have 4C skills (Creative, Critical Thiking, Communicative, and Collaborative) [5]. 4C skills lead to higher-level thinking skills (HOTS). HOTS is the ability to examine, connect, and evaluate all aspects of a problem including gathering, organizing, remembering and analyzing information [6,7]. Meanwhile, according to Anderson and Krathwoll, based on

Bloom's taxonomic revision, HOTS is the ability to analyze, evaluate and create (the top three skills from the cognitive level) [8,9]. HOTS has an important role in learning, especially in learning physics which requires us to study physical events in everyday life, both real and abstract [10,11]. Therefore, to train HOTS in learning physics, we need stimulus in learning.

Stimulus in learning is needed to arouse and increase students' attention to the learning topic and provide opportunities for students to foster their curiosity and their ability to investigate information [12]. To realize HOTS as a result of learning, the stimulus presented must be contextual and interesting [13]. One stimulus that can be used in learning is the variation technique in the use of learning media. Learning media that might stimulate HOTS is multimedia.

Multimedia is a learning media that is able to present information factually, conceptually, effectively and efficiently, so that, learning becomes more interesting and can increase students' motivation in learning, because the learning topics presented are not only in the form of text but also contain pictures, audio, videos, and animation. [14,15,16,17,18,19,20] However, based on the results of the analysis of student needs, it is known that currently, multimedia in schools has not been designed to stimulate HOTS, especially on the topic of renewable energy, on the sub-topic of water and wind energy which is very abundant in Indonesia.

Renewable energy is a topic that is very important for students to learn in order to deal with resource problems in the environment. this is explained in a Joint Decree of the Minister of Environment and Forestry and the Minister of Education and Culture, No.07/MenLH/06/2005 No.05/VI/KB/2005 about fostering and developing environmental education. In this joint decree, it is emphasized that environmental education is integrated with existing subjects in school, and the integration rules are contained in the copy of attachment of the Regulation of the Minister of Education and Culture No. 69 of 2013, which stated that renewable energy in physics subject is expected to be able to present the idea of solving the problem of limited energy resources, alternative energy, and its impact on life [21]. Therefore to achieve these basic competencies, the right learning approach is needed to be applied in multimedia in the topic of renewable energy.

The learning approach that is considered suitable for multimedia and in accordance with 2013 curriculum is STEM approach [22,23]. STEM is a learning approach that uses the inter-science approach i.e. science, technology, engineering, and mathematics [24,25,26]. The application of STEM is done by active problem-based learning [27]. This approach is considered suitable for stimulating HOTS. Because through this approach, students will get used to thinking in different ways so that they will form their logic of thinking. This approach makes learning more meaningful through the systematic integration of knowledge, concepts and skills to solve everyday problems in various fields of science [28].

Therefore, in order to create a multimedia that can meet the needs of the 21st century education and in accordance with 2013 curriculum, an analysis of the needs of students and physics teachers must be done to develop STEM-based multimedia design

to stimulate HOTS on the topic of water and wind energy which is valid based on teacher perceptions.

2. Methods

The method used in this research is the Research and Development (R&D) method with ADDIE (analysis, design, development, implementation, and evaluation) instructional media development model.

Figure 1. ADDIE Development Model[29].

However, this study only describes the development process up to the Analyze and Design stages through qualitative descriptive analysis. This research was only up to the design stage because this study aimed to develop a multimedia development design that is in accordance with the physics teacher's perceptions of water and wind energy. This design will be used as a reference for the development of STEM-based multimedia to stimulate HOTS in water and wind energy materials. The scheme of this research procedure is illustrated in the following chart:

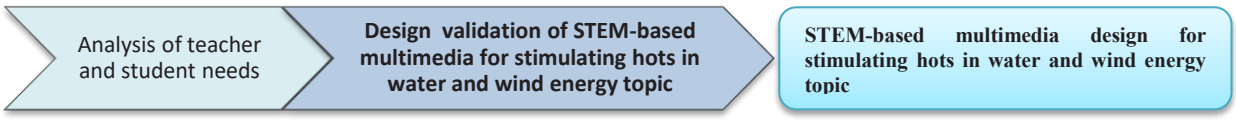

Figure 2. Research Procedure

In the analysis stage, we asked 43 students and 32 physics teachers in Lampung Province to fill out a needs analysis questionnaire consisting of 30 questions for teachers and 25 questions for students through a Google form. The analysis of needs aimed to get information about real conditions in the learning process. The data obtained were analyzed with quantitative descriptive using percentage technique.

In the Design stage, we asked 10 physics teachers to become multimedia design validators, then, we asked them to give an assessment through a validation sheets that used a Likert scale with five choices: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree, and (5) strongly agree [30]. . Multimedia design in the form of tables, story boards and charts are attached in the validation sheets. Design assessment instruments are provided in Google Form. The feasibility interpretation test is listed in table 1 below:

Table 1. Feasibility Interpretation [31].	
Average Score	**Decision**
4,20-5,00	Very suitable for stimulating HOTS
3,40-4,19	Suitable for stimulating HOTS
2,60-3,39	Quite suitable for stimulating HOTS
1,80-2,59	Not really suitable for stimulating HOTS
1,00-1,79	Not suitable for stimulating HOTS

3. Results And Discussion

Based on the results of physics teachers' needs analysis, we get the results as shown in table 2 below :

Table 2. Results of teachers' needs analysis

No	Statement Analysis
1.	93,8% of Physics teachers have implemented the 2013 curriculum revision in school.
2.	87,5% of Physics teachers have given higher-order thinking skills question to their students.
3.	87,6% of Physics teachers provide opportunities for students to discuss a problem with their group-mates.
4.	90,7% of Physics teachers give students the opportunity to exchange ideas and discuss them.
5.	93,73% of Physics teachers give students the opportunity to analyze the problems given during learning.
6.	90,8% of Physics teachers give students the opportunity to look for other sources to improve students' critical thinking ability.
7.	90,6% of Physics teachers give students the opportunity to discuss and present the topic.
8.	90,6% of Physics teachers give students the opportunity to solve problems in their own way.
9.	93,8% of Physics teachers give students the opportunity to do experiments.
10.	87,5% of Physics teachers give students the opportunity to present the results of their experiments in class (doing presentation).
11.	96,9% of Physics teachers give students the opportunity to complete experiments with physics concept.
12.	94,9% of Physics teachers use scientific approach in learning.
13.	96,9% of Physics teachers use media in learning.
14.	96,9% of Physics teachers apply fun physics learning.
15.	72,2% of Physics teachers have multimedia based learning resource.
16.	90,6% of Physics teachers have heard about multimedia based learning resources.
17.	90,6% of Physics teachers have used the STEM learning approach.

No	Statement Analysis
18.	37,5% of Physics teachers have developed *multimedia* learning resources with the STEM approach to stimulate HOTS.
19.	80,7% of Physics teachers need *multimedia* learning resources with the STEM approach to stimulate HOTS.
20.	84,45% of Physics teachers want to apply *multimedia* learning resources with the STEM approach to stimulate HOTS.
21.	81,5% of Physics teachers hope that STEM-based multimedia learning are effective to stimulate HOTS.
22.	87,5% of Physics teachers hope that STEM-based *multimedia* learning can be used in learning process.
23.	90,7% of Physics teachers hope that STEM-based multimedia could make students interested in learning physics.
24.	93,8% of Physics teachers are interested in using varied learning resources.
25.	84,4% of Physics teachers need STEM-based *multimedia* learning resources to stimulate HOTS.
26.	65,6% of Physics teachers feel they have not delivered the renewable energy topic completely
27.	84,4% of Physics teachers have not provided experiments on renewable energy
28.	83,3% of Physics teachers do not use multimedia when learning renewable energy.
29.	87,5% of Physics teachers provide questions related to higher-order thinking skills in renewable energy test.
30.	75% of Physics teachers have not stimulated higher-order thinking skills with the STEM approach in Static Fluid topic.

Table 3. Students' needs analysis

No	Statement Analysis
1.	67,4% of Students stated that they did not like Physics subject.
2.	51,2% of Students stated that physics is a difficult subject.
3.	79,1% of Students feel that physics is boring.
6.	48,8% of Students can work on higher-order thinking skills questions.
7.	95,3% of Students are given the opportunity to discuss the concept with group-mates.
8.	97,7% of Students are given the opportunity to exchange and discuss their ideas.
9.	95,4% of Students are given the opportunity to analyze the problems given by teachers while learning.
10.	97,7% of Students are given many opportunities by physics teachers to look for other sources.
11.	95,4% of Students are given the opportunity by physics teachers to present the results of the discussion.
12.	83,7% of Students are given the opportunity by physics teachers to solve

No	Statement Analysis
	problems in their own way.
13.	95,2% of Students are given the opportunity to do physics experiments.
14.	93% of Students are given the opportunity by physics teachers to present their work in the classroom.
15.	93% of Students are given the opportunity by physics teachers to complete experiments using physics concepts.
16.	88,3% of Physics teachers use a less attractive-physics learning media.
17.	86% of Students feel that their teachers are not good at conveying physics learning by applying a science, technology, engineering, and mathematical approach.
18.	86,1% of physics concepts they studied did not apply Science, Technology, Engineering, and Mathematics.
19.	86% of Physics concepts that I learned can be applied in everyday life.
20.	100% of Physics learning will be effective when using interesting *multimedia* learning.
21.	100% of Students are interested in the multimedia.
22.	93% of Students feel confident that learning Physics using *multimdia* learning will be interesting.
23.	76,7% of Students feel that Static Fluid topic is so boring.
24.	97,6% of Students agree that if physics -especially on the topic of renewable energy- is presented with multimedia learning will be more interesting.
25.	88,3% of Students think that they will understand the concept of renewable enegy if it presented by an interesting *multimedia*

Based on the analysis of the statement above, we know that almost all physics teachers in Lampung have implemented the 2013 curriculum and have given HOTS questions to students, and most of the physics teachers have known the STEM learning approach. But, on the results of student questionnaires, students feel that the learning that they have received does not link science, technology, engineering and mathematics properly or learn to link the concepts of physics to everyday life. The teacher also did not develop special multimedia with the STEM approach to stimulate HOTS. Especially on the topic of renewable energy which most of the teachers claimed to have not done the learning on this material precisely and have not provided any experiments related to the topic of renewable energy. In fact, learning using multimedia is possible, because most schools have multimedia-based learning infrastructure. And based on the questionnaires regarding the needs of physics teachers, almost all of them want to apply STEM-based multimedia specifically to stimulate HOTS on the topic of renewable energy. The teacher also predicted that multimedia with STEM approach is effective for stimulating HOTS on the topic of renewable energy. And most students also think that using multimedia for learning on the topic of renewable energy will be very interesting. Because based on the results of student questionnaires, it is known that most students do not like physics. Students feel physics is difficult and boring because it is less interesting. This sort of thing was also expressed several times by previous studies.

Esti's research stated that multimedia is effective to improve student learning outcomes [14]. Gunawan's research and Chen's research which stated that Multimedia was effective in increasing Physics concept understanding [15][19]. Therefore, based on the results of the analysis of teacher and student needs, as well as the results of previous research, we conclude that physics teachers in Lampung need STEM-based multimedia that is valid, effective, practical, and able to stimulate students' HOTS..

Based on the results of the needs assessment, we continue to develop into the design phase. At this stage, we made a research design in the form of a multimedia design chart, a multimedia story board, and a multimedia design table based on the analysis of teacher and student needs. Furthermore, the design is given to the design validators consisting of 10 professional teachers with a Masters in Physics Education qualification to be validated. The results of this validation are written in table 3:

Table 3. Design validation results

Category	Topic 1	Topic 2	Topic 3
The content is compatible to stimulate HOTS	4,6	4,6	4,6
Content compatibility with STEM components	4,6	4,5	4,5
The Suitability of Features and Multimedia Content to STEM to Stimulate HOTS	4,5	4,6	4,7
Average	4,57	4,57	4,61

Based on the results of the validation in table 3, it is known that all the criteria in the validation results are in the range of 4,20-5,00 with "Very suitable for stimulating HOTS" category. From the results of this validation also received positive support to immediately realize the development of this STEM-based multimedia to stimulate HOTS. Besides giving comments, the validator also gave advice to give attention in stimulating the ability to find ideas to design hydro and wind power plants, they also suggested to pay attention to the prerequisite knowledge about the concept of electricity in its application to the hydropower system and the availability of teachers to guide students.

Based on the results of the design validation, we made the following research design chart:

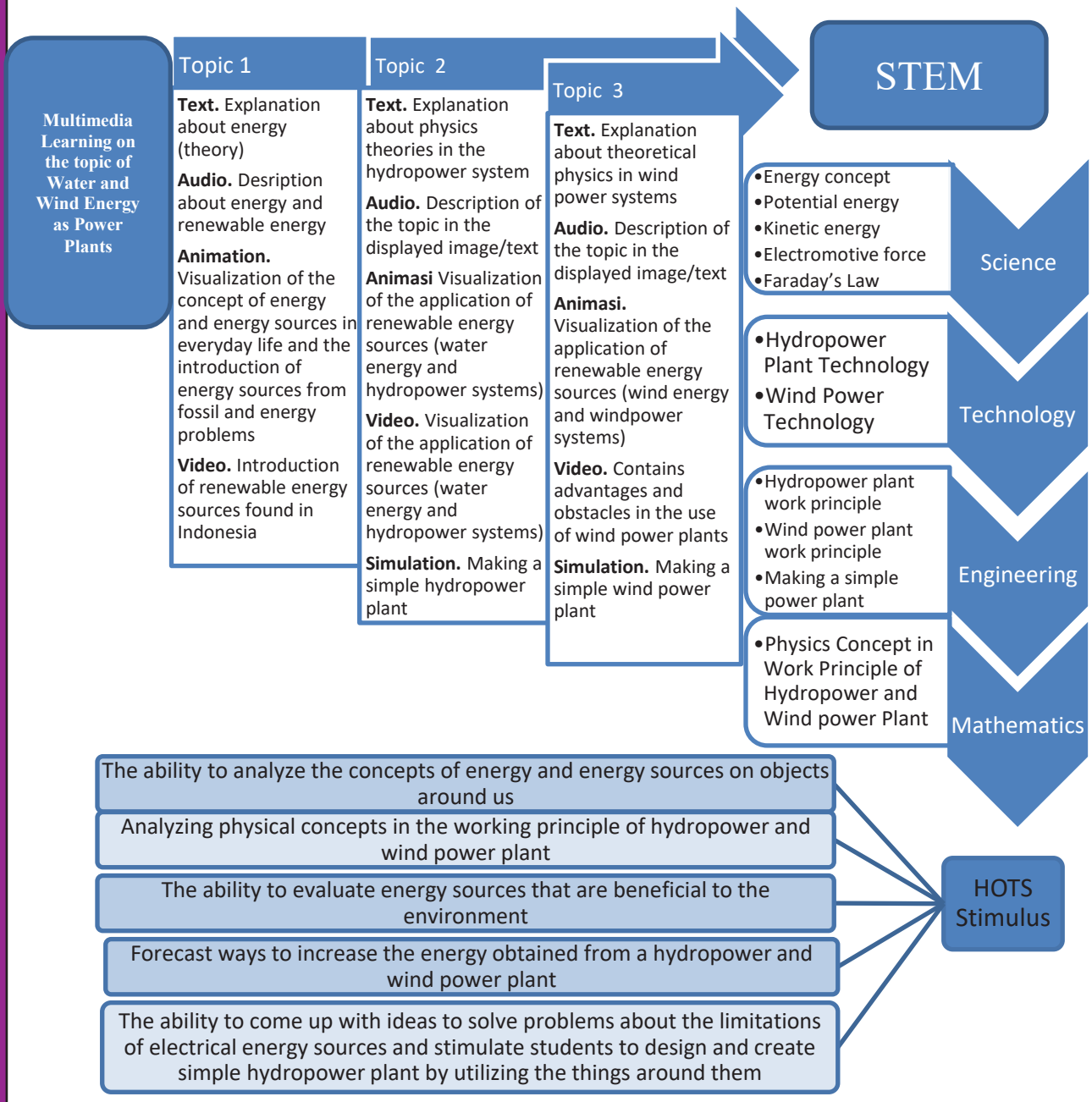

Figure 2. Multimedia Development Design

The chart illustrates that the topic of multimedia is divided into three: the concept of energy and renewable energy sources, hydropower and wind power plants. The research design chart illustrates that the features used in multimedia are text containing theoretical explanations and inducement questions to direct students' thinking. Audio which contains a description of the material from water and wind energy as electricity generation. Video introduction to abundant renewable energy sources in Indonesia and in the form of visualization of the advantages of using water and wind energy sources as power plants. Animated visualization of the concept of energy and energy sources in everyday life, the introduction of energy sources from

fossil materials, energy problems and visualization of the application of renewable energy sources, namely water and wind energy and the work system of hydroelectric power. The simulation of making a simple power plant, and will be added with an interactive quiz as an enrichment. The use of these features in multimedia can help visualize abstract concepts, making it easier for students to understand learning topics[27]. In accordance with some previous studies which have revealed that the use of instructional videos is very effective because video help students to understand the concepts of physics[31][32]. The use of simulations in learning helps students visualize problems and the solutions, it can also foster a positive attitude towards physics [15]. the use of animation in learning physics also helps students to understand physics concept [33], and based on Andriani's research, the use of animation in learning has been proven to increase students' HOTS [34]. So that, the multimedia design depicted in the chart in Figure 2 uses these features to potentially stimulate HOTS in water and wind energy in the renewable energy topic. The multimedia design illustrated that the features used were integrated with STEM. STEM integrated multimedia based on this research has the potential to stimulate HOTS of students, namely the ability to analyze, evaluate and create. In accordance with previous research which states STEM improves higher order thinking skills [35].

4. Conclusions and Suggestions

Based on the research results, at the analysis stage, it is known that a STEM-based multimedia on the topic of water and wind energy is needed to stimulate HOTS. At the Design stage, it was found that the multimedia design that was developed was valid with high criteria, so, the design is feasible to proceed to the development stage.

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Customary Existence Lampung *Nayuh* In The Case Of *Ngennipandai* And *Pangan* In The Era Of Globalization In Kotaagung District, Tanggamus Regency, Lampung Province

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Abstract:
The custom of Lampung Nayuh in terms of *ngennipandai* and *pangan* as a form of gratitude or happy expression as well as notification to the community for the held of a marriage or circumcision. The purpose of this research is to find out the existence of customs Lampung *nayuh* in the case of *ngennipandai* and *pangan* in the current era of globalization. This research uses descriptive qualitative research types with ethnographic approaches. The location of the research was carried out in Kotaagung district, Tanggamus regency, Lampung Province with research subjects is a community of Kotaagung district who is also a traditional leader Lampung in Kotaagung district. The results showed that 1) Customary existence Lampung *nayuh* in the case of *ngennipandai* and *pangan* still preserving the customs Lampung *nayuh* in the case of *ngennipandai* and *pangan*in a sacred manner complete with all the customary processes that have existed since ancient times, but many of the customary series that are used have not been used or have undergone changes due to the role of the clan customary leaders themselves and also the influence of modern globalization. 2) Custom Lampung *nayuh* in the case of *ngennipandai* and *pangan* can be used as learning for students or the next generation of the nation today as a source of social studies learning which should be introduced more by educators to the younger generations. Because in lampung traditional event contains various social studies education that can be learned the meaning in each process.

Keywords: Existence, The Custom of Lampung *Nayuh*, *Ngennipandai*, *Pangan*, Globalization, Social Studies Education

I. INTRODUCTION

Custom of Lampung *nayuh* in the case of *ngennipandai* and *pangan* means the traditional ceremony of the community Lampung *saibatin* who a few days earlier had to inform the community by visiting the surrounding community house and at the time and place that had been determined to do a big meal together. The three customs are interrelated with the community province Lampung especially the community county Kotaagung. Based on the results of interviews with several informants at the time of the research that the existence of custom Lampung *nayuh* himself experienced binding while in the matter *ngennipandai* and *pangan* it is suspected that they have

begun to decline due to changes in the series of customary processes and social changes in society.

The government has prepared a forum in the form of social studies education so that we as a society can respect our own customs and culture so that we don't lose it in time. Through social studies education, the unique things that exist will become more sustainable. The inheritance will continue to explore the good things in it. So through this social studies education, it is hoped that the young generation in this era of globalization can continue to maintain their customs and culture as national assets towards a more advanced nation.

II. LITERATURE REVIEW

A. *Strengthening Social Studies Education*

Social Sciences (IPS) is one of the subjects applied to primary and secondary education; even now it has reached the college level. IPS is a subject developed integratedly by taking essential concepts from Social Sciences and Humanities, consisting of various disciplines such as geography, sociology, economics, history, and anthropology. IPS examines various social problems and phenomena that often occur in the community [8].

The purpose of social studies is to prepare students to become good citizens of life in society. Strictly speaking he said "*to prepare students to be will-functioning citizen in a democratic society*". Another goal of social studies education is to develop the ability of students to use reasoning in making decisions about every problem they face [13].

B. *Definition of Globalization*

Globalization of organizations and communication between communities around the world to follow the same systems and rules [11] It takes local wisdom that is owned by each region or community to fight the swift currents of globalization. Indonesian local wisdom can be found in the values of kinship which are manifested in mutual cooperation, kinship and togetherness. These values can be a form of resistance to the dominance of individualization resulting from globalization.

Likewise, a culture of tolerance that feels and has empathy for others, in other words respecting fellow humans can be used as weapons in fighting "*free market*" globalization that makes people a commodity at a certain price. The appreciation of traditions, ceremonies, rituals that become the wealth of the local community becomes a force that can balance the power of globalization. However, local wisdom should not be used as a basis for fundamental or self shutting down from globalization, because globalization also has positive impacts that are useful for the development of human life. In this case, local values or identities must again be respected [12].

C. Nayuh

Nayuh can be meaning as a series of traditional Lampung ceremony processions *saibatin* by large families performed during weddings, circumcision, thanksgiving and others through *mupakat sengalamban* (core family deliberations), *himpun adat* or *mupakat sengamuakhian* and *mupakat sengapekon* (one village deliberation) which in it discusses about *nayuh* or *tayuhan*. The large family will be in consultation to prepare various equipment and equipment, such as *ngakuk bulung*, *nyani kubu*, *budandan*, *nyakhak bulung*, *nyakhak hibus*, *nyani bukha*, *nyani buak* (materials used to decorate the place *nayuh* and raw materials for making food), and so forth (Interview result Januari 14, 2020) [9].

Nayuh is *beguwai jejama aguk minak muakhi anjak khedik* or *jak jawoh*, *ngawin* or *nyunat si khadu ditatu ko* customary deliberations (a reception with all family, relatives, relatives, close and distant with deliberation and customary deliberation) (Interview result Januari 20, 2020) [10].

D. Ngennipandai

Ngennipandai is sending someone to inform the immediate family or family in one clan and community that will be held *nayuh* with traditional dress *minjung* (cap and sarong that is worn up to the knees), to tell the *penyimbang* custom by carrying betel and *buak tuha* (traditional Lampung cakes). While *ngennipandai* ordinary people do not need to wear traditional clothing *minjung* and only carry betel (Interview result Januari 14, 2020) [6].

E. Pangan

Pangan is to eat together and share the average of all the people who attend the event *nayuh* by serving or *butanjakh pangan* is a joint dining event held after all the community gathers and carries out a series of activities in the event *nayuh* by serving food or *butanjakh*, food served by both rice and cake is placed on top *talam* or *pahakh*. One *talam* which caters for 4, 6, or 8 people, after the meal finished both the rice and the remaining cakes were divided equally to take home (Interview result January 14, 2020) [2].

F. Definition of Existence

Existence is a dynamic process, a being or existing. This corresponds to the origin of the word existence itself, namely *exsistere* which means out of, beyond or overcoming. So existence is not rigid and stalled, but rather pliable or supple and undergoes development or otherwise setbacks, depending on the ability to realize its potentials [1].

III. RESEARCH METHODS

The research method used in this research is descriptive qualitative research type with ethnographic approaches. according to Spradley (1990: 22-35) in Hanifah (2010: 14–17) the ethnographic research cycle includes six steps: 1) Ethnographic project selection; 2) Asking questions; 3) Data collection; 4) Recording data; 5) Data analysis; 6) Report writing [5].

Data analysis was carried out after all data was collected and then written descriptively qualitatively, and on each *pekon* conclusions will be made based on a series of traditions that are still being implemented, whether they have changed or not, which will then draw conclusions from these data. The object of this research is the existence of Lampung *nayuh* custom in terms of *ngennipandai* and *pangan* in the era of globalization in Kotaagung district, Tanggamus regency, Lampung province. The subjects in this study consisted of several informants who were the people of Kotaagung district who is also a traditional leader from Lampung in Kotaagung district, Tanggamus regency, Lampung province.

IV. RESULTS AND DISCUSSION

The existence of *nayuh* in terms of *ngennipandai* and *pangan* currently a form of gratitude and notice to the public for gratitude for circumcision reception or marriage. The following researchers present the results of the research survey conducted *pekon-pekon* in the three clans in Kotaagung district. The research is based on the results of interviews with traditional leaders in the *pekon*.

Table 1. The existence of the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan* in recent years

No	Area/ Clan	Pekon	Nayuh			Ngennipandai			Pangan		
			2017	2018	2019	2017	2018	2019	2017	2018	2019
1	Buay Nyata	- Kedamaian	8	12	17	6	5	4	7	8	7
		- Kusa	7	10	13	5	5	3	7	7	8
		- Terbaya	5	6	8	3	2	2	5	5	4
		- Waysom	6	7	11	4	2	0	5	5	3
		- Teba	8	9	12	7	5	2	8	9	9
		- Kotaagung Kampung	12	14	18	10	8	5	11	8	7
	Buay	- Kagungan	10	14	15	7	5	2	8	11	7
		- Kerta	9	11	12	7	6	2	7	8	8
		- Umbul Buah	13	14	15	9	6	3	9	9	7
	Buay	- Menggala	17	19	20	11	9	2	10	7	5
		- Suka Banjar	10	12	15	7	5	2	6	5	3
		- Mulang Maya	11	13	16	7	6	4	7	5	5
		- Kampung Baru	8	13	17	6	4	1	8	6	5
		- Tanjung Jati	5	6	9	4	2	1	4	5	4
		- Banjar Manis	10	14	15	7	6	5	9	6	5
Total			139	174	203	100	76	38	111	104	87

Source: Primary data from research results in 2020.

A. *Implementation of Lampung Nayuh Customs in terms of Ngennipandai and Pangan*

1. *Nayuh*

At the implementation stage *nayuh* divided into three processes, namely the preparation process, the equipment process and the implementation process.In the preparatory procession, the first thing the family who will do the *nayuh* will do is *mupakat* (deliberations or meetings) nuclear family to determine the day and date of the traditional *nayuh*, which is then followed by *mupakat sengamuakhian* or *himpun adat* and *mupakat sengapekon*. As expressed by Mr. Bunyana (65 tahun) *adok* "*Dalom Batin Jaya*", Nuclear family deliberation, a family meeting of one customary leader and a community meeting of one village are usually held one month before the *nayuh* is held. The purpose of deliberation is to determine the day of the traditional *nayuh* event and determine who will be role models in the traditional *nayuh* event". (Interview results May 4, 2020) [3].

And at the time of the procession *nayuh* a lot of equipment will be used, ranging from traditional equipment for the room, equipment for processions, equipment for traditional clothing, and equipment for *pangan*. All equipment used in each clan is almost the same, namely *kubu* (tent), *kasukh* (mattress), *appai* (mat), *lelidung*; *tikhai*; *leluhukh* (cloth to decorate the wall) *seprah* and *papah seprah* (food mats like tablecloths but are long), *talam* (round tray), *pahakh* (the tray is round and legged), *awan gemesekh* (walking tents, equipment used only by *saibatin* descendants during processions), *juli/jajuli* (traditional equipment which is carried on a stretcher which is closed using a special white and transparent *kebung/kelambu* net which is only used by the offspring *saibatin* during a procession) *terbangan*/tambourine, utensils for eating such as plates, glasses, cutlery, and much more.

While the stages that are passed when *nayuh* in each clan in general are the same. Starting with the host opening the event *nayuh* begins with a series of wedding ceremony (if at *nayuh ngawin*) followed by a prayer together with the fathers of the *pekon* community. If the marriage agreement has been held before holding *nayuh* then the first one to be performed is a joint prayer and immediately *ngehappokh* (breakfast and eat cake together which is on the plate). Then hand over the *pedatong* from *kuakhi* or *kelama* (in-laws or parent's origin). Then proceed to *ngarak* eventnamely a procession by the family, *mulli-mekhanai*, Some of the *pekon* community, both brides and circumcised brides, go to the *saibatin* house to be dressed in traditional bridal accessories.

When *ngarak*, The bride and groom are paraded using *juli* accompanied by *mulli* and the women behind the bride with the verses of the hadrah rhymes in Arabic and Lampung language accompanied by a typical Lampung tambourine beating. And in the front row are *mekhanai* and fathers who act as opening the way for the *ngarak* by presenting *piccak khakot* and *khudat* who walk back to the family house that performs *nayuh*.

Arriving at the house, back at the family house, which performs *nayuh mulli-*

mekhanai, sitting in a position facing each other, which will later present a *deduay* (*mulli-mekhanai* event) followed by a traditional Lampung dance performance. Then both the circumcised bride and the *ngawin* bride continued with a *butammat* event (read the holy Quran verse at chap 30). In *nayuh ngawin* for *saibatin* offspring, after *butammat*, *adok* is given according to the level in the *saibatin* family.After finishing the *buadok* event (giving *adok* /title) followed by a food event *buak* (eating cake together from *talam* or *pahakh*). All invited guests who were present, both near and far, ate the cake that had been provided in the *talam* or *pahakh*. And the last is *pangan mi* (eating rice and its side dishes that have been provided in the *talam* and *pahakh*).

2. *Ngennipandai*

Ngennipandai is divided into two parts, namely: 1) *Ngennipandai* traditional leaders and; 2) *Ngennipandai* ordinary people. In the *Buay* real clan and *Buay Belunguh* if *ngennipandai* the traditional clothing figure that must be used is called *bulipat*, and named *minjung* in the *buay turgak* clan.

Namely wearing trousers and a sarong up to the knees and a cap for men, and wearing a sarong and scarf for women in addition to wearing a head scarf, carrying a *buak tuha* (traditional cake), or traditional leaders and carrying *ngasan* (betel nut equipment) consisting of betel, gambier, betel lime, and areca nut for ordinary people who will be identified in the *Buay Turgak* clan. Meanwhile, the *buay* real and *Buay Belunguh* clans carry *pedatong* (souvenirs such as *buak tuha*, sugar, tea and milk) for traditional leaders and do not bring anything to the people who will *dikennipandai*. And *ngennipandai* in ordinary people it is just ordinary clothes and there is no need to wear *bulipat* or *minjung* clothes.

3. *Pangan*

Pangan is the closing ceremony of the *nayuh* program. *Pangan* is differentiated into 2 types: 1) *Pangan Buak*, is eating traditional cakes together that have been provided in the *talam* and *pahakh*. The type of cake served is different between indigenous people and ordinary people, people can cake served in the form of *selippok*, *lepot*, *tapai* and other market snacks. As for traditional leaders, the food served is in the form of traditional cakes such as *cucur*, *wajik*, *peranggi*, *tippa*, *kekakhas* etc. *Pangan buak* this was done before *pangan mi*. 2) *Pangan Mi* is a rice meal with Lampung special side dishes that have been provided in *talam* and *pahakh*. On *pangan mi*, rice as well as side dishes served both to traditional leaders and the common people are evenly distributed. These foods are in the form of white rice, vinegar fish, and *gulai taboh kemunduk*, *gulai taboh kabing*, *gulai taboh takkil*, *masak manuk*, *kukhih*, *sambol* and fresh vegetables.

On *pangan* seating placement for traditional leaders if men are in the living room and if women are in the living room. The position they sit according to the level of *adok* in the clan. For ordinary people, *pangan* can be done in the stronghold, and outside the house in other parts. This is because traditional leaders have a high social status in society.

B. *Functions and Supporting Factors That Affect LampungNayuh Customs in terms of Ngennipandaia nd Pangan*

A culture survives because it turns out to have certain functions for the community concerned The custom of Lampung is *nayuh* in terms of *ngennipandai* and *pangan* does have a function for the social life of the people of Kotaagung district, These functions are interrelated so that the existence of the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan* is maintained [7].

The traditional functions of Lampung *nayuh* in terms of *ngennipandai* and *pangan* are:

1. Maintaining kinship.
2. Maintaining the bonds of solidarity and community harmony.
3. Entertainment.
4. Maintain cultural heritage.

While the supporting factors that affect the existence of Lampung *nayuh* customs in terms of *ngennipandai* and *pangan* are:

1. As a means of notification to the public.
2. The need to get together.
3. The willingness of the people to maintain The Lampung *nayuh* custom.

C. *Supporting Factors and The Role of Several Elements That Affect the Existence of Lampung Nayuh Customs in terms of Ngennipandai and Pangan*

Supporting factors that influence the existence of Lampung *nayuh* customs in terms of *ngennipandai* and *pangan* include:

1. As a means of notification to the public.
2. The need to get together.
3. The willingness of the people to maintain Lampung *nayuh* customs in terms of *ngennipandai* and *pangan*.

Apart from the various roles that contribute to the existence of Lampung *nayuh* customs in terms of *ngennipandai* and *pangan*. Both the role that can influence progress in terms of maintaining and preserving the cultural customs of our ancestors that have existed since time immemorial and the role that can affect the existence of Lampung *nayuh* customs in terms of *ngennipandai* and *pangan* deterioration.

1. ***Role of Local Government***
   a) Hold festivals related to customs and culture in order to introduce and promote the customs and culture of Kotaagung district, Tanggamus regency.
   b) Proposing recognition of Intangible Cultural Heritage (WBTB) whose purpose is none other than so that its existence can be recognized as an intangible cultural heritage.
   c) By creating a Lampung customs Balancing Council (MPAL) which concerns the customs and culture in Tanggamus regency

2. *The Role of the Younger Generation (Single-Girl/Muli- Mekhanai)*

From the *mupakat muli-mekhanai* stage, the day of the implementation of *nayuh* to the end of the event, the *Lampung* custom of *nayuh* in terms of *ngennipandai* and *pangan* cannot be separated from the big role of *muli- mekhanai*. Especially at the event *nayuh ngawin*.Various series of traditional activities are carried out by *muli- mekhanai*.

3. *The Role of Traditional Figures*

Customary figures are people who have the highest status, are respected and their advice is used as role models in society, especially in terms of custom. For example, the customary chief wants *nayuh* to be based on the true traditions of the ancestors and the people follow it.

4. The community has a significant role and role in the

preservation of the *Lampung nayuh* customs in terms of *ngennipandai* and *pangan*, especially the community.

D. Inhibitory Factors and Efforts in maintaining the Existence of Lampung Nayuh Customs in terms of Ngennipandai and Pangan

There are various obstacles that make some families feel hampered from holding the *Lampung nayuh* custom in terms of *ngennipandai* and *pangan*, and even make them completely unable to hold the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan*. These obstacles are as follows:

1. The cost is quite large.
2. Shifting value orientation in society.
3. Long time efficiency.
4. Equipment used quite a lot.

The efforts that need to be made to maintain the existence of Lampung *nayuh* customs in terms of *ngennipandai* and *pangan* are:

1. Try to always introduce custom to the younger generations today.
2. Always Uphold Customary Values.
3. Anticipation of cultural globalization.

Based on some of the descriptions above, it shows that the reason why the people of Kotaagung subdistrict still maintain the *Lampung nayuh* custom in terms of *ngennipandai* and *pangan* their gets a function for their social life,which is also to preserve and maintain the traditional Lampung ancestral heritage that has existed since ancient times so that they can be enjoyed by their children and grandchildren later, although it has undergone many changes and has cost a lot of money and in order to be able to implement the Lampung *nayuh* customs in terms of *ngennipandai* and *pangan*.

E. The Custom of Lampung Nayuh in terms of Ngennipandai and Pangan in the Context of Social Studies Education

There are five perspectives in teaching social studies. The five perspectives have the context of closeness to the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan* as follows [4]:

1. Social Science Education is taught as the Inheritance of Citizenship Values (*Citizenship Transmission*): Community-Centered Approach.
   The concrete example ofsocial studies education being taught as the inheritance of civic values is shown in the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan*at the time of *butamat* which contain religious values, the role of the head of the *battu bebai* and *bakas* during *nayuh* which reflects an attitude of responsibility, and cooperationbetween families who hold *nayuh* with the *pekon*community.
2. Social Sciences Taught as Social Sciences Education Where in the Lampung *nayuh* custom contains many values of social science that can be studied such as history; in which it can be explored how the custom was formed, sociology; such as at the time of the implementation of the traditional Lampung *nayuh*, there are reciprocal ties and others.
3. Social Science Education is taught as a Reflective Inquiry
   The teacher can provide an overview of the problems of the differences between the Lampung *nayuh* custom in the past and the Lampung *nayuh* custom today.Guided by the teacher, ask the child to examine the problem, why the problem arises, what are the consequences of the problem, how to solve the problem.
4. Social Studies Education is taught as Student Personal Development
   With the traditional Lampung *nayuh* event in terms of *ngennipandai* and *pangan*, it can foster students who have a social sense by respecting the cultural heritage of their ancestors which is still preserved today. And can foster positive values in students.
5. Social Studies Education is taught as a RationalSocial Decision-Making and Action Process Including students can study social problems in the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan* which has undergone many changes due to various social factors that arise.

From the five perspectives or contexts of social studies education that have been described relating to the Lampung *nayuh* custom in terms of *ngennipandai* and *pangan*. The author can conclude that the traditional Lampung *nayuh* in terms of *ngennipandai* and *pangan* can be used as learning for students or the current generation of young people as a source of social studies learning which should be introduced more by educators to younger generations. Because in this Lampung traditional event contains various social studies education that can be learned the meaning in each process. Not only Lampung custom, but all the custom and cultures that exist in Indonesia so that they always maintain and maintain the preservation of the customs and culture of the nation itself so that it is not lost to the current era of globalization.

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Development of Power Point Based CD Interactive Teaching Materials to Improve Student Learning Results

Musdalifa Herpratiwi Riswandi

Abstract:

The aim of this research is to describe the development of interactive CD learning materials based on power points to improve students' achievement in mastering IPA, especially the topic about the source of energy. The problems occurring in this research, students cannot master the material very well. Students did not have interesting in learning and they just had active in their activities. The research used is research and development. In collecting the data, the researcher had three types, observation, interview, and test. The results showed that the interactive CD learning material that was developed met the requirements in accordance with the steps of development. Media validation results and material validation results are shown with an average score of 79.8% and 87.2% respectively.Student responses to interactive learning materials scored 81.75% in small-scale trials while large-scale trials scored 85%. Then the teacher responses scored 71.7% and 80.48%, respectively.

I. Introduction

Learning science education in schools should put more emphasis on aspects of knowledge, attitudes and skills of various problems that exist around students. In the teaching and learning process, the media is used to facilitate teaching and learning communication. To expedite the learning process towards a better direction, it is very necessary that the media to assist in the learning process. In line with that according to Sudjana (2009: 2) states that the reasons for learning media can support the learning process of students regarding the benefits of teaching media include: (a) teaching will attract more attention of students so that it can foster motivation to learn, (b) teaching material will be more clearer and better understood by students, so students are able to master the teaching objectives.

Based on observations conducted on Monday, February 26, 2018 in class IV Pahoman 2 Primary School, Bandar Lampung on science subjects, the learning process is still conducted conventionally without the support of the media. This causes students to tend to feel bored during the learning process so that the impact on student learning outcomes is low or under KKM from the learning outcomes obtained are still ± 70% of students have not been completed. The limitation of supporting media results in the learning process of students not being optimal and not attracting students' attention. In this regard, to improve the learning process that is expected to improve learning outcomes, we need an attractive media to foster

enthusiasm, interest, and activate students in the process of teaching and learning activities in the classroom. One alternative to overcoming this problem is to use Power Point-based interactive CD teaching materials.

Media as a tool in the teaching and learning process, therefore teachers are required to be able to use media in learning. In line with that according to Arsyad (2015: 193), "Microsoft Power Point is one of the applications used by people or educators in presenting teaching materials, reports, and their work". With the help of power point media, a teacher can present teaching material to students so that students can more easily transfer their knowledge through presentations given by a teacher to their students in class. Besides making it easier for a teacher to master the class and help students to stay focused with what is explained by a teacher. For computer users, Microsoft Power Point is an application that is commonly used in its activities, especially at presentations. Microsoft Power Point is a software that will help in arranging an effective, professional, and also easy presentation. Microsoft Power Point will help an idea become more interesting and clear its purpose if presented. Microsoft Power Point will help in combining all media elements such as text, images, sound and even video and animation so that it becomes an interesting to media.

Teaching materials used in learning must be interactive so that there is a special attraction from the media. In line with that according to Prastowo, (2015: 328), the word "interactive" implies mutual action or interrelation or active mutual. Thus, interactive teaching materials can be interpreted as active teaching materials, meaning that they are designed so that they can carry out a command back to the user to carry out an activity. Based on the problems that have been raised, the general problem in this study is how the results of the development of interactive CD-based teaching materials Power Point to improve learning outcomes? The specific problems in this study are: 1) How is the development of interactive Power Point based CD teaching materials? 2) Is the development of Power Point based interactive CD learning materials feasible? 3) How big is the student learning outcomes after using Power Point based interactive CD teaching materials? 4) What is the response of students after using Power Point based interactive CD teaching materials?

The general objective in this research is to describe the results of the development of interactive Power Point based CD learning materials to improve learning outcomes. Specifically the objectives in this study are as follows: 1) Producing the development of interactive Power Point based CD learning materials 2) Testing the feasibility of developing interactive Power Point based CD learning materials is feasible 3) Knowing how much student learning outcomes after using Power interactive CD based teaching materials Point 4) Determine student responses after using Power Point-based interactive CD teaching materials.

Learning media are all components of the student learning environment that are used by instructors so that learning takes place more effectively. So that the message or information can be in the form of knowledge, expertise, ideas, experiences and so on when the process of delivering information from the teacher to students can run

smoothly. Power Point is a presentation application program developed by Microsoft Corporation. Like other presentation processing software, Power Point can position text objects, graphics, video, sound, and other objects on one or several individual pages called "slides". In line with that according to Arsyad (2015: 193), "Microsoft Power Point is one of the applications used by people in presenting teaching materials or reports, their work or status". By using Microsoft Office Power Point we can design stunning visual presentations using text, graphics, photos, animations, videos, and so on.

According to the Great Indonesian Dictionary of Nurhairunnisah(2017: 32), the word "interactive" implies mutual action or interrelation or mutual active. Thus, interactive teaching materials can be interpreted as active teaching materials, meaning that they are designed to be able to carry out instructions to the user to carry out an activity. So, this teaching material is not like printed teaching materials or models which are only passive and cannot exercise control over its users. In this interactive teaching material, the user (learners) engages in a two-way interaction with the teaching material being studied.

Furthermore, according to the Guidelines for Bibliographic Description of Interactive Multimedia in the General Guidelines for the Development of Teaching Materials, Minggiarti(2013: 329), "Interactive teaching materials are a combination of two or more media (audio, text, graphics, images and video) which users are manipulated to controlling the commands and or natural behavior of a presentation ". Nowadays, many people have started to use interactive teaching materials, because besides being interesting, these teaching materials also make it easier for users to learn the material. In preparing interactive teaching materials, adequate supporting knowledge and skills are needed, especially in operating equipment, such as computers, cameras, videos and photo cameras.

Interactive teaching materials are teaching materials that combine several learning media (audio, video, text, or graphics) that are interactive to control an order or the natural behavior of a presentation. Thus, there is a two-way relationship between teaching materials and users. So, if the learning process is carried out using teaching materials like this, students can be encouraged to be active.

According to Nataliani (2014: 334), the steps for the preparation and development of interactive teaching materials are as follows: a). First, the title is derived from basic competencies or subject matter according to the size of the material. Basic competence contains a number of abilities that students must have in certain subjects as a reference for compiling competency indicators. While the main material, namely a number of key information, knowledge, skills or values arranged in such a way by educators so that students master the competencies that have been set. b). Second, learning instructions are written clearly so that students are easy to

use. c). Third, supporting information is explained clearly, densely and attractively in written form or still and moving images. d. Fourth, assignments are written in interactive programs. e. Fifth, assessment can be done on the work of assignments given at the end of learning, which can be seen by educators through computers. f. Sixth, use various learning resources that can enrich the material, for example books,

magazines, internet and research journals as material for creating interactive teaching programs.

II. Method

Design of research used is a research and development (R&D) research design following the

Sukmadinanta design (2015: 169). Because interactive learning media is a tool in the learning process, to evaluate the learning process, what is developed is non-test. The step of interactive media development is preceded by a needs analysis followed by determining SK, KD and Story Board, SD Learning Development SD Learning Media and expert studies, Development of Draft II, limited trials, limited trials, field trials, analysis of trial results, and production Interactive CD.

The type of data to be collected is qualitative data and quantitative data. Sugiyono (2014) qualitative data are inputs from media experts and material experts as well as quantitative data in the form of students' response scores (coding scores). Data analysis method is done by using mix-method design triangulation that is by analyzing simultaneously from qualitative and quantitative data as well as combined data. Then use the results of the analysis to understand the research problem. The basis of this data analysis design is the lack of one type of data to be supplemented by other types of data. Quantitative tests were conducted statistically to determine the validity and reliability of teaching materials based on interactive Power Point CDs. Success criteria for development Assessment of learning activities is ≥ 80%, Assessment of student and teacher responses is ≥ 80%, Teaching Materials have a readability level that is easy to understand (readability coefficient> 0.3) and easy to use, Standards of achievement of learning objectives namely the acquisition of individual scores ≥ 65 and the percentage of completeness classically is ≥ 85% of students have achieved a score ≥ 65.

III. Result and Discussion

Development of teaching materials based on interactive Power Point CDs is carried out with development procedures through 7 stages namely: needs analysis, determination of SK, KD and Flowchart, development of elementary learning and elementary learning media, expert studies, field test / implementation stages, analysis of trial results, and interactive CD products. The development of Microsoft Office Power Point learning media on social studies subjects is based on needs analysis. Information gathering is done by analyzing problems and material through field surveys, then proceed with the preparation of draft products. The development of teaching materials based on interactive Power Point CDs is feasible to be used based on the

results of the validation of the material experts and media experts as the basis for revising the media from aspects of learning, content aspects, aspects of appearance and programming aspects. The results of the experts' validation are used as benchmarks for the appropriateness of learning media to be tested in the field.

The development of teaching materials based on interactive Power Point CDs is feasible to be used based on the results of the validation of the material expert and the media expert as the basis for revising the media from the learning aspect, the content aspect, the display aspect and the programming aspect. The results of the experts' validation are used as benchmarks for the appropriateness of learning media to be tested in the field. The percentage of the results of the feasibility assessment of the material experts included very feasible criteria, namely with an average percentage of 79.8%. The percentage of the results of the feasibility assessment of the media experts included the very feasible criteria, namely with an average percentage of 87.2%. Student learning outcomes after using Power Point interactive CD-based teaching materials in limited trials conducted on Grade IV students of SDN 3 Bandar Lampung, in large-scale trials conducted on students in grade IV Pahoman, held on Monday, March 12, 2018. Data The research findings are grouped based on students learning by using Power Point interactive CD-based teaching materials.

The percentage of the results of the feasibility assessment of the media experts included the very feasible criteria, namely with an average percentage of 87.2%. How much student learning outcomes after using Power Point-based interactive CD teaching materials in a limited trial was conducted on grade IV students of SDN 3 Bandar Lampung, held on Tuesday, March 6, 2018. The research findings data are grouped based on students learning by using Power Point interactive CD-based teaching materials. Student responses after using interactive CD-based teaching materials Power Point teacher responses to interactive CD teaching materials outline shows that the teaching materials used are good. This can be seen from the results of small -scale trials obtained by the teacher's response of 71.7% while in large-scale trials obtained by 80.48%. Student responses to interactive CD teaching materials on small-scale trials obtained 81.75%. Whereas in large-scale trials obtained

85%. This shows that students' responses to interactive CD teaching materials are included in the criteria very well.

IV. Conclusion

Based on the results of research and discussion, it can be concluded research conclusionsas follow

1. Planning the development of learning media begins with the determination of competency standards, basic competencies, indicators of learning achievement, and learning strategies to be carried out. The subject matter mentioned is packaged into Microsoft Office Power Point learning media. Learning media is developed with the program language used in the form of commands in Hyperlinks, so that its use is integrated according to the order arranged in the slide.
2. Learning media interactive teaching materials material development of production technology, communication and transportation is very feasible as a medium of learning according to media experts and material experts. The percentage of eligibility scores obtained in detail is explained as follows:

a) Percentage of eligibility based on expert judgment on the material: the percentage of eligibility based on the evaluation of material experts obtained 79.8% included in the very feasible category, and the percentage of eligibility based on the assessment of the media expert obtained 87.2% included in the feasible category.
b) Teaching material interactive CD material development of production technology, communication and transportation can improve student learning outcomes. This can be seen from the score obtained by 63% of students in small-scale trials fulfilling the minimum completeness criteria (KKM ≥ 75). While the scores obtained in the large-scale trial that is equal to 100% remaining have met the minimum completeness criteria (KKM ≥ 75).

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Pengembangan LKPD Berbasis Question, Read, Reflect, Recite, Review (PQ4R) Untuk Meningkatkan Keterampilan Berpikir Kreatif

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Abstrak

Penelitian dan pengembangan ini bertujuan untuk mengembangkan LKPD berbasis *preview*, *question*, *read*, *reflect*, *recite*, *review* (PQ4R) yang layak (valid, praktis dan efektif). Penelitian pengembangan ini menggunakan desain Borg & Gall yang terdiri dari 10 langkah. Pada tahap penelitian ini hanya menggunakan 5 langkah dan terbagi menjadi tiga tahap. Tahap pertama pendahuluan, pada tahap ini digunakan untuk mengambil data awal dan mengkaji kurikulum, selanjutnya pada tahap kedua perencanaan dan pengembangan, pada tahap ini digunakan untuk mendesain LKPD, merancang LKPD, dan membuat LKPD. Pada tahap ini dihasilkan prodak LKPD. Tahap ketiga adalah tahap uji lapangan, pada tahap ini digunakan untuk menguji kepraktisan dan keefektifan. Populasi pada penelitian ini adalah Sekolah Dasar di Gugus Mawar Kecamatan Kotabumi Kota, Kabupaten Lampung Utara. Sampel penelitian ini adalah Peserta Didik Kelas IV. Teknik pengumpulan data yaitu observasi, lembar validasi ahli, dokumentasi, dan angket. Hasil penelitian dan pengembangan yaitu LKPD berbasis PQ4R sangat layak digunakan sebagai bahan ajar dalam pembelajaran kelas IV didasarkan pada hasil penilaian ahli materi 85,5 (sangat baik), ahli media 92,0 (sangat baik), ahli bahasa 93,3 (sangat baik), dan uji praktisi mendapatkan nilai rata-rata 83,5 (sangat baik). Hasil uji n-gain menunjukkan bahwa LKPD berbasis PQ4R yang digunakan efektif dengan nilai yang diperoleh 0,47.

Kata Kunci: LKPD, PQ4R, berpikir kreatif

Development Student Worksheets Based Question, Read, Reflect, Recite, Review (PQ4R) to Improve Creatives Thinking Skills

Abstract

This research and development aims to develop student worksheet based on proper preview, question, read, reflect, recite, review (PQ4R) (valid, practical and effective). This development research uses the Borg & Gall design which consists of 10 steps. At this research stage, it only uses 5 steps and is divided into three stages. The first stage is preliminary, at this stage it is used to take initial data and review the curriculum, then in the second stage of planning and development, at this stage it is used to design student worksheet, design student worksheet, and make student worksheet. At this stage the student worksheet product is produced. The third stage is the field test stage, at this stage it is used to test practicality and effectiveness. The population in this study were elementary schools in the Rose Cluster, Kotabumi Kota District, North Lampung Regency. The sample of this research was grade IV Students. Data collection techniques are observation, expert validation sheets, documentation, and questionnaires. The results of research and development, namely student worksheet based on PQ4R are very suitable for use as teaching materials in grade IV learning based on the results of the assessment of material experts 85.5 (very good), media experts 92.0 (very good), language experts 93.3 (very good), and the practitioner test got an average value of 83.5 (very good). The results of the n-gain test showed that the student worksheet based PQ4R used was effective with a value of 0.47.

Keywords: *Student worksheet, PQ4R, creative thinking skills.*

Introduction

Education is about how to improve students' learning outcomes. This case will continue in order to the future generations can grow and have competitiveness. Education is one of the important things and plays a role in human life. Education is a conscious and planned effort to actualize the leraning process actively in order that students can develop their potential. (Tohir & Mashari, 2020).

In this modern era, the learning process that is applied tends to use the constructivism approach, taken from the word "construction" which means to build. The theory of constructivism realizes that knowledge cannot be transferred just like that, but rather must be interpreted by each individual. Knowledge is also a process that develops continuously. For this reason, a person's activeness is crucial in developing knowledge (Cahyo, 2013);(Qomario et al., 2020).

Education is a field that has an important role in creating competent human resources in the 21st century today. Efforts in realizing these skills in the 21st century require humans who are not only intelligent in thinking from memorizing activities, but

also thinking intelligence which is formed from the habituation process to solve problems and think creatively. 21st century education requires students to process the information they learn through analyzing, assessing, and creating activities. Education has to accommodate the development of students' higher-order thinking skills (Zubaidah et al., 2017). According to (Bialik & Fadel, 2015) the abilities that students in the 21st century must have are Creativity, Critical Thinking, Communication, and Collaboration. Students must be able to use the information obtained to create something new, be able to make sensible opinions, communicate the knowledge gained, and collaborate with other students to build more optimal abilities.

Creative thingking skills is one of the skills that students must have to be able to solve various problems. (Martin, 2009) argues that being able to generate new ideas and ways to produce a product is being able to think creatively. According to (Sambo & El-Yakub, 2012), creative personas individual who provide unique and unusual problem solutions, which is different from other people. Therefore, creative thinking is the way of thinking which is direct to the generation of new ideas or views or new ways of solving the problem.

According to (Runisah, 2016) creative thinking skills is higher order thinking skills. Meanwhile (Birgili, 2015) explains that creative thinking can be interpreted as the regulation of all cognitive activities according to specific objects, situations, or problem solving. Thus, a person who has the ability to think creatively always tries to get new ideas/ideas to solve when faced with a problem.

Based on the results of the questionnaire analysis of the creative thinking abilities of students of the Elementary School of the Kotabumi Rose Cluster, the results showed that 71.7% of students did not like doing experimental activities (detailed aspects). This is because the experimental or experimental activities in finding the concept being carried out are not interesting or too complicated. Then 59.2% of students do not like to give examples that are different from existing examples (including aspects of original thinking). This is because students are accustomed to being faced with concrete problems only at the level of knowledge and understanding. As many as 51 or 42.5% of students easily see errors in solving problems (including in the aspect of fluent thinking). Based on the results of the questionnaire, the three indicators above of the 10 questions in the creative thinking skills questionnaire of students had a calculation result below 50%.

Ideally, quality creative learning can take place if the communication process runs smoothly, so that teaching materials are needed as learning aids. In developing creative thinking skills and supporting the success of the learning process of understanding the material, it is necessary to have the role of teachers, students, and media or learning tools. This is needed in the learning process, where the learning process is essentially an interaction between educators and students. One of the learning media is teaching materials. There are many types of teaching materials available, such as books, modules, and student worksheets. Apart from serving as a guide for conducting activities, discussion guides and other scientific activities, student worksheets also have an important role in the elaboration of the concept of knowledge.

(Prastowo, 2015), student worksheets is a printed teaching material in the form of sheets of paper containing material, summaries, and instructions for implementing learning tasks that must be done by students, which refers to the basic competencies that must be achieved. In addition, student worksheets as a support to increase the activities of students in the learning process can optimize learning outcomes. student worksheets can be useful in terms of academic achievement. For example, as a support for textbooks (Lee, 2014).

The results of observations in the field also found that the learning strategies carried out by teachers were less varied and did not motivate students to learn. One of the learning strategies related to the creative thinking process is the PQ4R Strategy (Preview, Question, Read, Reflect, Recite, Review). The PQ4R strategy is part of the elaboration strategy. The elaboration strategy is the process of adding details so that new information will be more colorful. The elaboration strategy helps transfer new information from short-term to long-term memory in the brain by creating relationships and combinations of new and existing information (Iskandarwassid & Sunendar, 2008).

Furthermore (Trianto, 2011), states that the PQ4R Strategy is a practical strategy that can be applied in various learning approaches. The independence of students in learning will lead to structured learning habits that will develop student learning skills. Furthermore, according to Thomas & Robinson (Novriansyah, 2013) states that the PQ4R strategy is a stimulus that helps students develop their knowledge using six steps, namely: reviewing, questioning, reading, reflecting, retelling and repetition. According to (Anwar & et al, 2012) abilities that include creative thinking are flexibility, originality, fluency, imagery, associative thinking, attribute listing, metaphorical thinking and forced relationship. Guilford (Alghafri & et al, 2014) identifies four main aspects of creative thinking skills, namely fluency (thinking fluently), flexibility (flexible thinking), originality (original thinking) and elaboration (ability to detail).

Based on the above background, researchers are interested in improving the learning process through the development of Student worksheets based on Preview, Question, Read, Reflect, Recite, Review (PQ4R) to improve creative thinking skills.

Method

This type of research, namely research and development or research development. Research and development (Research and Development / R&D) is intended to produce a product. This is in accordance with (Sugiyono, 2013) explaining that R&D is a research method used to produce certain products and test the effectiveness of these products. The type of R&D research used in this study is the design model of (Borg & Gall, 1983). The R&D steps are: 1) initial information collection, 2) planning, 3) product development, 4) initial product testing, 5) product revision, 6) main product trial, 7) main product revision, 8) trial operational products, 9) product revisions, and 10) dissemination.

The R&D research steps used in this study were completed in stage five, namely revising operational products based on the results of the main trials. This is because

step eight and thereafter must be carried out on a large scale, product dissemination must be carried out after going through quality control before it can be published.

Population in this research was Elementary School Gugus Mawar Kotabumi, North Lampung Regency. The sample in this study was grade IV SD N 3 Rejosari, amounting to 8 students. The data collection techniques used were observation, questionnaires, tests, and documentation. The data analysis techniques used in the study were the validity, practicality and effectiveness of student worksheets. The validity category of the student worksheet can be seen in the table below

Table 1. *The validity category of the student worksheet*

Value	Category
86-100	Very Good
71-85	Good
56-70	Enough
0-55	Less

(Aqib, 2009) Furthermore, for the practicality category of student worksheets can be seen in the following table:

Table 2. *Categories of student worksheet practicality*

Value	Category
86-100	Very Good
71-85	Good
56-70	Enough
0-55	Less

The effectiveness of these student worksheets was obtained from the pretest and posttest results. The data obtained were then analyzed, by calculating n-Gain. The n-Gain formula according to Meltzar (Sudjana, 2012) is as follows:

$$\text{n-Gain} = \frac{\text{Posttest} - \text{Pretest}}{\text{Max Value} - \text{Pretest}}$$

The n-Gain categories are as follows:

Table 3. *n-Gain Categories*

Large Percentage	Interpretation
-1,00 ≤ g < 0,00	Decrease
g =0,00	Fixed
0,00 <g <0,30	Low
0,30 ≤ g < 0,70	Moderate
0,70 ≤ g ≤ 1,00	High

(Sudjana, 2012)

Result and Disscussion

This research is a research and development (R&D) by following the following steps: 1) initial information gathering, 2) planning, 3) product development, 4) initial product testing, 5) product revision.

At the initial information gathering stage, the researcher made direct observations in grade IV to find an overview of the problems that became obstacles in the learning process. At this stage it is also a process for conducting needs assessment (needs analysis), identifying problems (needs), and conducting task analysis. In this stage, a needs analysis is carried out to gather information that there is a need for media development in the form of student worksheets based on the PQ4R strategy with the theme of My Residence.

At the planning stage, starting with the preparation of student worksheets based PQ4R framework, then determining the systematic presentation of material in the development of student worksheets based PQ4R on KI and KD which have been determined to be developed indicators. The presentation of the material was adjusted to the PQ4R steps. and planning evaluation tools used in student worksheets based on the PQ4R strategy include competency tests. The evaluation in this study was a multiple choice test.

As a follow-up to the design that was carried out in the planning stage, steps were taken to develop student worksheets based on the PQ4R strategy. Furthermore, this product will be tested through initial field trials.

The initial field test stage is the final test stage in this research and development because it is considering Covid-19. In the initial field trial stage it is used to carry out validity, practicality, and effectiveness. Validity is done through expert validation, which consists of material expert validation, design expert validation, and linguist validation. The results of the material expert validation are as follows:

Table 4. *Result of the Material Expert Judgement*

No	Aspect	Total Score	Maximum Score
1	Suitability of picture story books with learning materials	25	32
2	Quality of story book content	40	44
Total Score		65	76
Average		85,5	
Description		Very Good	

Based on the material validation expert's judgement above, the score obtained is 65 from a maximum score of 76 and the resulting value is 85.5. In this study, the material validation test was carried out once. Some suggestions given by material experts have been used to revise the product including description material according to indicators and related sub-themes, complete information on the images presented, and grammar to meet the correct and correct spelling and writing of Indonesian.
Furthermore, the design validation obtained the following results:

Table 5. *Results of Design Expert Validation*

No	Aspects	Total Score	Maximum Score
1.	Didactic Terms	36	40
2.	Construction Requirements	25	28
3.	Technical Requirements	31	32
Total Score		92	100
Value		92	
Description		Very Good	

Based on the results of the above assessment, a score of 92 was obtained from a maximum score of 100, and the final score was obtained, namely 92 in the very good category. In this study, the design expert validation was carried out once. Some of the suggestions given by media expert validation have been used to revise the product, including the size and color of the letters in the rearrangement, the image should be professional better than the photo, and the contents of the PQ4R steps should be related.

Expert validation which then is validation of linguists, obtained the following results:

Table 6. *Results of Linguist's Expert Validation*

No	Aspects	Total Score	Maximum Score
1.	Straightforward	11	12
2.	Communicative	17	20
3.	Posts	8	8
4	Conformity with the level of development of students	10	10
5	Usage terms, symbols, or image	10	10
Total Score		56	60
Value		93,3	
Description		Very Good	

Based on the results of linguist's expert validation above, the score obtained is 56 from a maximum score of 60 and the resulting value is 93.3 in the very good category. In this study, the linguist's expert validation was carried out once. Some suggestions given by linguist's have been used to revise products, namely improving the use of punctuation marks and writing words.

A part from the three expert validations, the researcher validated the practitioners, who in this case were elementary school teachers. This test aims to determine the teacher's response to the feasibility / practicality of the product being developed. The practitioner test was carried out on 8 teachers who were initially the targets of a questionnaire for teaching material needs. This is intended to assess the material, media, and language aspects of student worksheets from the point of view of the teacher as a user of student worksheets in learning.

The feasibility analysis of the student worksheets based on the teacher's assessment is summarized in the following table.

Table 7. *Results of Teacher Response Data Analysis of Student Worksheets*

No	Subjects	Total Score	Maximum Score	Value
1.	Practicioner 1	189	204	92,6
2.	Practicioner 2	198	204	97
3.	Practicioner 3	189	204	92,6
4.	Practicioner 4	190	204	93,1
5.	Practicioner 5	199	204	97,5
6.	Practicioner 6	186	204	91,1
7.	Practicioner 7	192	204	94,1
8.	Practicioner 8	191	204	93,6
Total		1534	1632	752
Average		83,5		
Description		Very Good		

Based on the validation results obtained an average value of 83.5 and how many are in the very good category. In general, the teacher's response to the design of student worksheets shows that this teaching material can help students in learning. Interaction in learning is carried out based on the stages of thinking that evoke the experience of students through pictures to help the learning process effectively based on the PQ4R stages (preview, question, read, reflect, recite, review). Thus, this student worksheets is feasible/practical to be continued and used because it meets the aspects of making student worksheets.

After conducting the expert and practitioner test, the next step is to test the attractiveness, convenience, and usefulness of the student worksheets through 3 students. The results of this test are as follows:

Table 8. *Results of the Analysis of Student's Responses to Student Worksheets*

No	Learners	Value	Category
1.	Diray	80	Very Good
2.	Riska	85	Very Good
3.	Amin	85	Very Good
Average		83,33	Very Good

Based on the results above, the value obtained is 83.33 in the very good category. The use of this student worksheets was tested in the field on 8 students to determine the effectiveness to improve creative thingking skills of the product that had been developed. The results of the field test are:

Table 9. *Recapitulation of Student Learning Outcomes*

No	Learning Outcomes	Pretest	Posttest
1.	Total Value	386,31	579,98
2.	Average	48,28	72,49
Overall n-Gain		0,47	
Category		Moderate	

Based on the field test, it was obtained n-Gain 0.47 in the medium category. This shows that the developed student worksheets is effective in improving creative thinking skills. The last R&D stage is product revision. At this stage all input from expert tests, practitioner tests, and field tests is used to produce products in the form of student worksheets based PQ4R. The difference before and after revision can be seen in the image below:

Figure 1. Before Revision

In the picture above that was done before revision. The results of input and suggestions from expert validation include many pictures, the name of the developer and the writing of the students' worksheet is not clear. From the suggestions, it is used to improve and the results obtained in Figure 2 are as follows:

Figure 2. After Revision

Figure 3. Before Revision

In the picture above, input from expert validation includes, among others, on one page there is not only a picture but there is other writing, on every page try to have a students worksheet based PQ4R, information and at the bottom of the page there is a description of the sub-theme and also the page number. Input from expert validation is then used to improve LKPD and results are obtained as shown below:

Figure 4. After Revision

The use of student worksheets based PQ4R is effective as indicated by a learning outcome test that is designed and assessed based on five indicators of creative thinking abilities including the ability of students to observe, ask questions, analyze, collect information or try, reason or associate, and communicate. The effectiveness test was analyzed using n-Gain. The result of the n-Gain calculation is 0.47 (moderate category), this indicates an increase between the previous and after learning outcomes after using student worksheets based PQ4R (preview, question, read, reflect, recite, review).

This result is reinforced by research conducted by (Yasa et al., 2013), which states that developing student worksheets uses the Preview, Question, Read, Reflect, Recite, Review (PQ4R) Learning Strategy. In his research, the results show that the application of the PQ4R learning method affects students' academic achievement. The stages of this development research start from analyzing potential and problems, collecting data, product design, design validation, design revision, product testing, product revision,

and usage testing. This is in accordance with what is produced in this study, especially on the dependent variable.

Furthermore, according to (Fitriyanti et al., 2015), the use of the PQ4R learning model has an effect on increasing student activity and mastery of material. Then the results of research conducted by (Toman et al., 2013), it is known that worksheets activate more students and usually increase success. A study was carried out in this study with the aim of evaluating worksheets while teaching ethanol fermentation prepared according to a constructivist model. It is also a known fact that the behaviors that individuals learn by trying them are more effective than those they get by simply hearing or seeing.

The results of this study are also supported by research conducted by (Mubin, 2013) the results of this study aim to develop and test the feasibility, practicality, and effectiveness of student worksheets based on Preview, Question, Read, Reflect, Recite, Review (PQ4R) to increase learning motivation. In the subject of Natural Science grade V Elementary school Karang Dawa, Warungpring District, Pemalang Regency, based on the results of his research there was a fairly high increase in student learning outcomes compared to using conventional learning methods.

Student worksheets are sheets that can be used by teachers or educators to convey information better, attract and enable students to be more active. According to (Toman et al., 2013) Worksheets are one of the teaching methods which can bedone individually or in group work and enable conceptual development. One of the functions of student worksheets is as an evaluation tool, this is according to (Lee, 2014) as an assessment tool, worksheets can be used by teachers to understand students' previous knowledge, outcome of learning, and the process of learning; at the same time, they can be used to enable students to monitor the progress of their own learning.

Well-structured student worksheets must refer to various conditions that are met. (Prastowo, 2015) explains that the student worksheets design is not fixed on one form. Educators can develop student worksheets designs by paying attention to the level of ability and knowledge of students. (Rohaeti & Padmaningrum, 2012) explains the requirements of student worksheets, namely (1) didactic requirements regulate the use of student worksheets which are universal, emphasizing the process of finding concepts, there are variations of stimulus through various media. (2) the construction requirements relate to the use of language, level of difficulty, and clarity in the student worksheets. (3) Technical requirements emphasize writing, pictures, appearance in student worksheets.

Student worksheets developed based on PQ4R to improve creative thinking skills. Creative thinking is an attempt to connect objects or ideas that were previously unrelated. This is one of the abilities of the cognitive aspects of students. The cognitive aspect is an aspect that emphasizes the intellectual ability of students in thinking, in the realm of Bloom's taxonomic thinking development (Krathwohl & Anderson, 2001). Creative thinking is richer than critical thinking. According to (Runisah, 2016) creative thinking skills is higher order thinking skills. The above goals necessitate a distinction between an innovative teaching approach and an approach that provides opportunities

for creative thinking. Helping students to think creatively in the context of school science is certainly very different form both teaching them creatively (i.e., by implementing an innovative approach) and teaching them about the nature of science, in order to help them become aware of and appreciate science as a creative endeavour (Hadzigeorgiou et al., 2012).

According to (Susanto, 2014) creative thinking can be interpreted as thinking that can connect or see something from a new perspective. While the characteristics of creative people according to Carin (Susanto, 2014) are curiosity, resourceful, have a desire to find, choose difficult jobs, enjoy solving problems, have dedication to work, think flexible, ask lots of questions, give answers who are better, capable of synthesizing, able to see new implications, and have broad knowledge. (Martin, 2009) argues that being able to generate new ideas and ways to produce a product is being able to think creatively. The same opinion is expressed by (McGregor, 2007), namely that creative thinking is thinking whose direction is to gain new insights, approaches, perspectives, and ways when facing something. Creative thinking is a skill of performing thinking pattern that has been based on the indepth understanding toward the concepts that an individual has mastered previously and the thinking pattern then will influence the individual‟s mind to make a change. A usual matter for a teacher might not be usual for a student. Therefore, teachers should be able to develop a learning method or a learning strategy that will develop their students‟ creative thinking (Noviani & Wangid, 2018).

According to Holland (Mann, 2005) aspects of the ability to think creatively are fluency, flexibility, authenticity, elaboration, and sensitivity. Meanwhile, according to Torrance and Guiford (Munandar, 2009), the ability to think creatively includes abilities such as fluency, flexibility, originality, and elaboration. Limitations in the development student worksheet based PQ4R research (preview, question, read, reflect, recite, review) are: 1) Competency tests presented in the student worksheet based PQ4R (preview, question, read, reflect, recite, review) with the theme "uniqueness the area where I live ", refers to indicators of the achievement of learning objectives. 2) This research was conducted to focus on studying the use of student worksheet based PQ4R (preview, question, read, reflect, recite, review) in learning. 3) The R&D research steps are completed only in the fifth step due to the existence of policies regarding social distancing. 4) This research was conducted at the level of feasibility of student worksheets only in terms of theoretical feasibility. And 5) the development of student worksheets is only limited to one sub-theme, so that it is considered not comprehensive enough to meet the needs of students.

PQ4R offers learning concepts that optimize students' ability through meaningful organizing of information and involves the student's active role in learning (Fitriani & Suhardi, 2019). Other research, Wahyuningsih & Kiswaga (2019) Preview Question Read Reflect Recite Review (PQ4R) Learning Model is also effective for improving the students' reading comprehension skills. The effectiveness has been confirmed by the significant gain score in the second experimental group from 72.435 into 87.652. (Setiawati & Corebima, 2018), PQ4R Learning centers on the students, so that students

can build their own knowledge. Attributes of creativity include that: (1) it is determined by individual products, results of valuing creation, (2) it is a mental process with focus on occurrence and experiences of creation to understand through observational and instropective methods, (3) it is determined by measurement result of test (Lin, 2012).

Conclussion

Based on the results of research and development under the title "Development of student worksheets based preview, question, read, reflect, recite, review (PQ4R) to improve creative thinking skills" it can be concluded that the product produced in this research and development is student worksheets based on preview, question, read, reflect, recite, review (PQ4R) grade IV elementary school with material on the uniqueness of my living area. Based on the results of the validation, the student worksheets based preview, question, read, reflect, recite, review (PQ4R) was declared valid both in terms of content and construction. language 93.3 and practitioner test of 83.5. In addition, the effectiveness of student worksheets based on the n-Gain test was obtained by 0.47 in the medium category.

The implication of research and development of student worksheets based preview, question, read, reflect, recite, review (PQ4R) is learning that can make students learn creatively, in solving various problems. This is because student worksheets based PQ4R is presented with an attractive and contextual appearance, and presents learning with various activities. student worksheets based PQ4R is presented by combining fluency, flexibility, authenticity, and detail so that it can facilitate the diverse abilities of students. The results of research and development of student worksheets based PQ4R can be used as an alternative to support textbooks and make it easier for teachers to deliver practical material. The development of student worksheets based PQ4R can optimize the creativity of students.

Based on the results of the research that has been done, it is suggested that the following things: the process of searching for information to solve problems is more creative in conveying the information obtained, so that it is easier for students to find answers to problem solving at high-level thinking skills. In addition, it can be used as teaching material that supports facilities in the learning process.

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Code Switching and Code Mixing in Hitam Putih Talkshow

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Abstract:

Background: *Indonesian society is a multilingual society. A multilingual society means that a society has several languages. The diversity of languages that exist in Indonesian society makes each individual potentially use more and one language in a speech event. The bilingualism can be resulting in code switching and code mixing. Code switching is a transition and code from one code to another (Suwito in Rokhman, 2011: 37). In contrast to code switching, code mixing is between two or more languages with incorporate the elements of one language into the other consistently (Kachru in Goldman, 2011: 38). Talkshow is one of interactive communication. One of the pupular talkshow in Indonesia is Hitam Putih Talkshow. The speakers in Hitam Putih Talkshow are given time to describe experiences and things that actually happened. This is very positive and it can motivate the audience or listeners to do better things. Hitam Putih Talkshow does not only bring in speakers from the upper class or celebrities but also from the middle or lower classes who have potential, achievements, and things that can be emulated. The guest stars or resource persons who have various social status and have various language skills can result in the emergence of language phenomena, namely code switching and code mixing. It is important for researchers to research code switching and code mixing on Hitam Putih Talkshow because it is a linguistic phenomenon that is very closely related in daily life. Moreover, Hitam Putih Talkshow involves speakers and speech partners from various backgrounds, social background, and language skills and it can make the speakers can using their various languages but can be understood by partners.*

Materials and Methods: *Bilingualism is the use of two languages or two language codes (Chaer and Agustina (2010: 84). The bilingualism can be resulting in code switching and code mixing. Code switching is a transition and code from one code to another (Suwito in Rokhman, 2011: 37). Then, code mixing is between two or more languages with incorporate the elements of one language into the other consistently (Kachru in Goldman, 2011: 38). The design in this study used a qualitative approach with the descriptive method to describes the characteristics of the data accurately according to the nature itself. The data source in this study is the code switching and code mixing used in the speech in Hitam Putih Talkshow. There are three episode to collecting data and they are Syiar Penyair, Survivor,*

and Save Children Song. Collecting data in this study using non- participatory observation data collection techniques (no involvement). The speech in video in Hitam Putih Talkshow will be recorded and then analisys.

***Results**: The results showed that there were speeches that contained code switching and code mixing, as well as the contributing factors. The form of code switching used in the speech in Hitam Putih Talkshow are internal and external code switching. The code switching forms used in speech in Hitam Putih Talkshow like code mixing in the form of words, phrases, baster, repetition words, phrases, and clauses.*

***Conclusion:** Code switching tends to be used in the speech in Hitam Putih Talkshow is external code switching. Then, code mixing that tends to be used in speech in Hitam Putih Talkshow is code mixing in the form of words.In addition to the form of code switching and code mixing, the factors causing the occurrence of the code were also found. The factors causing the occurrence of intern code switching are interlocutors factor and the change in the topic of conversation while the factors causing the occurrence of extern code switching are speaker, interlocutors, had a third person, and changes in the topic of discussion. Then, the factors that cause code mixing are the background factors of attitudes and linguistics of speaker.*

***Keywords**: Code Switching; Code Mixing; Talkshow; Sosiolinguistics.*

I. Introduction

Humans are social creatures. Their daily activities are inseparable from communicating with each other. This communication activity carried out using language, both spoken and written. Language can be interpreted as a means of supporting the communication process because language is an effective means of conveying messages. Alex and Achmad (in Ahmad and Hendri, 2015: 1) said that language is an arbitrary sound symbol system used by members of social groups to work together, communicate, and identify people.

Indonesian society is a multilingual society. A multilingual society means that a society has several languages. The diversity of languages that exist in Indonesian society makes each individual potentially use more and one language in a speech event. Chaer and Agustina (2010: 84) said that bilingualism is the use of two languages or two language codes. The bilingualism can be resulting in code switching and code mixing. Code switching is a transition and code from one code to another (Suwito in Rokhman, 2011: 37). In contrast to code switching, code mixing is between two or more languages with incorporate the elements of one language into the other consistently (Kachru in Goldman, 2011: 38). The transition and insertion of a language in a another language structure often occurs in everyday life as in campus environment, school, market, hospital, work environment, as well as media. In media is like talkshow.

The speakers in Hitam Putih Talkshow are given time to describe experiences and things that actually happened. This is very positive and it can motivate the audience or listeners to do better things. Hitam Putih Talkshow does not only bring in speakers from the upper class or celebrities but also from the middle or lower classes who have potential, achievements, and things that can be emulated. The guest stars or resource

persons who have various social status and have various language skills can result in the emergence of language phenomena, namely code switching and code mixing. Suwito (in Rokhman, 2011: 37) said that code switching is a transition event from one code to another. Unlike code switching, code mixing is the use of two or more languages by inserting the elements of one language into one language into another in another language, where the language elements or variations are inserting in another language is no longer separate (Rokhman, 2011: 39).

Previous research on code switching and code mixing has been studied by Fitria (2016), Murniati (2015), Nur (2015), and Santoso (2014) Their study on the educational domain. Fitria (2016) examines speech events in SMKN I Liwa, Murniati (2015) examines speech events in the Indonesian Language and Literature Study of University Lampung, Nur (2015) examines speech events in the learning process at SMAN 1 Seputih Agung, and Santoso (2014) examines speech events in SMAN 1 Purbolinggo. Furthermore, to add to the study of code switching and code mixing, especially in the television domain, in particular speech events in talkshow media. The researcher wanted to add to the straggled pan.

Based on the description above, researchers feel interested and important to research code switching and code mixing on Hitam Putih Talkshow because it is a linguistic phenomenon that is very closely related in daily life. Moreover, Hitam Putih Talkshow involves speakers and speech partners from various backgrounds, social background, and language skills and it can make the speakers can using their various languages but can be understood by partners. This really represents the condition of Indonesian society which is multilingual. Therefore, the title of this research is incorrect "Code Switching and Code Mixing in Hitam Putih Talkshow".

II. Material And Methods

Code Switching and Code Mixing

Code switching is a transition and code from one code to another (Suwito in Rokhman, 2011: 37). In contrast to code switching, code mixing is between two or more languages with incorporate the elements of one language into the other consistently (Kachru in Goldman, 2011: 38). The transition and insertion of a language in a another language structure often occurs in everyday life as in campus environment, school, market, hospital, work environment, as well as media. In media is like talkshow. Suwito (in Rokhman, 2011: 37) said that code switching is a transition event from one code to another. Unlike code switching, code mixing is the use of two or more languages by inserting the elements of one language into one language into another in another language, where the language elements or variations are inserting in another language is no longer separate (Rokhman, 2011: 39).

Methods

The design in this study used a qualitative approach. The qualitative approach aims to describe, study, and explain the phenomenon (Syamsyudin and Damaianti, 2011: 74). In the qualitative approach there are several methods, one of it is the descriptive method. The descriptive method is a method that describes the characteristics of the data accurately according to the nature itself. The data collected is not numbers, it can be in the form of words or a description of something (Djajasudarma, 2010: 16). So, qualitative descriptive research is research that aims to describe or describe a social phenomenon and the perspective.

The data source in this study is the speech that occurs in Hitam Putih Talkshow. The data in this study are code switching and code mixing used in the speech in Hitam Putih Talkshow. There are three episode to collecting data that using in this research. The title of episode are *Syiar Penyair*, *Survivor*, and *Save Children Song*. Collecting data in this study using non-participatory observation data collection techniques (no *involvement*). In this data collection technique, researchers collect data by observation (Syamsudin and Damaianti, 2011: 100). The speech in video in Hitam Putih Talkshow will be recorded and then analisys.

III. Result

The results showed that there were speeches that contained code switching and code mixing, as well as the contributing factors. The form of code switching used in the speech in Hitam Putih Talkshow are internal and external code switching. The code switching forms used in speech in Hitam Putih Talkshow like code mixing in the form of words, phrases, baster, repetition words, phrases, and clauses. The code switching that used in the speech in Hitam Putih Talkshow like the transition from Sundanese to Indonesian and Indonesian to Sundanese while the external code switching that used in the speech in Hitam Putih Talkshow like the transition from Indonesian to English, English to Indonesian, Indonesian to Arabic, Arabic to Indonesian. Code switching tends to be used in the speech in Hitam Putih Talkshow is external code switching.

The code mixing that used in the speech in Hitam Putih Talkshow is the insertion of pieces of English into the Indonesian language structure, Indonesian into the English structure, Arabic into Indonesian language structure, *Betawi* into the Indonesian language structure, and Sundanese into the Indonesian language structure. Code mixing that tends to be used in speech in Hitam Putih Talkshow is code mixing in the form of words.

In addition to the form of code switching and code mixing, the factors causing the occurrence of the code were also found. Then, the factors causing the occurrence of code switching are the speaker, interlocutors, had a third person, and changes in the topic of discussion. The factors causing the occurrence of intern code switching are interlocutors factor and the change in the topic of conversation while the factors causing the occurrence of extern code switching are speaker, interlocutors, had a third person, and changes in the topic of discussion. Then, the factors that cause code mixing are the background factors of attitudes and linguistics of speaker. The code mixing

which is used in Hitam Putih Talkshow tends to be caused by the background factors of attitudes of the speaker.

A. Code Switching and Mixing Forms

1. Internal Code Switching

Internal code switching is the transition language from the speaker language to a related language or otherwise. There are two data in internal code switching. Here is the data and analysis.

Chika: Arya? Answer what? *Kumaha damang* 'How are you?' **(Dt-70/AK13- I1/Sun/LT3)**
Arya: *Damang* 'I'm fine.'
Data (70) is a code switching. The code switching occurs at speech (31). The code switching is in data
(70) occurs in Hitam Putih Talkshow. The code switching on data (70) is carried out by Chika, it happened when Chika asked how Arya was. Code switching on data (70) was internal code switching. It's because the transition is from the speaker language to the corresponding language. The Code Switching in the data (70) is transitional over Indonesian to Sundanese. The previously language that used is Indonesian. Then, Chika switched to using Sundanese to ask about Arya's news. The word *kumaha damang*? 'How are you?' is the vocabulary of Sundanese. That vocabulary can be found in the Sundanese dictionary. This is what causes the transition over language that used by Chika belongs to internal code switching.

2. External Code Switching

The external code switching is the transition language from speaker language to foreign language. The external code switching that used in Hitam Putih Talkshow are the transition from transition language from Indonesian to English, English to Indonesian, Indonesian to Arabic, and Arabic to Indonesian. Here are the data and analysis.
Ustaz : Indeed, the moral message is that there were times when the principles were simple NBHI. First N *nikmati* 'enjoy'. Second, B *batasi* 'limit'. *Kulu Asrofu wala tufribu* **(Dt-123/AK22- E20/Ar/P15)**.

Data (23) is code switching. The code switching of data (123) was found in the 47th conversation. The code switching of data (123) was carried out by Ustad Wijayanto when Ustaz Wijayanto talk about a good dietary habit. Data (123) is an external code switching. It's because the transition is from speaker language to foreign language. The code switching is the role of Indonesian into Arabic. Previous speech used Indonesian and the he swich to Arabic.

3. Code Mixing in the Form of Words

Code mixing in the form of words is the insertion of language fragments in the form of foreign words or speakers into another the language structure. Code mixing in the form of words which is used in speech in

Hitam Putih Talkshow are English, Javanese, Sundanese, and Betawi words into the Indonesian language structure. Here is the data and analysis.
Deddy : I mean, you are *sono* 'over there' (Dt-02/CK2-Kt1/Btw/P2) please. Please let the guest star sit. Have you applaud (to audiens).

Data (2) is the code mixing. The code mixing is in Hitam Putih Talkshow in the 1st conversation. That code mixing is used in Deddy's speech. That code mixing used when Deddy responded to Chika's massage which misunderstood. Data (2) of code mixing in Hitam Putih Talkshow is in the form of words because there is no transition but inserting *sono* 'over there' which is Betawi language. The word single morpheme which is classified as free morpheme or root word.

4. Code Mixing in the Form of Phrases

Code mixing in the form of phrases is the insertion of language fragments in the form of foreign language phrases in the language structure of speakers. Code mixing in the form of phrases used in speech in Hitam Putih Talkshow are the insertion of English, Arabic, and Betawi phrases in the Indonesian language structure. In addition, there is also the insertion of Indonesian into the English structure. Here is the data and analysis.

Dea: Already *move on* **(Dt-161/Ck132-Fr27/Ing/K61)**, already *move on.*

Data (161) is code mixing. That code mixing is used by Dea when Dea responding to Chika's statement. Data (161) is a code mixing in the form of phrases. It's because the inserted fragment is a combination of two or more words which are not have predicate, the combination can be loosened.The inserted phrase is an English phrase into the Indonesian language structure. There are two english words which is inserted, there are *moved* and *on.* The two words have a separate meaning and can stand alone but in data (161) the two words are combined and have one meaning.

5. Code Mixing in the Form of Baster

Code mixing in the form of baster is the insertion of a combination of native language speakers with a native language. Code mixing in the form of baster which used is the insertion of the combined language Indonesian with English. Here is the data and analysis.
Deddy : So there is a project, *save children's lagu* 'song' **(Dt-143/Ck116-Bs1/Ing/K56)** for children, save children's songs.

Data (143) is a code mixing. The code mixing on data (143) used by Deddy when Deddy described his guest star's activity in society when his his guest star enter the stage. The code mixing that he used is code mixing in the form of baster. It's because the inserted fragment is a combination of native language and foreign languages There are two words, one word from English and the other Indonesian word. When the two words are combined it will form the baster form. The code mixing in the form of baster on that data is *save lagu* 'song'. That data said as code mixing in the form of baster because the

word *lagu* 'song' is the word of Indonesian and then juxtaposed with the word *save* which is the English word.

6. Code Mixing in The Form of Word Repetition

Code mixing in the form of word repetition is the insertion of elements of a native language or a cognate language in the form of word repetition (the process and results of repetition of language units as a result of phonological or grammatical) into the structure of the speaker's language. Code mixing in the form of word repetition used in speech in the form of partial word repetition: Betawi word repetition into the Indonesian language structure. Here is the data and analysis.

Joshua: Yes but you're first, just *gegayaan* 'a style' **(Dt-172/Ck143-Pk1/Btw/P77).**

Data (172) is code mixing. The code mixing on data (172) used by Joshua when Joshua answered Deddy's question, who teased him as a photographer at Ancol. Data (172) was mix code in the form of repeated words. This is because the pieces that are inserted are a process and result of repetition of language units as a result of phonological or grammatical repetition of the word. is a repetition of Betawi language words. The repetition is in the form of partial repetition, namely the repetition of words in some of the basic words. The basic form of that word is *gaya* 'style' and then given partial repetitions, becoming *gegayaan* (styles).

7. Code Mixing in The Form of Expressions

Code mixing in the form of expressions is the insertion of elements of a foreign language or cognate in the form of insertion of expressions or idioms into the language structure of speakers. The code mixing in the form of expressions used in the form of inserting Arabic expressions into the Indonesian language structure. Here is the data and analysis.

Ustaz : Who means it, will get, *man jadda wa jadda* (Who means it, will get). **(Dt-139/Ck114- Ung1/Ar/K55)**

Data (139) is a code mixing. Code mixing on data (139) used by Ustaz Wijayanto when Ustaz Wijayanto gives encouragement and advice to Arya to change for the better. Data (139) is a code mixing in the form of expressions. It is because the pieces that are shown are constructions of the elements that choose each other, each member has a meaning that exists only because it is shared with the old, and the construction is not the same as the combined meaning of the members. There are three words on that expressions that have its own meaning. *man* 'who', *jadda* 'means it', and *wajadda* 'will get'. Each word has its own meaning but that words are combined to have a complete meaning and form an expression, namely *man jadda wajada jadda* 'who means it, will get'. So it is classified as an expression.

8. Code Mixing in The Form of Clauses

Code mixing in the form of clauses is the insertion of elements from foreign languages or cognate language in the form of insertion of grammatical units in the form of groups of words which at least consist of subjects and predicates, and have the potential to become sentences into the structure of the speaker's language. The code mixing in the form of clauses that used in speech in Hitam Putih Talkshow is the form of inserting English and Arabic clauses into the Indonesian language structure. Here is the data and analysis.

Deddy : We can cut it into three pieces (in Indonesian), *God is able* (in English) **(Dt-60/Ck50- Kl2/Ing/P22)**.

Data (60) is code mixing. The code mixing in data (60) is found in Deddy's speech. Mix The code mixing in data (60) was found when Deddy gave the last statement before he closes his talkshow. Data (60) is a code mixing in the form of clauses. The inserted clauses are English clauses into the Indonesian language structure. The code mixing in data (60) is classified as code mixing in the form of a clauses because the pieces that are inserted are grammatical units in the form of groups of words which at least consists of subject and predicate, and has the potential to be a sentence. The code mixing in data (60) has the potential to become a sentence because there is a subject and a predicate. Subject on word *God* and *is able* as the predicate. The existence of the subject and the predicate makes a splinter that inserted in the speech is belongs to the form of clauses.

B. Factors That Cause Code Switching and Code Mixing

1. Causing Factors for Code Switching

The factors that cause code switching in speech in Hitam Putih Talkshow are the speakers' factor, the interlocutor, the presence of a third person, and change in the topic of conversation, while the change in situation is not found to be a factor causing code switching in Hitam Putih Talkshow. The code swiching in the speech or conversation in Hitam Putih Talkshow tends due to speaker factors.

2. Causing Factors for Code Mixing

Factors that cause code mixing in speech or conversation in Hitam Putih Talkshow is the the background factors of the speaker's attitudes and linguistics. Code mixing that occurs in Hitam Putih Talkshow tends to be caused by background factors of the speaker's attitudes and linguistics. Personal closeness, language skills, and social background is a factor in what makes code switching used.

IV. Conclusion

Based on the results of research in the speech events at Hitam Putih Talkshow, it was found that there was the speech that classified as code switching, code mixing, as well as factors causing code switching and code mixing.

1. Code switching that used in the speech in Hitam Putih Talkshow are internal code switching and external code switching. The internal code switching used in the speech in Hitam Putih Talkshow consists of two

data. The internal code switching used in this study is the transition from Indonesian to Sundanese and Sundanese to Indonesian.

Then, the external code switching that used in the speech in Hitam Putih Talkshow totals have 39 data. The external code switching that used in this study is a transition from Indonesian to English, English to Indonesian, Indonesian to Arabic, and Arabic to Indonesian Language. The external code switching which tends to be used in speech in Hitam Putih Talkshow is a transition from Indonesian to English. Furthermore, it is also found the code mixing in speech in Hitam Putih Talkshow. The code mixing that found were inserted code in the form of words, phrases, baster, word repetition, expressions, and clauses. The code mixing which used in the speech in Hitam Putih Talkshow were the form of inserted of pieces of English into the Indonesian language structure, Indonesian into the English structure, Arabic into the Indonesian language structure, Betawi into the Indonesian language structure and Sundanese to in the Indonesian language structure. The code mixing in the form of words tends to be used in the speech in the Hitam Putih Talkshow.

The code mixing in the form of words used in the speech in Hitam Putih Talkshow totaling 117 data. The code mixing in the form of words used includes the inserted of words in Betawi, Javanese, Arabic, English, and Sundanese which are inserted into the structure of Indonesian Language. The code mixing in the form of words is a form of code mixing which tends to be used in the speech in Hitam Putih Talkshow.

The code mixing in the form of phrases were found in the speech on the Hitam Putih Talkshow totals 35 data. The code mixing in the form of phrases used in the speech on the Hitam Putih Talkshow in the form of inserting English, Arabic and Betawi phrases into the Indonesian language structure and there is also the insertion of language phrases Indonesian into the English structure. The insertion of English phrases into the Indonesian language structure which tends to be used in the speech in Hitam Putih Talkshow than the other language phrases.

The code mixing in the form of baster used in the speech in the Hitam Putih Talkshow amounts to one data. Code mixing in the form of baster used is a combination of English words with the Indonesian word. Then, the code mixing in the form of repeating words found in speeches in the Hitam Putih Talkshow amounts to one data. The code mixing in the form of repeating words used in the form of inserting Betawi word repetitions into the Indonesian language structure. The code mixing in the form of repeating words is a little found in the speech in the Hitam Putih Talkshow.

The code mixing in the form of expressions found in speeches in the Hitam Putih Talkshow title amounts to one data. The code mixing in the form of expressions used in the form of inserting Arabic expressions into the Indonesian language structure. The code mixing in the form of expressions is a little found in the speech in Hitam Putih Talkshow.

The code mixing in the form of clauses found in the speech in Hitam Putih Talkshow amounts to eight data. The code mixing in the form of clauses used in the form of inserting English and Arabic clauses into the Indonesian language structure. The

insertion of English clauses into the Indonesian language structure which tends to be used in the speech in Hitam Putih Talkshow than the other language clauses.

2. Apart from the forms of code switching and code mixing, several factors were also identified the occurrence in the speech on the Hitam Putih Talkshow. The factors that cause the occurrence of the code switching are 41 data. The factors that causes are speakers' factor, the interlocutor or speech partners, the presence of a third person, and changing topics of conversation. As well as the factors causing code switching, there are also factors that cause code mixing. There were 163 data including and the factors that cause code switching were the speaker's attitudes and linguistics. Then, the factors that causing code switching were speaker's factor, interlocutors or speech partners, the presence of a third person, and changing topics of conversation. The code switching which tend tobe caused in speech in Hitam Putih Talkshow were caused by the determinants of the speakers.

Speaker has the determining factors so that he can switches the code, such as social baground, the baground of the speaker, closeness with speech partner, and the benefits that are expected from the speaker when talking with his speech partner. Then, the factors causing the code mixing were the baground of speaker's attitudes and linguistics. The code mixing which is used in the speech or conversation in Hitam Putih Talkshow tends to be caused by the baground of speaker's attitudes. Closeness with speech partner, the purpose and influence of culture and technology is a factor in it.

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The Effect of Academic Supervision in Improving Teacher Performance: A Literature Review

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Abstract.
Teachers play an important role in learning. As a professional teacher, supervision is needed to improve the implementation of the teaching process. The purpose of this literature review is to examine and Analyze the impact of academic supervision on improving teacher performance. The method in this study was carried out by reviewing related articles about academic supervision and teacher performance. The sample of this research is focused on the google schoolar search engine with academic coaching and teacher performance as the main research constraints and then identified. The results of the review articles, most of the role of academic supervision, are very influential in improving teacher performance even though there are still obstacles such as not yet participatory planning and implementation of academic supervision. Therefore, effective academic supervision requires the principal's willingness to plan, implement and evaluate participatory supervision.
Keywords: Academic supervision, teacher performance.

1 Introduction

Ability expressions that are based on knowledge, attitudes, skills, and motivation to produce something are defined as performance. Teacher performance is an achievement or performance carried out by teachers in carrying out their duties as educators, and the quality of educational outcomes is largely determined by the teacher, because the party who has the most direct contact with students in the learning process in school educational institutions and other educational institutions is the teacher. This is not only determined by one factor, but many things that have an influence in determining the improvement of the teacher's performance. Basically, the result of the result is performance, is the end point of people, bringing together certain resources and the environment, with the aim of appreciating certain things, such as the tangible product of less tangible service. To the extent that interactions produce

the desired results and quality, at unreasonable cost levels performance is judged satisfactory, good, or excellent. Performance will be judged poor or difficult if the results are disappointing, for whatever reason.

In the learning process the teacher has a very important role. If the teacher works professionally is not impossible if a school can produce students who excel. Conversely, if human resources in this case the teachers in a school are not well managed, then the student output at the school will also be low [5]. This means that between human resources (teachers) and the quality of students in schools there is a positive correlation, where human resources need good management to reach quality students. In fact, one of the keys to the success of education quality in the country is teachers. Supervision and guidance are needed to improve the execution of the teaching process they do as professional teachers. A teacher who is considered capable of carrying out their duties with the conditions that they have fulfilled before they are appointed as teachers still needs supervision from various parties [3]. One of them is the principal who supervises. The duties and roles at school must be understood by a school principal. If the duties and roles of the principal can be understood by the principal, then it is easy for him to carry out all his duties, especially those related to the implementation of supervision.

Academic supervision is an activity in which teachers are assisted in developing the ability to manage learning so that effective and efficient learning objectives can be achieved [4]. It is hoped that teachers, as the pioneers of educational activities, will have a good performance in realizing high-quality character-based learning through supervision, so as to develop the potential of students into people who believe in and fear the almighty, noble, healthy, and knowledgeable God. Independent, capable, creative, and become a democratic and responsible citizen. Educational Supervision as an activity that is inseparable from the management activities of Education needs to be pursued simultaneously and improved the quality of its implementation. Education supervision has a strategic and important position in the management of education, it has become imperative for the government to strive continuously to make the implementers of education supervision a professional force [18].

Supervision has not been optimal. Supervision and observation objectives focus more on technical aspects and rarely involve administrative aspects directly related to the learning process [16]. Due to time constraints of supervisors, the principal supervisor did very little in frequency and intensity. Supervision of school principals in its implementation has not provided significant benefits for improving teacher professional skills. The principal should allow a larger portion of supervision to be directed at academic supervision to improve teacher professional abilities. A basic function (basic function) in the whole school plan is academic supervision, which shows that function is a source of information for teachers' professional development. The performer of academic supervision can be performed by the principal, to carry out management functions that aim to improve teacher professionalism.

Teacher performance can be seen through a performance appraisal which in principle is a way of measuring the contribution of individuals in the institution to the

organization [30]. Academic supervision is one way of evaluating teacher performance through a systematic planning cycle, careful and careful observation. Through supervision it is expected that teachers will provide feedback with the improvement of the quality of performance. Academic supervision will have a positive impact on teachers professionally if it is carried out effectively [11]. The impact is visible from indicators such as: the invitation of teachers to be supervisors to supervise the class, increased teaching motivation, discussions between teachers began to take place, Improve teachers' innovative ability and creativity, and produce designs, artworks or intellectual property in the form of research, publications and students. which indicates an increasing trend achievement.

However, there are studies that draw conclusions about vocational high schools in Indonesia which show the results of the principal's academic supervision have a significant positive effect on the performance of teachers of the Private VHS Business Group and Management of Depok City, directly and indirectly through work motivation. This shows that improving teacher performance is not only improved work motivation. But the principal's academic supervision must also be improved [15].

Research has been carried out on principal leadership, academic supervision, and work motivation in improving teacher performance. The results obtained a significant positive correlation between academic supervision and teacher performance [10]. According to Ali Rifaldi in his research, the assessment of teacher performance in managing learning cannot be separated from academic supervision [8].

This makes it clear to us in understanding the influence system of academic supervision behavior. Directly, teacher behavior and teacher performance can be relied on by academic supervision. Through academic supervision, the teaching behavior of the supervisory teacher is better in the teaching process. Furthermore, good teacher teaching behavior will influence student behavior in learning. Writing this article aims to see the effect of supervision on teacher performance. Thus, the main research question for this research is "How should academic supervision be directed towards improving teacher performance?"

2 Literature Review

2.1 Supervision

Supervision is an effort given to teachers in performing professional tasks so that teachers can help students to learn better than before [32]. Supervision is an integral part of the functions of the school administrators [46],[38],[37]. Thus, supervision can also be interpreted as assistance in developing better learning or activities provided to help teachers carry out their work more optimally [41]. In this way, supervision has the function to direct, coordinate, develop, guide and regulate others in achieving the goals set in the school situation which leads to the understanding that supervision has a significant meaning to provide assistance and guidance [49].

Supervision is to improve classroom management strategies, adhering to curriculum content, shaping the direction and utilization of instructional activities and discipline for effective control measures [27],[28]. The aim of school supervision is to

improve student learning but the direct focus is on teachers and the entire educational environment. [53],[25]. Supervision in education includes science, skills, personality, teacher welfare, staffing services, career paths, performance development, and professionalism, to bring teachers to an open, skillful attitude, their souls integrated with the task as an educator [22].

Effective supervision has characteriz, such as : (a). competency supervisor, (b). Academic supervision is planned to be prioritized in the supervision program, (c) more varied supervision techniques, (d) providing feedback according to teacher problems, (e) participatory supervision, (f) teacher support and commitment to self-improvement, (g) continuous coaching and mentoring, (h) increasing teacher competence in learning, (i) increasing student absorption and (j) continuous evaluation [16]. Supervision is an activity to help develop teacher skills and facilitate teachers in improving the learning process carried out by the principal [44]. Supervision is coaching that is planned in order to help teachers and other school staff do their work effectively [23].

From several meanings it can be understood that supervision is a series of efforts to compare the standards of a certain planned activity with implementation, as well as following up on these results. This means that supervision must be able to measure the results with the standard of certain activities.

2.2 Academic Supervision

Academic supervision is an activity to help develop the ability of teachers to manage the learning process to achieve goals. Academic supervision is related to the assessment of teacher performance in managing subsequent learning [16], [34], [29]. Supervision is a way of cultivating teacher professionals to develop democratic leadership and solve the problem of the learning process effectively [17], [21], [36]. Effective learning supervision is carried out to achieve these goals, namely effective learning in order to improve the quality of education from efforts to increase the cognitive value of student learning achievement in subjects at the high school level, the principal previously conducted a problem analysis followed by problem identification and clarification [52].

Not only head master as supervisor, but it requires the responsibility of academic supervision of the vice principal. The responsibility of academic supervision of the vice principals is to focus on the process of supervising teachers in teaching, how the teaching media is, how learning is carried out and providing solutions to the problems faced [2], [43], [40]. In this process, how do teachers manage time, use teaching materials and practices that are expected to improve student academic achievement. This is because a significant factor affecting children's education is the quality of the teacher [48]. Academic supervision must change teachers to become competent, that is, teachers increasingly master their competences, both personal, pedagogical, professional, and social competences [26]. Through academic supervision, the teacher is assisted by the principal in managing the learning process, and the teacher is helped to develop his professionalism, in this case the teacher's performance

in preparing learning tools [24]. Therefore academic supervision should address the development of all teacher competencies [51]. Students as mentors also play an important role in supervision. The relationship between academic instructors and supervisors is complex and affected by a variety of dynamic dynamics [9]. Therefore, it is useful to know whether students receiving academic guidance have opinions on their expectations of academic relationships and the support they receive from the mentor. In addition, determining how the students' views differ or converge with the supervisor's views are important topics to consider.

From the above theory, it can be concluded that a series of activities to assist teachers in developing their abilities in managing the learning process in a professional manner to achieve the expected learning objectives. There are four competencies that must be developed through academic supervision, namely personality, pedagogical, professional, and social competencies.

2.3 Teacher Performance

The result of work is performance and progress that has been achieved by someone in their field of work. Performance is synonymous with work performance or in English is called performance. Performance is always a sign of the success of an organization and the people who are in the organization. Performance is the key that must function effectively so that the organization as a whole can succeed. Performance is only a result of achieving measurable goals. But performance is how they achieve it, not just what is achieved. Good performance results are the result of appropriate behavior, especially wisdom in behavior, and effective behavior in accordance with the skills and competencies needed [6], [47]. Good and effective teacher performance will shape the school's work culture, thereby improving the quality of education and creating an effective school [42]. Furthermore Andriani, Kesumawati, and Kristiawan concluded that performance is the work of a person or organization by doing and producing Something, physical or non-physical according to instructions, functions and tasks based on knowledge, attitudes, skills, and motivation. Performance systems generally include behavior (what employees do) and results (results from employee behavior). The performance dimension does not include the results of the behavior, but the behavior itself [20], [35]. So performance is about behavior or what employees do, not what is produced or what results from their work. It describes two behavioral traits as evaluative and multimedia social performance.

Teacher performance is the result of teacher work in carrying out their duties based on abilities, skills, experience, abilities, according to their competence and job criteria [45]. The most common goal of classroom observation is teacher performance [39]. Lecturer or teacher performance is an important factor. The main assessor of teacher performance is students [5]. Teacher performance is the ability and success of the teacher to carry out learning. There is a significant effect of teacher performance on teacher teaching abilities [12], [31]. Teacher performance can be seen through several indicators 1) ability to compile lesson plans; 2) the ability to carry out learning; 3) the ability to do interpersonal relationships; 4) ability to assess learning outcomes; 5)

ability to carry out enrichment programs; 6) ability to implement improvement programs [33].

Based on that teacher productivity in classes taught by performance teachers are more useful theoretical findings, because they come from any class too small to be of use. Efforts to improve teacher quality, whether through better recruitment and selection, increased in-service training, or efficient use of teachers all rely on the ability to check teacher performance on demand, quickly, economically, and accurately.

3 Method

This literature review focuses on the The influence of academic supervision on teacher performance. The review process begins with a search engine, google schooler, to search for articles with keywords. "The Effect of Academic Supervision in Improving Teacher Performance". The search was not limited and a total of studies and articles were identified. Thus, this literature review is built by gathering and filtering researches under these following conditions and search keys:

a. Supervision in Education :3.470.000 results b. Academic Supervision: 198.000 results
c. Performance : 978.000 results
d. Teacher Performance : 379.000 results
e. Range of research year between 2014-2020

Thus, there are 23 papers found and suitable with this library research. The 23 papers are the most suitable because the papers are discussing about how the aspects of academic supervision can affect teachers' performance. The aspects are not only in the supervisor itself, but also in some other aspect like facilities and financial issues.

Table 1. Academic supervision in improving teacher performance.

Author and Year	Title	Country	Method	Sample	Resuslts
Andriani, Kesumawati, Kristiawan (2018)	The Influence Of The Transformational Leadership And Work Motivation On Teachers Performance	Indonesia	Quantitati ve	193 teachers	Transformational leadership has a significant effect on the performance of SMK teachers in Palembang. This means that the better the transformational leadership, the better the performance of vocational school teachers in Palembang
Arum (2017)	The Development of Elementary School Headmaster's Managerial Performance Assessment Model Based On Competence Standard	Indonesia	RnD	Managerial Performanc e Assessment Model	Principal management performance evaluation model tools need to be developed, so that the evaluation of principals can truly measure all measurement aspects, and the process of processing the results is very fast, so it is necessary to improve the principal management performance evaluation model
Ambarita, Siburian, Purba (2014)	Development of Academic Supervision Model which Based on Educational Management	Indonesia	RnD	30 teachers of Indonesian	The first stage of the art model of academic supervision has a good performance value for teachers. In cycle II, 86.67% of teachers had good performance scores, while 13.33% of teachers had good performance scores.
Ardiana (2017)	Pengaruh Motivasi Kerja Guru Terhadap Kinerja Guru Akuntansi SMK Di Kota Madiun	Indonesia	Quantitative	97 accounting teachers	80.6%, motivation has a significant effect on accounting teacher performance and 19.4% accounting teacher performance is determined by factors other than research.
Adewale 2014)	Instructional Improvement of Secondary School Teachers through Effective Academic	Nigeria	Qualitative	Teachers' improvemen t level will be evaluated in mastery	Internal academic supervision is undoubtedly the best choice to improve current quality and

	Supervision by the Vice-Principals		Of subject matter, teaching skills, and use of teaching resources	Maintain a higher standard, because it is easy to obtain, supervise with teachers, correct and consolidate the intimate relationship between thought and innovation.
Rifaldi & Roesminingsi h (2014)	Pengaruh Supervisi Kepala Sekolah dan Motivasi Kerja Guru Terhadap Kepuasan Kerja Guru di SMK ADB INVEST Se- Kota Surabaya	Indonesi Quantitati a ve	95 teachers	There is an influence significant from the Principal's supervision of teachers' job satisfaction at SMK ADB INVEST throughout Surabaya City Significant influence of work motivation teacher to job satisfaction of teachers in vocational schools ADB INVEST throughout Surabaya City; Have a significant impact Supervision of School Principals and Work Motivation Teacher together against teacher job satisfaction at ADB INVEST Vocational School Surabaya City
Elliott (2015)	Teacher Performance Appraisal: More about Performance or Development?	Australi Qualitativae	Teacher performance appraisal	Evaluate the complexity of performance evaluation and its impact on teacher effectiveness, and acknowledge the need for further research in this area. Keep in mind that performance evaluation, teacher standards and professional learning are difficult to separate.
Hardono, Haryono, Yusuf (2017)	Kepemimpinan Kepala Sekolah, Supervisi Akademik, dan Motivasi Kerja dalam Meningkatkan	Indonesi Quantitati A ve	123 teachers	Principal leadership and Academic supervision has an effect on good work motivation Partially or simultaneously

Astuti (2017)	Supervisi Akademik Untuk Menigkatkan Kompetensi Guru di SD Laboratorium UKSW	Indonesia	School Action Research	15 teachers Academic supervision can improve the ability of teachers in particular ability to arrange appraisal administration. In order to improve teacher's ability is needed guidance and direction from the principal as a teacher supervisor.
Dee & Wyckoff (2015)	Incentives, Selection, and Teacher Performance: Evidence from IMPACT	United States	Descriptive Quantitati ve	Approximat There is a relatively ely 2,630 strong consensus teachers regarding the following points of view: teachers will have a significant and long-term impact on students' educational and economic results, and under the current basically static teacher evaluation and compensation system, the quality of teachers is very different .
Naggar, Sarory, Naggar, Al-Muosli	Doctorate international students' satisfaction and stress on academic supervision in a Malaysian University: a qualitative approach	Malaysia	Qualitative	9 PhD Most international PhD Students students mentioned that the supervision system makes them feel worried and stressed.
Gatrix & Barrett (2016)	Desperately seeking consistency: Student nurses' experiences and expectations of academic supervision	United Kingdom	Qualitative	8 students It is important that students do not be afraid to contact their superiors, because if the relationship between superiors and students is more positive, they are more likely to put more energy into their work and get support again in future modules
Guarino, Maxfield, Reckase, Thompson, Wooldridge (2015)	An Evaluation of Empirical Bayes's Estimation of Value-Added Teacher Performance Measures	United States	Quantitati ve	Empirical If the allocation Bayes's mechanism is known to Estimation be random, it may be appropriate to apply these AR and EB estimates, especially when the amount of data per teacher is minimal.

Suarda, Yadnyawati, Suda (2018)	Portrait of Hindu Religious Teacher Performance Certified Educator in Junior High Schools Denpasar	Indonesia	Qualitative	Hindu Religious Teacher's performance	The performance of Hindu religious teachers who have pocketed an educator certificate at SMP Denpasar is not yet good. This is due to several reasons, including human resources, infrastructure, leadership systems and supervisory systems
Rahabav (2016)	The Effectiveness of Academic Supervision for Teachers	Indonesia	Qualitative	1 Principal 9 Regular teachers	The academic supervision performed by the principal is invalid for the following reasons. First of all, from the supervisor; 1) Time constraints (many management tasks must be completed); 2) Participatory programming has not yet been carried out; (3) Insufficient understanding of the supervisor's concept of supervision, theory and practice; 4) Every teacher will teach Lack of understanding of scientific supervisors related to the research field
Waang, Matin, Ahmad (2019)	Pengaruh Efektivitas Manajerial Kepala Sekolah dan Etos Kerja Terhadap Kinerja Guru Sekolah Dasar di Kecamatan Teluk Mutiara Kabupaten Alor	Indonesia	Quantitative	146 teachers	Effectiveness of managerial affect headmasters directly positive for teacher performance. Which means the better the level of managerial effectiveness of the principal, The performance of elementary school teachers in Teluk Mutiara Subdistrict, Alor Regency is getting better.
Mackinnon (2004)	Academic Supervision: seeking	New Zealand	Qualitative	Metaphors and models	These conclusions about best practices are partial

	Metaphors and models for quality		for quality in Academic Supervision	because they are proven correct by past experience, my experience, and other experiences. More resources are needed to help supervisors provide high-quality quality supervision in complex relationships that are difficult to predict future problems
Khoeriyah (2015)	Effect On The Performance Of Supervision Academic Teacher In SMP IT Yaspida Sukabumi	Indonesi Descriptiva Quantitative	3 teachers	Principal's academic supervision of performance of YASPIDA IT Middle School teachers Sukabumi is quite good with results by doing f test and t-test
Medley & Coker (2015)	The Accuracy of Principals' Judgments of Teacher Performance	United Quantitati Statesve	322 teachers	The principal's average judgment on the performance of the teachers he or she supervises is still not accurate enough
Prasetyono, Abdillah, Fitria (2018)	Academic Supervision toward Teacher's Performance through Motivation as Intervening Variable	Indonesi Quantitatia ve	80 teachers	Directly and indirectly through work motivation, the principal's academic supervision has a significant positive effect on the performance of the Business Group and Management of VHS Public Private Group teachers in Depok City.
Podgursky & Springer (2007)	Teacher Performance Pay: A Review	United Descriptiv Statese Quantitati ve	Teachers' payment	Education policy makers need to be careful when designing such plans and must expect to continuously improve these plans while understanding behavioral responses
Muralidharan & Sundararaman (2009)	Teacher Performance Pay: Experimental Evidence From India	India Quantitative	300 schools	Teacher's performance pay is an idea with strong supporters and opponents. So far, the empirical evidence on its performance is uneven
Hansen, Thomsen, Nordentoft (2014)	Challenges Collective Academic Supervision: supervisors'	Qualitative	5 supervisors 19 students	The monitoring methods used, the expectations and experiences of the supervisors all have an impact on the students'

experiences from a Master Programme in Guidance and Counsellin behavior

4 Result and discussion

Based on the results of literature reviews and the comments obtained from the comments obtained, the analysis shows that most articles focus on the impact of academic supervision on improving teacher performance. It can be seen from the review articles that most academic supervision has a great influence on improving teacher performance.

There are many factors that hinder the effectiveness of academic supervision of the principal, including: first, the supervisor: 1) must complete a lot of administrative work; 2) not planning and implementing academic supervision in a participatory manner; 3) the concept, theory and practice of supervision by supervisors Lack of understanding; 4) Lack of understanding of the essence of scientific principles related to the research field taught by each teacher. 2. Teachers: 1) Low commitment to quality; 2) Motivation of teachers to specialize in pursuing prosperity. Based on this, to facilitate academic supervision, what is needed is the principal's plan, the willingness to carry out and evaluate participatory academic supervision. [16].

Whereas, not only the supervisor him or herself become the main issue that affects teachers' performance. Teacher's performance pay is an idea with strong supporters and opponents. So far, the empirical evidence on its performance is uneven [13]. That means, financial issues and facilities are also taking an important role in affecting teachers' performance. Education policy makers need to be cautious when designing such procedures and must expect them to continuously improve the procedures as they understand behavioral responses. The programs mentioned above are closely related to financial topics which are becoming one of issues that affect teachers' performance [14].

5 Conclusion

Based on the analysis of the above papers and research. It can be concluded that academic supervision is obviously an important aspect of improving teacher performance. The effectiveness of managerial affect headmasters directly positive for teacher performance [20]. Which means the better the level of managerial effectiveness of the principal, the better the performance of Elementary school teachers in Teluk Mutiara District, Alor Regency. Academic supervision can improve teachers' abilities in particular ability to arrange appraisal

administration. In order to improve teacher's ability is needed guidance and direction from the principal as a teacher supervisor [7]. Although other factor like financial issue is still another problem due to education world has become such a beneficial business.

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Project Based Learning as a Learning Model toImprove Sociall Skills and Student Creativity

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Abstract:
This research was created by Annida Erin MiftakulCahyani at SMKN Wonosari entitled Project Based Learning Integrating STEM in E-Modules Against Student Creativity in Vocational School, then by Dwi Wahyu Nuryati under the title Project Based Learning Influence on Creativity of Students in Pandemic Period, the third Zakia Ismuwardani implementation of Project Based Learning Model to Increased Creativity and Self-Reliance of Students on Poetry Writing Skills , the fourth Iman hermanto titled The Effectiveness of Project-based Learning Model to Develop Students' Social Skills, then by A.A. Sagung Paramita Ari Putri ysng titled Traditional Game "Bakiak" Assisted Project-Based Learning Model Influences Students' Social Skills and finally by Anis Shofatun, Integrated IPA Learning using project based learning is able to train academic and social skills of junior high school students. The data was collected by researchers with observations, documentation studies, interviews and others. And all the results of the research sought by the authors show that through the Project Based Learning model is able to improve the Creativity and Sociall Skill (Social Skills) of students.
Keywords: Creativity, project based learning, Sociall Skill

1. Introduction

The benchmark of a nation's progress is seen from its education, so it should be in line with the development and demands of the times so that it can be a successful person in and ready to compete in the 21st century (Insyasiska, Zubaidah, & Susilo, 2015). In order to prepare qualified human resources and be able to have the relevant skills according to the needs, then the world of education has a tough challenge (Hartini, Misbah, Zainuddin, Arifuddin, Miriam, Mahtari, & Dewantara, 2017; Suyidno, Dewantara, Nur, &Yuanita, 2017). Because the world of education not only provides knowledge but also must guide and provide creativity skills to students in hopes of competing and surviving in the world of work (Kurnia, Zainuddin, & Mahardika, 2016).

Different types of goals that must be achieved by students, such as thinking skills, social skills, Psychomotor skills, and skills Process. The learning curriculum also aims to

improve quality in imagination and creativity; values humanitarian, developing, Potential someone, develop critical thinking, and develop private committed people and responsible (Zhou, 2005).

(Erna Pujiasih 2020) Educators must have the skills to design learning to be useful and meaningful, because teachers are the main center of success and achievability of the golden generation, Indonesia, 2045. That is Quality and quality.

In solving the problem, it is necessary to conduct effective learning activities in shaping students in order to learn independently without forgetting the cognitive, affective and psychomotor aspects, one of which is to use project-based learning. Project-based learning is an innovative learning approach, emphasizing contextual learning through the complex activities of Thomas, (2000) and Kamdi (2007). Yuliana (2020) explained that project based learning is an appropriate learning model for learning from home as students are invited to cooperate, be independent, investigate, and use evaluations tailored to the student's situation.

Slameto (2015) suggests that students can be creative if they experience fun learning, feel valued, engage actively in learning, feel free to discuss problems, and face real problems.

Project based learning can provide participation in the development of motivation and self-interest, student creativity, communication skills with others, responsibilities, social skills, problem solving skills, and cooperation. In addition, students participating in *project based learning* are given authentic projects that aim to help students create ideas that have been given and how these ideas apply to the real world (Shin, 2018).

With the use of project based learning models in various research in children to develop social skills and creativity children will certainly be more useful than using conventional learning models that have been done a lot. With the development of project based learning models in various studies, teachers are able to learn more meaningfully. Based on what has been described above, there needs to be a relevant research to improve students' social skills and creativity by using the project based learning model.

2. Research Methods

In the research obtained by the authors using qualitative research methods. Data collection techniques are performed by searching through Google Scholar. And searched through the keyword "Project Based Learning to improve .social and skills. Students" creativity. From the 10 research journals obtained, the authors chose 6 journals because they meet the criteria that the authors want, namely: there is research done by researchers on project based learning models to improve students' social skills and creativity with clear methods, types of research, research techniques, data collection techniques and also the results of the study.

3. Results and Discussions

In this journal, the author gets journals with relevant research that meet the criteria desired by the author, namely: in the journal there is a project based learning model to improve the social skills and creativity of students with clear methods, in addition to methods also there are types of research, research techniques, data collection techniques and also research results. From these criteria, the author found 6 journals containing all the criteria:

Percentage Table Improves Students' Social Skills and Creativity with Project Based Learning Model

No	Researcher's Name	Research Year	Journal Title
1	Annida Erin Miftakul Cahyani, TantriMayasari, MislanSasono	2020	Effectiveness of E-Module Project Based Learning Integrates STEM Against The Creativity of Vocational School Students
2	Dwi Wahyu Nuryati , Siti Masitoh ,FajarArianto	2020	The Effect of Project Based Learning on The Creativity ofStudents in Pandemic Period
3	ZakiaIsmuwardani, AgusNuryatin, MukhDoyin	2019	Implementation of Project Based Learning Model to Increased Creativity and Self-Reliance of Students on PoetryWriting Skills
4	Faith hermanto, Sarwi, Amin Yusuf	2019	The Effectiveness of Project-based Learning Model to Develop Students' Social Skills
5	A.A. Sagung Paramita Ari Putri1,I WayanSujana	2020	Traditional Game "Clogs" Assisted Project-Based Learning Model Influences Students' Social Skills
6	Anis Shofatun, Muslimin Ibrahim,Wasis	2016	Integrated IPA learning through project based learning in training academic and social skills of junior high schoolstudents

1) Effectiveness of E-Module Project Based Learning Integrating STEM Towards Creativity of VocationalSchool Students

Researcher's Name	Results Before Research	Results After Research
Annida Erin MiftakulCahyani,Tantri Mayasari, Mislan Sasono	students have difficulty in the learning process of physics because the learning strategies used are limited, the learning model used by teachers results in students easily getting bored in the learning process but with the model used by the student teacher has a copy of the material that can be used in the independent learning process, the absence of models and modules that increase the creativity of students, the absence of modules integrated with the STEM realm by hooking up projects in daily life	In this study conducted in class X Multimedia 1 SMKN Wonoasri, obtained the results of the effectiveness of e-module *Project Based Learning* integrated STEM in a moderate category. This is because it is caused by various sides, namely the lack of maximum time in research. Further research and development is needed to improve the E- *Module Project Based Learning* integrated STEM to be more effective if applied in learning

2) The Influence of Project Based Learning on The Creativity of Students in Pandemic Period

Researcher's Name	Results Before Research	Results After Research
Dwi Wahyu Nuryati., Siti Masitoh., FajarArianto 3.	Educators at the time of assigning assignments to students get batik motif images, giving assessments made by students only monotonously. Karaya produced by students is still much the same as the example that has been given, teachers in the strategy of conveying learning in the classroom have not been in accordance with existing learning strategies so that there is no goal of learning, then there needs to be a proper learning strategyor relevant learning model, and students are able to create something new that corresponds to the KD or learning theme, students more exemplify given by teachers and information from various resources they obtain.	Through online learning using *project based learning* strategy, students have an average score of 10.20 in the creation of batik motif design, students are better able to create something no longer imitating examples and assessment of results that are quite better. when .compared to. conventional learning.

3) Implementation of Project based learning. Model to I don't want to be a Creativity and Self-Reliance of Students onPoetry Writing Skills

Researcher's Name	Results Before Research	Results After Research
Zakia Ismu wardani,Agus Nuryatin, MukhD oyin	Students tend to be passive in learning electrochemical materials, They like to listen to information from teachers and take notes. They only make use of some learning resources such as chemistry books or e-books. Teachers also implement discussion methods to explore students' understanding and activities	Student creativity is increased through the implementation of project-based learning as evidenced by the development of learning media: playback media, videos, "charta", or kits as a representation of the concept of volta cells and electrolysis that they understand.

4) The Effectiveness of Project-based Learning Model to Develop Students' Social Skills

Researcher's Name	Results Before Research	Results After Research
Faith hermanto, Sarwi, Amin Yusuf	IPA learning in general is still done by lecture and drilling methods to complete the learning and achieve the targeted grades for national exams. Students only memorize science, but do not attempt to conduct scientific processes to develop their processing skills related to the skills of 4Cs, especially in grade IV students sdn 1 Panongan and SDN 1 Sedonglor.	The learning process using project-based is able to develop the social skills of grade IV students SDN 1 Sedonglor and SDN 1 Panongan

5) Traditional Game "Clogs" Assisted Project-Based Learning Model Influences Students' Social Skills

Researcher's Name	Results Before Research	Results After Research
A.A. Sagung Paramita Ari Putri1,, I WayanSujana	The development of children's social skills is still not optimal, the learning model in the classroom is still less varied including in the selection of media and communication of students with others is still lacking and resulting in the learning process is still monotonous and less attractive throughout grade V students of SD Negeri 201 in Cluster VII Sukawati Sub-district	There is a significant difference between social skills after learning and traditional clogs-assisted learning compared to conventional media. This is seen from the benefits of using traditional project- based clogs in the learning process to positively affect students' social skills

6) Learning Integrated IPA through project based learning in train academic and social skills students, junior high school

Researcher's Name	Results Before Research	Results After Research
Anis Shofatun, Muslimin Ibrahim,Wasis	In the learning process in grade VII F SMP Muhamadiyah 12 GKB Gresik which numbered 31 students, the absorption of students is still very low in the material, this is due to some things such as the learning process in the classroom tends to still be monotonous and less attractive by teachers, so it is less involved in students and less motivating students. The dominance of teachers is still apparent which results in students not being able to develop in learning and not providing experience to students in solving a problem.	With the Use of Project Based Learning model students are more likely to be skilled in academics, including being able to organize materials, plan skills, perform and present the projects they create. In addition, students are better trained in social skills, especially when working together and communicating in learning, so that students are more confident in the surrounding environment, and students are able to better understand learning materials and themes, as well as students able to produce a work based on student creativity.

4. Discussion

The findings made by Annida Erin Miftakul Cahyani (2020:15-22) show that effectiveness of e-module *Project based Learning* Integrate STEM category moderate, means it can increase the creativity of students and student learning outcomes even though it has not been significantly with n- gain of 0.40.

In addition, there is research that also supports research from Annida Erin MiftakulCahyani to increase student creativity, namely research conducted by Dwi Wahyu Nuryati conducted in grade VIII SMPN Mojokerto with 60 research subjects. It concluded that the assessment of students' creativity online scored an average of 10.20 increased compared to conventional learning which had an average score of 9.00, students were more likely to be creative in problem solving and able to produce work that was not the same as that of others.

The 3rd result of Zakia Ismuwardani's study (2020:58-63) subjects in this study were grade IX students at SMP Negeri 36 Medan consisting of 28 students. Out of 4 cycles conducted by researchers found that the project based learning model supports student creativity, Students are trained in designing a product, are able to come out many ideas and ideas, are able to think originally, have skills in asking and answering questions, have the ability to solve problems in the form of creating a product.

Furthermore, the research conducted by Iman hermanto (2019:173-180) is titled "The Effectiveness of Project-based Learning Model to develop Students' Social Skills". In this journal, researchers conducted class action research with grade IV students at SDN 1 Sedonglor and SDN 1 Panongan Goddess. Sartika is 72 students. At stage 1 peer-related skills received a positive response from students. In pretest, 74%; while in posttest by 90%, there is an increase in this indicator. Similar results were found in the second indicator,namely self-management skills. Student response increased from 80% to 89%. In the third indicator, the academic skills of positive response at the time of pretest 77% while in the posttest indicator increased to 92% meaning there was an increase. In addition, the fourth indicator score of compliance skills increased from 79% to 94%. The fifth indicator, task skills, obtained an 81% positive response during the pretest and 90% during the posttest. That is, there has been a slight improvement in students' social skills on this indicator. Based on this it is concluded that project based learning can increase students' interest as well as students' social skills.

In A.A. Sagung Paramita Ari Putri's study titled Traditional Game "Bakiak" Assisted Project-Based Learning Model Influences Students' Social Skills (2020:473-482) Data collection conducted by researchers is done by observation method is done by conducting assessment through direct and systematic observation. This research uses participatory observations, in which case the observer participates in the environmental situation in which the research is conducted. Itis concluded that traditional clogs-assisted learning models have a positive influence on students' social skills. This is not separated from the advantages of traditional learning models of clogs assisted by project learning models. The advantages are: 1) this model can enhance student cooperation in groups; 2) this model increases student tolerance and sportsmanship; 3) this model also makes the learning atmosphere more interesting and enjoyable because the learning process is not only indoors but also outdoors; 4) This model also makes students develop problem solving skills by creating clogs with their groups. Based on the advantages of this model, this model can be used as an option to be applied in schools and in classrooms based on the characteristics of the model.

The last study conducted by Anis Shofatun with the title Of Integrated IPA Learning through a project based learning in training academic and social skills of junior high school students (2016:1150-1158), where researchers conducted research on students of grade VIIF SMP Muhammadiyah 12 GKB Gresik where researchers develop learning devices. And from the research conducted can be concluded with the use of project-based learning (PjBl) able to train various academic skills students such as skills in organizingmaterials, Skills plan, implement and report project assignments and work

skills, Project-based learning (PjBL) can also train students' social skills, especially on cooperation and communication skills so that students are able to live cooperatively and confidently in living with the environment, and Project-based learning (PjBL) can improve students' understanding especially in consolidating knowledge integrating some related concepts through real work creativity products are created.

5. Conclusion

Project based Learning model is able to increase the creativity and sociall skills of students in learning, in the researches that have been listed by students to increase their creativity and social skills when learning using the Project based Learning model. So the role of teachers is very important, teachers must be able to use and develop learning models that are able to increase the creativity and social skills of students in learning so that the learning process becomes more meaningful.

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Improve Reading on Procedure Text for Grade IX, Junior High School 15Pesawaran

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Abstract

This study aims to determine the process of developing student worksheets (LKPD) in English based on cooperative learning on the procedural text material for class IX in Junior High School (SMPN) 15 Pesawaran. This research is a research and development (RnD) of English student worksheets based on cooperative learning in English lessons with the theme of procedural texts to improve students' reading skills. This research approach uses a research and development model from Borg & Gall (1983) which is an educational research and development in order to develop effective educational products that can be used to solve learning problems.The steps in the student worksheets development process are preliminary, initial product design, expert validation, product revision, and conducting field tests. The student worksheets development process in the first stage is the preliminary stage, namely analyzing the needs and potentials that support product development. The second stage is designing the initial product by preparing teaching materials, syllabus, lesson plans, and supporting images. The third stage is validating the experts to material experts, media experts, and design experts. The validation of material experts obtained a score of 3.4 with proper criteria, media experts obtained a score of 3.2 with proper criteria, and design experts obtained a score of 3.4 with proper criteria. The last stage is a field test in the form of responses to teacher and student representatives. In the field test, the teacher obtained a score of 3.4 with attractive criteria and student field tests with a percentage of 95% with very attractive criteria.

Keywords: *Cooperative Learning*; *Reading Ability*; *Procedure Text*

Introduction

English is the most widely spoken language in the whole world, and it is also the mother tongue spoken by more than 400 million people in all corners of the world. The use of English in the international world is used in everyday situations and also when working in social life (Tjokro et al, 2019). English is spoken almost all over the world, especially in countries that have bilateral relations, so the only language used as a liaison language is English.

Reading for understanding according to Tarigan (2008) is a type of reading to understand literary standards or norms, research criticism, written drama, and fictional patterns. In an effort to gain understanding of the text, readers use certain strategies. Reading comprehension is a process in understanding the content of reading, for that we need a solution as a way out which at least can reduce the difficulty of students in reading various kinds of textbooks in English.

Cooperative learning is a form of learning based on constructivist ideas. Cooperative learning is a learning strategy with a number of students as members of small groups with different levels of ability. In completing group assignments, each student member of the group must work together and help each other to understand the subject matter. In cooperative learning, learning is said to be incomplete if one of the students in the group has not mastered the subject matter being taught. According to Lie (2008) in his book 'Cooperative Learning', states that the cooperative learning model is not the same as just group learning, but there are basic elements that distinguish it from randomly divided groups. Cooperative learning has advantages over other methods in terms of its effectiveness for cognitive enhancement, social skills, and motivation (Gull, 2015).

Learning English at Junior High School 15 Pesawaran also experienced serious problems, especially reading skills. In semester 1 grade IX, there are several reading skills that students want to achieve, such as reading procedural texts and narrative texts. The goal is that students can understand the reading text they are learning and train to communicate using the target language or the language being studied. The desired indicator in reading is that students can convey ideas in English, which of course must first understand the contents of the reading. But what happened to students at Junior High School 15 Pesawaran did not match expectations. Based on the results of the examination of teacher assessment documents, it was found that: 1) 10 students or 33.3% of students reached the KKM standard in the procedural text material; and 2) 20 students or 66.6% of students did not achieve the KKM score.

Based on preliminary observations in class IX Junior High School 15 in Pesawaran in the learning process, information was obtained that: 1). The teaching materials used by most teachers are still unable to improve student learning outcomes, especially in English lessons on procedural text material, 2). Teachers are still unable to find effective and targeted teaching materials, 3). Students tend to still have difficulty understanding the procedural text. 4). The learning to the ability to read procedural texts are still low. Based on the formulation of the problem above, the researcher determines the purpose of this study so that it is focused and right on target. This study aims to determine the process of developing English Student Worksheets based on cooperative learning on the procedural text material for class IX at Junior High School 15 Pesawaran.

Literature Review

According to Stahl (1994) in the book 'Cooperative Learning Analysis of Social Studies Learning Models', said that the cooperative learning model places students as part of a system of cooperation in achieving an optimal result in learning. This learning model departs from basic assumptions in people's lives, namely getting better together, or "achieving better together" (Solihatin & Raharjo, 2007: 5).

Cooperative Learning Steps

Agus Suprijono (2009) describes the syntax of the cooperative learning model consisting of six phases as follows:

a) The first phase, the teacher communicates the learning objectives and prepares students.
b) In the second phase, the teacher conveys information related to the procedural text.
c) The third phase, group formation. The teacher must explain that students must work together in groups.
d) The fourth phase, the teacher needs to accompany the learning teams, reminds them of the tasks that must be done by students, as well as the time allocated to complete them.
e) In the fifth phase, the teacher evaluates using an evaluation strategy that is consistent with the learning objectives.
f) The sixth phase, the teacher prepares the rewards that will be given to students.

Strengths and Weaknesses of the Cooperative Learning Model

The role of the teacher in cooperative learning as a facilitator, moderator, organizer and mediator is clearly visible. The advantages of cooperative learning according to Jarolimek & Parker (in Isjoni, 2009: 24) are: 1) positive interdependence, 2) recognition in responding to individual differences, 3) students are involved in class planning and management, 4) a relaxed classroom atmosphere and fun, 5) establishing a warm and friendly relationship between students and teachers, 6) having many opportunities to express pleasant emotional experiences.

Besides having advantages, of course there are still flaws in it. The weakness of the cooperative learning model comes from two factors, namely internal factors and external factors. Internal factors include: 1) the teacher must prepare for learning in the classroom optimally, therefore it requires more energy, thought, and time; 2) in order for the learning process to run smoothly, adequate support for facilities, tools and costs is needed; 3) during the group discussion activities, there was a tendency for the issues being discussed to expand, so that many were not in accordance with the predetermined time; and 4) during class discussions, sometimes dominated by someone, this causes other students to become passive (Isjoni, 2009: 25).

In the learning process at school, generally the teacher is provided with teaching materials in the form of books related to the teaching material and not only that, there are also several other supports, namely LKPD (student worksheets) or also better known as LKS (student worksheets). . This aims to make the subject content easier to understand and

more practical. In the 2013 Curriculum, teachers are encouraged to make student workshets as supporting teaching materials for students and it is also one of the teachers' strategies in developing the teaching and learning process, because the teacher is someone who carries out his main duties namely educating, teaching, guiding, directing, training, assessing, and evaluating students in education (Ramayulis, 2013: 4).

Student Worksheets can also be defined as printed teaching materials in the form of paper sheets containing material, summaries, and instructions for carrying out tasks that must be done by students, which refer to the basic competencies to be achieved (Andi Prastowo, 2011: 204).

Research Design Model

This study is a research and development of English student worksheets based on cooperative learning in English lessons with the theme of text procedures to improve students' reading skills. This research approach used the research and development model of Borg & Gall (1983). The Borg and Gall development model contains a systematic guide to the steps that researchers must take so that the products they design have a standard of feasibility. Thus, what is needed in this development is a reference on the product procedure to be developed.

In instructional technology, descriptions of the procedures and development research steps have been developed. Borg & Gall (1983) stated that the development research procedure basically consists of two main objectives, namely: (1) developing the product, and (2) testing the effectiveness of the product in achieving the goal. Data collection is intended to reveal facts about the variables under study using appropriate methods and standard instruments. The method of obtaining data in research is known as the data collection method. This research uses interview, questionnaire, and observation methods.

The data analysis used in this study includes:

1. Analysis of validation data from material experts
2. Analysis of validation data from media experts
3. Data validation analysis from design experts

Result and Discussion

Cooperative Learning student worksheet product development process:

A Introduction (Needs and potential analysis)
b. Design the initial product
c. Validating to experts
d. Make product revisions according to the suggested improvements
e. Conduct a field test

a. Introduction

What is done at this stage are: needs analysis, reviewing theories, analyzing the potential and learning conditions.

b. Design the initial product

What is done at this stage is to prepare equipment, syllabus, lesson plans, KI, KD and learning objectives.

c. Validation Material Validation

The first product validation was carried out by a material expert. Material validation includes several aspects, including aspects of content worthiness, aspects of presentation feasibility, and aspects of overall appearance.

Table 1. Material Expert Validation Results

No	Aspect	Analysis	Validator 1	Validator 2
1	Content eligibility	∑ score	17	15
		x_i	3,4	3,0
		X	3,2	
		Criteria	Quite Valid	
2	Serving eligibility	∑ score	14	15
		x_i	3,5	3,7
		X	3,6	
		Criteria	Valid	
3	Overall view aspect	∑ score	35	44
		x_i	3,2	4,0
		X	3,6	
		Criteria	Valid	

Based on the table above, it can be concluded that the results of the value in the aspect of content feasibility, the first validator gave a value of 3.4 while the second validator gave a value of 3.0. The average of the results of the first and second validator assessments is 3.2 with the criteria is quite valid. The feasibility aspect of presenting the first validator with a score of 3,4 while the second validator is 3,7. The average of the results of the first and second validator assessments was 3.6 with valid criteria. The value in the overall display aspect, the first validator gave a value of 2.9 while the second validator gave a value of 4.0. so as to produce an average value of 3.6 with valid criteria.

Media Validation

The second product validation is media validation with the assessed aspects covering communicative aspects, creative and innovative aspects, presentation aspects, overall display aspects

Table 2. Validation Results of Media Experts

No	Aspect	Analysis	Validator 1	Validator 2
1	ommunicative Aspect	∑ scor e	17	12
		x_i	3,4	3,0
		X	3,2	
		Criteria	Quite Valid	
2	reative and innovative Aspect	∑ scor e	14	14
		x_i	3,5	3,5
		X	3,5	
		Criteria	Valid	
3	Presentations Aspect	∑ scor e	32	32
		x_i	2,9	2,9
		X	2,9	
		Criteria	Quite Valid	
4	Overall view Aspect	∑ score	25	22
		x_i	3,5	3,1
		X	3,3	
		Criteria	Valid	

The accumulated average of the communication aspects of the first and second validators is 3.2 with sufficiently valid criteria. The average score of the first and second validators on the creative and innovative aspects is 3.5 with valid criteria. The average assessment aspect of the presentation of the first and second validators is 2.9 with sufficiently valid criteria. The average rating of the first and second validators in the overall view aspect is 3.3 with valid criteria.

Design Validation

Design validation on student worksheets includes several aspects, namely: Student worksheets display, image display, worksheets functions, and students' intellectual conformity.

Table 3. Results of Design Expert Validation

No	Aspect	Analysis	Validator 1	Validator 2
1	Worksheet display	∑ scor e	14	14
		x_i	3,5	3,5
		X	3,5	
		Criteria	Valid	
2	Worksheet function	∑ scor e	10	10
		x_i	3,3	3,3
		X	3,3	
		Criteria	Valid	
3	The intellectual suitability of students	∑ score	12	9
		x_i	3,3	3,0
		X	3,1	
		Criteria	Quite valid	
4	Image display	∑ score	11	10
		x_i	3,6	3,3
		X	3,4	
		Criteria	Valid	
5	Overall view	∑ scor e	27	22
		x_i	3,8	3,1
		X	3,4	
		Criteria	Valid	

Based on the recapitulation of the 1st and 2nd design expert validators, the mean score of the worksheet display is 3.5 with the criteria "Valid". Aspect of worksheet function with score 3,3 with “Valid” criteria. The intellectual suitability aspect of the students has a score of 3.1 with the criteria "Quite Valid". The display aspect of the image score is 3,4 with the criteria "Valid" and the aspect of the overall display is the score is 3.4 with the criteria "Valid"

d. Revision

Suggestions for improvement from the material validator: Improved grammar, added goal points, added glossary, and added psychomotor assessments. Then, Suggestions for improvement from the media validator: Layout arrangement, adding text outside of food and drinks, adding activity sheets. Next, Suggestions for improvement from the design validator: repair foreword, repair cover, repair worksheets components, and improve the color.

e. Field Test

Field tests conducted in the form of responses to teacher and student representatives about the feasibility of the product. The field test for the teacher got a score of 3,4 with interesting criteria and suitable for use, while the student's response to the product was 95% with very interesting criteria.

Conclusion and Suggestion

Based on the research results, it can be concluded as follows:

1. The process of developing Student Worksheets of Cooperative Learning products are:
   a. Introduction (Needs and potential analysis)
   b. Design the initial product
   c. Validating to experts
   d. Make product revisions according to the suggested improvements e. Conduct a field test
   2. Experts Validation

The validation of material experts on cooperative learning worksheets to improve reading skills obtained an average score of 3.4 with the explanation that the student worksheets was suitable to be used in teaching learning English. Meanwhile, the media expert validation on the worksheets obtained an average score of 3.2 with criteria worthy of use. And design experts rated the worksheets with an average score of 3.4 so it worthy to use.

Based on the conclusions, the suggestions from the researchers are as follows:

1. Schools are expected to apply student worksheets cooperative learning teaching materials to improve the ability to read procedural text material in English class IX subjects.
2. Further researchers are expected to be able to develop student worksheets cooperative learning more broadly so that in the future it is expected to minimize

obstacles for students and teachers in the learning process in English language subjects, especially in procedural text material.

3. The next researcher is expected to be able to design the product not only on one aspect of reading skills, because learning English should cover all aspects of reading, writing, speaking, listening. Every aspect of learning skill must be mutually supportive. Learning with student worksheets teaching materials will be more varied, not limited to certain materials.

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E-Module Developmet Based on PBL Integrated STEM Assisted by Social Media to Improve Critical Thinking Skill: Preliminary Study

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Abstract.
This research aims to develop an electronic module (e-module) based on problem based learning (PBL) integrated in Science, Technology, Engineering and Mathematics (STEM) assisted by social media to improve students' critical thinking skills in dynamic fluid material. The development of this research used a mixed method consisting of qualitative and quantitative data. This study involved 308 students and 17 physics teachers in Lampung province. The results of the preliminary research conducted by only 12.5% of teachers used STEM integrated PBL-based e-modules to improve students' critical thinking skills and 46.6% of students stated that they only used printed books when physics learning. 100% of teachers and 88.2% of students stated that they really need e-modules to make learning easier. 50% of teachers stated that they use social media as a learning tool. Based on the results of the preliminary study, the use of e-modules is needed by teachers and students. Sehingga need to do a needs analysis for the development of E-Module integrates STEM-assisted PBL-based social media to enhance students' critical thinking skills.
Keywords: Critical Thinking, PBL, Social Media, STEM

1. Introduction

Currently we are in the 21st century which is a century with the development of science and technology that is very fast. In the 21st century we must be able to compete, for that we need skills to face the 21st century. Known 21st century skills include critical thinking and problem solving, creativity and innovation, communication, and collaboration [1].Critical thinking skills are the most important skills in order to be successful in facing the 21st century. This is because critical thinking involves grouping, organizing, remembering and analyzing information that can be internalized to students through systematic learning [2].

The ability to think critically in Indonesia is still not maximally learned. This can be seen from, 78% of Indonesian students can only work on science questions which are in the low category, which is only knowing or memorizing [3]. The results of the 2015 PISA study [4] show that Indonesia's ranking in the field of science is ranked 61 out of 70

countries. Indonesia obtained a score of 401 while the average score of other PISA participants was 493.

Critical thinking skills can be learned through student-centered learning. Students are trained to practice their reasoning skills in dealing with various daily problems in groups or individually. The 2013 curriculum is a strategic step for the government to realize the challenges of the 21st century [5]. In the 2013 curriculum, there is a model that fits the characteristics of the scientific approach, one of which is the problem-based learning [6].

The results of Arends's [7] study suggest that PBL helps improve the development of lifelong learning skills in an open, reflective, critical, and active learning mindset. PBL is learning based on problems. The problems that exist come from the surrounding reality and challenge students so that students are able to identify. Based on this process, the PBL learning model is implemented systematically by building student skills through problem solving, identification, and solutions given in solving problems, especially in learning physics.

STEM-oriented PBL is one solution that can be applied to face the problems previously described because PBL is learning based on problems. by [8] shows that there is an increase in critical thinking skills through PBL models with *outdoor learning*. Through STEM learning, students have scientific and technological literacy that can be seen from reading, writing, observing, and doing science so that they can be used as provisions for living in society and solving problems faced in everyday life related to the STEM field of science [9]. By [10] states that STEM which is integrative allows various learning methods to be used to support its application. Based on this, it is possible for STEM to be oriented in the PBL learning approach. The STEM approach is expected to produce meaningful learning for students through systematic integration of knowledge, concepts, and skills besides the STEM approach, students are able to solve problems, become better, become innovators and inventors, are independent, logical thinkers, and are aware of technology [10].

This technological very rapid development provides opportunities for the world of education to make it easier to obtain information in the form of text, images, videos and animations [11]. As an effort to adapt the development of module technology to be made in electronic form to make it more practical and efficient.

Module can be a solution, because it has five characteristics main that become its advantages, namely self-instructional, self-contained, stand-alone, adaptive, and use friendly [12]. In addition, e-modules are very practical because they are easily accessed by students wherever and whenever [13]. This is in line with the results of cecep's research which states that e-modules are one of the easiest learning resources to use because they can be studied anywhere and anytime, are more interesting, interactive, and can improve learning outcomes. In addition, e-modules can be used independently and are presented in an electronic format which includes animation, audio, navigation which makes users more interactive in learning [14]. The advantages of using E-Modules include being able to be integrated with the internet and directly playing videos [15].

Based on research conducted by [16] The use of E-Module can improve students' critical thinking skills and learning motivation.

However, based on the results of a preliminary study conducted by researchers on 308 students in Lampung, it was stated that it was very difficult to learn physics due to several factors such as the teacher only giving assignments without being given an explanation, difficulties in doing assignments, too many assignments, less attractive teaching materials besides that students find it easier to understand the lesson if there are pictures or videos. To make learning easier, researchers use social media applications for learning online. Social media offers modern and creative ways to build a social learning environment [17]. Social media applications in the form of discussion groups can trigger and increase interactions between instructors and students [18]. By using social media this supports the change from teacher-centered learning to student-centered [19]. and also improves student self-regulation [20] [21]. In line with Amry's research [22] states that learning usingaccess *chat* can support an active learning process. The benefit of implementing learning *mobile* is that it provides a forum for students to discuss with each other and expand the learning environment anywhere and anytime [23].

Based on the above problems, the researcher wants to develop teaching materials *E-module* based on STEM integrated PBL. The approach of the four aspects of Science, Technology, Engineering, and Mathematics (STEM) is a match between problems that occur in the real world and problem-based learning[24] [25]. Learning with the STEM approach is to apply and practice basic STEM contents in situations they encounter in life [26].

2. Method

This research uses mixed methods, consisting of qualitative data and quantitative data. The sampling technique was carried out by purposive sampling. Data collection was carried out by giving questionnaires to student teachers in Lampung province. Questionnaires were given to 308 students and 17 physics teachers. The instrument uses a Likert scale with four choices, namely (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. The *e-module development is* provided in full in the form of a file as an attachment to the assessment instrument. The development assessment instrument is provided in the form of a google form. The results of the respondents' assessment were analyzed by calculating the average score obtained for each component of thedevelopment *e-module*, then converted into a qualitative statement according to Table 1.

Table 1. Assessment and Decision

Score Average Score	Decision
4.20-5.00	Very suitable
3.40-4.19	Suitable
2.60-3.39	Sufficiently suitable
1.80-2.59	Less suitable
1.00-1, 79	Does not match

3. Research Result and Discussion

The results of preliminary research based on the needs analysis were obtained from the google form filled in by physics teachers and students can be seen in Table 2 and Table 3.

Table 2. The results of the analysis of the phsics teacher needs

NO	Statement For Teachers	Percentage
1	physics teacher using *modules* e-learningin Physics	40%
2	physics teacher to develop *e-modules* using PBL syntax	12.5%
3	Teacher of physics to develop *e-module* has been integrated STEM	12.5%
4	Physics teachers have used the STEM approach in learning	37.5%
5	Teachers use learning media in learning physics	37.5%
6	Physics teachers present material related to the phenomena of everyday life	87.5%
7	Physics teachers give students the opportunity to seek information with friends when discussing	100%
8	Physics teachers give students the opportunity to analyze problems given during learning	75%
9	Physics teachers give students the opportunity to find other sources to improve critical thinking skills	100%
10	Physics teachers give students the opportunity to solve problems first in their own way	87.5%
11	The physics teacher gave the participants the opportunity to Dik conducted an experiment	50%
12	Physics teachers gave students the opportunity to present the results of the experiment	50%
13	The problem based learning model that physics teachers did made student learning outcomes increased by	85%
14	Physics teachers taught by utilizing existing technology and supporting	87.5%
15	Physics teachers guide students to develop scientific literacy in learning	50%
16	Physics teachers train students to make engineering techniques used in everyday life	50%
17	Physics teachers guide students to formulate experimental results mathematically	62.5%
18	Physics teachers use media learning to integrate science, technology, engineering and mathematics to make it easier to understand physics concepts	50%
19	Physics teachers train questions that contain critical thinking skills to students	50%
20	Physics teachers use E-Modules on dynamic fluid material	12.5%

	to improve critical thinking skills students	
21	Physics teachers use about social media as a means of teaching	50%
22	During the Corona virus pandemic like today, e-modules are needed to make teaching online easier because they can be accessed anywhere and there arevideos and pictures	100%

Table 3. Results of Student Needs Analysis

NO	Statement for Teachers	Percentage
1	I like learning physics	65%
2	I prefer playing social media than learning physics	48.5%
3	Teachers use *e-modules* in physics learning	51.5%
4	Teachers use *e-modules* to invites students to actively investigate physical phenomena	50%
5	I only use textbooks from school	46.6%
6	The teacher presents material related to the phenomena of everyday life	87.5%
7	The teacher gives students the opportunity to seek information with their friends when discussing	93 , 5%
8	Teachers give students the opportunity to analyze problems given during learning	83.8%
9	Teachers give students the opportunity to find other sources to improve critical thinking skills	100%
10	Teachers give students opportunities to solve problems in their own way	87 %
11	The teacher gave the students the opportunity to do the experiment	53.8%
12	The teacher gave the opportunity students to present the experimental results	59.2%
13	Teachers use problem-based learning models	85%
14	Teachers teach using existing technology and support	87.5%
15	Teachers guide students to develop scientific literacy in learning	72.3%
16	Teachers train students to make engineering techniques that are used in everyday life	50%
17	I am able to mathematically formulate experimental results	62.5%
18	I am able to formulate a hypothesis	50%
19	I can draw conclusions from a physics concept by utilizing various information	50%
20	Based on the skills I have, I can understand the material delivered by the teacher	12.5%

21	Teachers use social media as a learning tool	50%
22	During the Corona virus pandemic, e-modules are needed to make teaching online easier because they can be accessed anywhere and there are videos and pictures	100%
23	Online lessons carried out during the coronavirus pandemic se like this it is difficult for me to learn physics	80.9%
24	The teacher only gives assignments when learning	57.7%
25	Electronic modules are needed when learning online because they are easily accessible on smartphones than textbooks	88.2%
26	Teaching materials when learning online taste from package books alone	79%

Based on data in table 2 with 17 teacher respondents and table 3 with a total of 308 students, it is stated that *e-module* is needed to facilitate the learning and teaching process *online*. Based on table 2, it shows that 40% of teachers have used *e-modules* in physics learning. Based on table 3, 46.6% of students only used textbooks from school and 57.7% stated that the teacher only gave assignments without teaching them first. This is why 80.9% of students find it difficult to learn physics online and as many as 48.5% of students prefer to play social media when learning physics. Based on table 2 only 12.5% of teachers developed *theire-modules* own STEM integrated PBL based. Therefore, the researcher wants to develop an *e-module* based on integrated PBL STEM assisted by social media on dynamic fluid material to improve students' critical thinking skills. Each learning step and activity in the *e-module* contains PBL syntax with the STEM approach and accommodates students' critical thinking skills. So that the *e-module* is expected to be able to improve students' critical thinking skills. Assessment ofdevelopment is *e-module* carried out with the suitability of *e-modules*, the design of learning activities, the suitability of STEM components in learning activities, the feasibility, and effectiveness ofdevelopment *e-module* with STEM integrated PBL syntax to improve students' critical thinking skills. The results of the assessment ofdevelopment *e-moduleare* presented in Table 4.

Table 4. Assessment results of *E-Module*

No	Development E-Module Development	Average score
1	**Conformance E-*Module***	
	The activities in the LKPD were developed in accordance with the PBLsyntax	4.35
	The images presented are in the context of the material	4,3
2	**Teaching and Learning Activities**	
	orientation activities carried out have the potential to accommodate students to have critical thinking skills	4,2
	Organizing activities to facilitate students to have critical thinking skills	4,45
	investigation activities are able to educate students' critical thinking to do experiments	4,24
	Through experimental activities, being able to train students in collecting data	4,5
	Experimental activities are able to train students in determining experimental variables	4.2
	Presentation activities are able to educate students' critical thinking skills in conveying rebuttals to something different from what they understand	4,3
	Variety of learning activities arranged according to PBL (problem based learning) syntax	4,3
	Variety of learning activities arranged in accordance with STEM	4,5
3	**PBL Model with STEM Approach**	
	Various learning activities are arranged using the PBL model with STEM components included	4,3
4	**Effectiveness E-*Module***	
	Various activities that have been designed have the potential to accommodate students' critical thinking skills	4,2

Based on the results of thedevelopment assessment *e-module* in table 4 it shows that the suitability of the *e-module* with the syntax of the PBL learning model corresponds to an average value of 4.35. Student teaching and learning activities which include orientation, organizing, guiding, developing, analyzing and evaluating with an average value of 4.35. The results of the suitability of the activities in the *e-module* with the STEM approach obtained an average value of 4.3 and the effectiveness of the *e-module* with an average value of 4.3. Based on the results of the assessment, it shows that all components are assessed to get a score of 4.20-4.5. By referring to Table 1, the development of this *e-module* is stated to be very suitable and can be used to improve students' critical thinking skills. The *e-module development is* designed to include learning activities with PBL syntax and using the STEM approach. The learning activities carried out aim to improve students' critical thinking skills with the help of social media.

4. Conclusion

Based on the data from the results of the needs analysis conducted by the researchers, it can be seen that the development of an E-Module based on STEM integrated PBL is necessary. The findings in the field that most of the learning resources used were textbooks from schools. In addition, most teachers stated that they had not used modules that stimulated students' critical thinking skills. Therefore, the e-module that will be developed focuses on stimulating students' critical thinking skills.

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