DEVELOPING DIFFERENTIATED ELECTRONIC SUPPLEMENTARY READING EXERCISE FOR THE SLOW LEARNERS OF SEVENTH YEAR STUDENTS AT SMP N 2 SINGARAJA

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Abstract
Integrating ICT in learning has become the demands of Curriculum 2013. Yet, not all of the teacher have media to support the integration of ICT in learning. Whereas, the integration of ICT may help the teachers to accommodate students’ diversity by using differentiated instruction. Thus, this study aimed at: (1) identifying kinds of supplementary reading exercises are needed by the Seventh Year Students at SMP N 2 Singaraja; (2) identifying the design of the electronic supplementary reading exercises for the slow learners of seventhyear students at SMP N 2 Singaraja; (3) measuring the quality of the electronic supplementary reading exercises for the slow learners of seventhyear students at SMP N 2 Singaraja. This study was conducted based on the research and development design proposed by Sugiono (2011). The data of the study were collected through questionnaire, interview, observation, expert judge and field study. The results of the data were further analyzed by using descriptive analysis and interrater agreement model from by Gregory (2000). The result of the study showed that (1) the supplementary reading exercise needed by the seventh year students at SMP N 2 Singaraja was supplementary reading exercise which was integrated with ICT; (2) the design of the electronic supplementary reading exercise for the slow learners was developed based on the needs; (3) the electronic supplementary reading exercise for the slow learners was categorized as high quality exercises based on content validity, empirical validity, quality of the media and field test.

Key words: R&D, Differentiated Instruction, Slow Learners, Supplementary Exercise, Electronic Reading Exercise

INTRODUCTION
In today’s digital world, Information and Communication Technology (ICT) has become a part of human life. It has influenced all aspects of life, even Education is no exception to this. The use of ICT is very significant in supporting the learners to improve their quality of learning. Thus, as the importance role of ICT in improving the learner’s competencies, Indonesian government tried to develop a new curriculum which is in accordance with the future demands. This new curriculum is commonly known as 2013 curriculum and has been implemented to some schools in Indonesia since 2013.

In 2013 curriculum, Information and Communication Technology as a subject is no longer exist. The removal of this subject is replaced by integrating it into other subjects. As stated in Kemendikbud (2012) ICT becomes a medium of learning and integrated in all subjects. Hence, all of teachers including English teachers are required to integrate ICT in their teaching and learning process. The integration of ICT can be
applied by the use of mobile devices, such as Smartphone, tablet computer or laptop. This requirement is not a difficult task since teachers as well as students nowadays is common using ICT. Most of the students even already have their own electronic devices with them. It is supported by a survey done by Wulandari, et al. (2014, p.402) which shown that there are 55.2% students in Singaraja already have phone, 44.8% have Smartphone, 6.9%, have tablet and 24.1% have laptop.

SMP N 2 Singaraja is one of junior high school in Indonesia that implementing 2013 curriculum. Based on the preliminary observation which was conducted by the researcher in SMP N 2 Singaraja on Friday, 27 November 2015 at 1 pm, from 112 students of seventh grade, 96 have smartphones and 101 have laptop/notebook. It means that 90.17% of the students have mobile devices to be used. The availability of those kinds of facilities was not utilized effectively, especially in relation to language learning. It is due to the absence of suitable learning media that can be used for conducting teaching and learning process using those kinds of electronic devices. The teaching and learning process was mostly conducted inside the classroom and the only media that is used to support teaching and learning process is the book that is provided by the government.

Unfortunately, the use of this book only cannot facilitate the learners well since the ability of the students in understanding the reading material are different from one student to another. As supported by Nordlund (2003), he stated that since learners are not the same in terms of their ability, teachers should differentiate the instruction in order to help every student to meet his or her full potential. There are three types of learner that should be considered in modifying the instruction, namely fast, medium, and slow learners (Mohammad & Mahmoud in Wijayantari 2015). Fast learners are those learners who always get good scores during the evaluation tests, and work well on all tasks and master skill faster than what it is expected on the syllabus. The average learners are the ones whose scores are good enough on evaluation tests, could work on all tasks and master skills in a normal time as what is planned on syllabus, while, the slow learners are those students with below average cognitive abilities and need to struggle to cope with the traditional academic demands of the regular classroom.

The classification of those kinds of learners can be analyzed from the scores of their achievement test. Mohammad & Mahmoud in Wijayantari 2015 states that slow learners normally get slow score during the evaluation test, while average learners usually get moderate score, and above average students mostly get high score on achievement test. Thus, in this study, the students’ ability will be categorized based on the result of their achievement test that has been conducted by their English teachers. Further, among those three learners, the slow learners are the ones who need to be assisted the most. It is because they have a difficulty in dealing with abstract and symbolic materials which make them slower in understanding the material. Thus, most of the time the slow learners will get the lowest score compared with the average and fast learners.

In relation to English language teaching, Reading is one of important skills that should be mastered by the foreign language learners. It is because reading text, which is written in the target language, will make the students have opportunity to study the target language, i.e. the vocabulary, grammar, punctuation, the way to construct sentences, paragraph, and text (Harmer, 2003). Thus, as the important of reading, the teacher should be able to provide the students with a good reading material as well as supplementary exercise in order to meet the needs of the different ability of the students.
Besides, the supplementary exercise also can help the students to build their prior knowledge about the kind of reading exercise which may occur in the National Examination.

Reading comprehension is the ability to construct meaning from a given written text. According to Greenwood (1989), there are five aspects of reading which help the students to comprehend the English text: main idea, specific information, references, inference and vocabulary. Those aspect are Identifying Main Idea (Important information that tells more about the overall idea of a paragraph or section of a text), Identifying Specific Information (Specific information develops the topic sentence by giving definitions, examples, facts, an incidents, comparison, analogy, cause and effect and quotation), Reference (Words or phrase used either before or after the reference in the reading material), Making Inference (The logical connection that the reader draw between his observes or unknown and what he does not know), Understanding Difficult Vocabulary (Vocabulary knowledge, the understanding of word meanings and their use, contributes to reading comprehension and knowledge building).

Multiple choice question is the common form of exercises used to test students understanding toward the learning process. A Multiple Choice (MC) question can be defined as a question in which students are asked to select one alternative from a given set of alternatives in response to a question stem (Torres, et al., 2011). A standard multiple-choice test item consists of two basic parts, namely a problem (stem) and a list of suggested solutions (alternatives). The stem may be in the form of either a question or an incomplete statement, and the list of alternatives contains one correct or best alternative (answer) and a number of incorrect or inferior alternatives (distracters). In the study presented in Torres et al. (in Azevedo, 2015) there were some advantages and limitations of the use of multiple choice test. The advantages of multiple choice question is firstly it can be used with diversified contents. Next, it can measure a wide range of learning objectives, it is adaptable to various levels of cognitive abilities and it is very useful for assessment of large classes. Besides it also can be used with computer systems, such as LMS, tests can be graded automatically and statistical analysis can be easily performed and they also provide the most useful format for comparisons over time due to the objectiveness in grading. Meanwhile there are also some limitations of multiple choices question such as it can be difficult to construct for higher levels of cognitive skills as well as it require good writing skills from teachers, so that the questions are clear. It also require good reading skills from students, in order to correctly interpret the questions. Moreover, it cannot measure some types of learning objectives, such as the ability to communicate. Then, many times it is difficult to find good "distracters" (which corresponds to the incorrect options) and students can guess the answer.

Slow learners are those learners with below average cognitive ability. They are not categorized as a disabled learner, yet they are those who struggle to cope with the academic demands in a regular classroom (Carroll, 2004). There are some characteristics of slow learners, such as: function ability which is significantly below grade level, consistently get low scores for achievement tests, working on all task slowly and normally they take longer time to complete the tasks. Besides, they also slow in mastering skills, difficult in dealing with abstract learning, and they also find difficulty in following multi-step instruction. Slow learners will be able to work at their best only if teacher teach the students by using concrete, hands-on manipulation of subjects. Also, in order to make the slow learners more automatic, the teacher should
give repetition in a highly structured learning environment. Further, these students also
categorized as usually disorganized and peer teaching is needed during learning process.
Moreover, the slow learner need simpler and shorter assignments and they commonly
need extra time to complete the assignments.

Based on Yang (2013, p.19), Mobile assisted language learning (MALL) is a
 burgeoning subdivision of computer assisted language learning in general. As mobile
technologies has evolved, so have their advanced applications developed for language
education. Mobile learning is characterized by its potential for learning to be
spontaneous, informal, personalized and ubiquitous. Students do not always have to
study a second language in a classroom. They may have the opportunity to learn it
using mobile devices when they desire and where they are. There are some properties
of mobile devices according to Klopfer et al. in Miangah&Nezarat (2012, p. 310). The
first property is portability, mobile devices can be taken to different places due to small
size and weight. The second property is social interactivity, where exchanging data and
collaboration with other learners is possible through mobile devices. Then, the third is
context sensitivity where the data on the mobile devices can be gathered and responded
uniquely to the current location and time. Further, the fourth property is connectivity,
mobile devices can be connected to other devices, data collection devices, or a common
network by creating a shared network. Then, the last one is individuality where
activities platform can be customized for individual learner.

This study aims at finding out kinds of supplementary reading exercises are
needed by the Seventh Year Students at SMP N 2 Singaraja, the design of the electronic
supplementary reading exercises for the Slow Learners of Seventh Year Students at SMP
N 2 Singaraja, the quality of the electronic supplementary reading exercises for the Slow
Learners of Seventh Year Students at SMP N 2 Singaraja.

METHOD
This research follows R&D design that is proposed by Sugiyono (2011). The
steps are analyzing of potency and problems, collecting data, designing product,
validating design, revising design, field test, revising product. The subject of this study
is English teachers and the slow learners of the seventh grade students of SMP N 2
Singaraja. While, the object of the study was developing differentiated electronic
supplementary reading exercises for the slow learners. The methods that are used in
collecting data are document analysis, questionnaire, interview, observation, expert
judge and field study. While the instrument used to support the data collection are check
list, questionnaire, interview guide, observation sheet and expert judgment sheet. After
the data are collected, then it will further analyzed by using
descriptive analysis and interrater agreement model from Gregory (2000).

FINDING AND DISCUSSION
In order to find kinds of reading exercises needed by the slow learners, syllabus
analysis and existing exercises analysis are conducted. The result of syllabus analysis
shows that there are four basic competencies appropriate to be developed as
supplementary reading exercises. The first basic competency is to understand the social
function, text which is about people, animal and things characteristics based on the
appropriate context. The second basic competency is understand the social function, text
structure, and language feature of text which is about people and animal activity and
function of things based on the appropriate context. The third basic competency is
understand the social function, text structure, and language feature of text which is about instruction, short notice, and warning/caution to be used in appropriate context. Then the last basic competency is understand the social function, text structure, and language feature in the form of descriptive text to describe people, animal and things to be used in appropriate context. Then from the result of existing exercises analysis the result shows that the exercise that are usually used by the teacher are exercises from the handbook from the government and students’ workbook (LKS). The exercise contained in the handbook only in the form essay. There is no other type of exercise like matching, true-false, multiple choice and etc. Whereas, multiple choice test is an important exercise in order to prepare the students for the summative test which commonly in the form of multiple choice. On the other hand, the exercises contained in the students’ workbook are varied, such as fill in the blank, true false, essay and multiple choices. Students can try different kinds of exercises in this workbook to check as well as improve their understanding. Meanwhile, the arrangement of the unit in this workbook is not appropriate with the syllabus as well as the handbook provided by the government. It can be seen from the descriptive text which should be taught in the last unit, but it is placed in the first unit. Moreover, the workbook does not contain any interesting pictures or illustration to make the students feel motivated to answer the exercises. Besides, based on the teacher and students’ opinion toward the existing exercise, they agree that it is necessary to developed differentiated supplementary reading exercise which is integrated by the use of ICT in order to make the learning more exiting.

Then, after finding out kinds of exercise needed for the seventh year student at SMP N 2 Singaraja, the next step is designing the supplementary exercise. The supplementary reading exercise is designed in the form of electronic reading exercise and focusing different ability of the students, in this case the slow learners. There are also four units developed in the electronic supplementary reading exercises. For every unit, there are five indicators that should be achieved by the students which are developed based on the aspects of reading comprehension. There are three parts contained in every units of the electronic reading exercise. The first part is lesson. In this part the students observed a video which contain vocabulary building related with the topic of each unit. The vocabularies were some difficult words that the students may face when they answer the Main Exercises. The second part is Pre-exercise. In pre-exercise the students recall the information they get from the video by matching pictures with its appropriate meaning. This activity will help the students to remember some useful words to be able to answer the main exercise. Then, the last part is main exercise. The main exercise contained 20 items of multiple choice questions. Each of the items consist of four choices in which three of them belong to destructors and one of them was the correct answer. They are symbolized with letter a, b, c and d. The multiple choices developed in accordance with the aspects of reading comprehension, namely main idea, supporting details, reference, inference and vocabulary. Those aspects are distributed in the 20 items of multiple choice questions.

Further, after the design of the electronic supplementary reading exercise has been developed, then the quality of the developed reading exercise is also examined. It is seen from the content validity from two experts who expertise in content and media, empirical validity from the result of try out, quality of the media based on expert of media, the teacher’s and students’ opinion toward the developed electronic supplementary reading exercise, and the weaknesses of the developed supplementary
reading exercises based on the teachers’ and students’ opinion. The content validity shows which is analyzed from the result of expert judgment shows that the content of the product is 0.85. Then, from the empirical validity it is shows that most of the items are valid, the index of difficulty shows that the items are mostly categorized as easy question. Further most of the index discriminant of the items are above 0.40, the result in measuring the quality of distracters of this instrument indicated that most of the choices of answers of the 25 questions in each unit could be considered as good distracters, and the reliability for unit 1 is 0.98, unit 2 is 0.98, unit 3 is 0.98 and unit 4 is 0.97. In addition the quality of the media based on expert media is 74.

In order to find out the kinds of supplementary reading exercise needed by the seventh year students at SMP N 2 Singaraja, syllabus analysis and existing exercises analysis were conducted. Based on the analysis of English syllabus of curriculum 2013 there were five basic competencies that should be taught in the second semester of seventh year students. Yet, based on the syllabus analysis which was involved the English teacher of seventh year students, there were only four basic competencies should be developed. The first basic competency is to understand the social function, text which is about people, animal and things characteristics based on the appropriate context. The second basic competency is understand the social function, text structure, and language feature of text which is about people and animal activity and function of things based on the appropriate context. The third basic competency is understand the social function, text structure, and language feature of text which is about instruction, short notice, and warning/caution to be used in appropriate context. Then the last basic competency is understand the social function, text structure, and language feature of in the form of descriptive text to describe people, animal and things to be used in appropriate context.

Besides, from the document analysis it was found out that the reading exercise used by the teachers in SMP N 2 Singaraja was the exercises contained in students handbook provided by the government and students’ workbook (LKS). The handbook provided good picture and illustration for the exercises. But, the exercises cannot prepare themselves for the summative test as it was usually taken in the form of multiple choice tests. Wu, et al. (2006) stated that there were several types of learning exercises, namely multiple choice, matching, permutation, fill in the blank and etc. those type of exercises can be used as supplementary exercise to provide the students with different kinds of exercises. In the students’ workbook, it contained several kinds of exercises, such as fill in the blank, true false, essay and multiple choices. Students can try different kinds of exercises in this workbook to check as well as improve their understanding. Yet, the arrangement of the unit in this workbook is not appropriate with the syllabus as well as the handbook provided by the government. It can be seen from the descriptive text which should be taught in the last unit, but it is placed in the first unit. Moreover, the workbook does not contain any interesting pictures or illustration to make the students feel motivated to answer the exercises.

Furthermore, the existing exercises analysis were also conducted by examining the teachers’ and the students’ opinion toward the existing supplementary exercises. It was done by distributing questionnaire to the teacher as well as the students in relation with the existing supplementary reading exercises. From the analysis of the questionnaire it was found out that the existing exercise were not 100% appropriate with the syllabus demand. The supplementary exercises also did not contain any interesting pictures or illustration to make the students more motivated to answer the exercises.
Moreover, the teachers also stated that sometimes there were some exercises which were not contextualized or based on the students’ real life. Besides considering the requirements in English syllabus of curriculum 2013, the kinds of reading exercises needed by the students in SMP N 2 Singaraja also need to accommodate the different ability of the students. In the finding, it was found out that the supplementary reading exercise cannot accommodate the different ability of the students. It is since not all of the students were able to do the exercises contained in the supplementary reading exercises used by the teachers which were in the form of students’ workbook (LKS). They need kind of supplementary reading exercise which is in accordance with their level of ability, so that all of the learners could achieve the learning goals as what is expected.

As supported by Hall, T. et al. (2002) that teachers should vary and adapt their approach to fit the vast diversity of students in the classroom. The teacher who recognizes the different prior knowledge, experiences, culture and etc of the students will distinguish their instruction in order to meet all off the students’ ability. In addition, related with the curriculum demands to integrate ICT in teaching and learning process, the existing supplementary exercises do not facilitate the teachers to be able to integrate it with ICT. Muthomi et al. (2014), who conduct a research to investigate the effectiveness of Differentiated instruction on students’ achievement in mathematics in secondary schools in Meru County in Kenya indicated that Differentiated Instruction significantly improved the students’ achievement in mathematics which may lead curriculum developers to include Differentiated Instruction in approaches to teaching mathematics to improve achievement in the subject. As the effectiveness of the differentiated instruction as well as the result of the analysis above, it was necessary to develop an interesting differentiated supplementary reading exercise which was based on syllabus demand and integrated with ICT.

Since the data about kind of supplementary reading exercise needed by the seventh year students at Singaraja had been collected, the next step was designing the electronic supplementary reading exercises. The design was started by developing the blue print of the electronic supplementary reading exercises. The blue print was developed in accordance with the basic competencies needed to develop in the second semester. Moreover, it was also based on the aspect in the reading comprehension theory, namely main idea, supporting details, reference, inference and vocabularies (Greenwood, 1989). Those basic competencies were distributed in each unit of the developed exercises.

The supplementary reading exercises were also design in order to allow the teacher to integrate the leaning process using ICT. Thus, it used Moodle which was a private website which allow teacher to conduct online courses to achieve the learning goal. Since the focus of this research on development of reading exercise thus the content contain in the designed website were about reading exercises only. There were four unit covered in this website which was related with the needed basic competencies. For every unit, there were five indicators that should be achieved by the students which were developed based on the aspects of reading comprehension.

There were three parts contained in every units of the electronic reading exercise. The first part was lesson. In this part the students observed a video which contain vocabulary building related with the topic of each unit. The vocabularies were some difficult words that the students may face when they answer the Main Exercises. The second part was Pre-exercise. In pre-exercise the students recalled the information
they got from the video by matching pictures with its appropriate meaning. This activity will help the students to remember some useful words to be able to answer the main exercise. Then, the last part was main exercise. The main exercise contained 20 items of multiple choice questions. Each of the items consisted of four choices in which three of them belong to destructors and one of them was the correct answer. They were symbolized with letter a, b, c and d.

As the study was focusing on the learning of the slow learner, thus the developed supplementary reading exercises also considered the characteristics of slow learners. Based on the (Carroll, 2004), there are some characteristics of slow learners, such as: function ability which is significantly below grade level, consistently get low scores for achievement tests, working on all task slowly and normally they take longer time to complete the tasks. Besides, they also slow in mastering skills, difficult in dealing with abstract learning, and they also find difficulty in following multi-step instruction. Considering the characteristics of the slow learners, thus the exercises contained in the developed reading exercises were supported by the use of interesting pictures or illustration. It was used in order to make the slow learners could understand the reading exercises easier. Besides, the instructions used in the developed reading exercises were simple and clear instructions.

In conclusion, the developed supplementary exercises were guided by syllabus 2013, aspect of reading comprehension, characteristics of slow learners, criteria of good multiple choice and the weaknesses of the existing exercise. There were some differences between this study with the previous study done by Utami et al. (2014). The previous research developed culture-based supplementary reading material for the eighth grade students of SMP Laboratorium Singaraja. The first different was the product which was developed in the previous study was supplementary material, while this study was supplementary exercise with the integration of ICT. The previous study also did not differentiate the instruction based on the student ability. Yet, despite of those differences, both of the researches were an R & D research proposed by Sugiono focus on reading skill.

The quality of the electronic supplementary reading exercises was examined through the result of content validity, empirical validity, quality of the media and teacher’s and students opinion toward the developed product. The content validity involved two experts who expertise in content and media, those experts were Prof. Dr. Ni Putu Kerti Nitisasih, M.A. and I Ketut Trika Adi Ana, M.Pd. The result showed that from the total of 100 items, 85 items were accepted since the two judges believed that the items were strong relevance. Then, 9 items should be dropped since both of the judges stated that the items were weak relevance. While, there were 6 items which should be revised since only one of judge said that the items were weak relevance. In order to know the quality of the electronic supplementary reading exercise, thus the result of expert judgments were analyzed by using Gregory formula. The result showed that the content validity was 0.85. Based on the criteria of the content validity, it indicated that the quality of the electronic supplementary reading exercise was very high validity.

Then the quality of the developed supplementary reading exercise based on the empirical validity was done by conducting field test for the seventh year students at SMP N 2 Singaraja. The result of the field test were analyzed by using Anates in order to find out the item validity, index of difficulty, index of discriminant, quality of distracters and reliability of the product. In the item validity, the result showed that 10
items were invalid from 100 questions. Those items which were categorized as invalid should be dropped since the point biserial was under the requirement. Meanwhile, the other items were categorized as valid since they had fulfilled the requirement validity based on the index correlation of point biserial which was above 0.325. Then, the index difficulty showed that most of the items in the developed electronic reading exercise were categorized as easy items. Thus it can be concluded that the items were not appropriate to be given in normal class since the items were specially made for the slow learners.

Further, the index of discriminant showed that the test were able to distinguish between the knowledgeable students and those who are not, it was since the discrimination index of the items were above or equal to 0.40. Moreover, The result in measuring the quality of distracters of this instrument indicated that most of the choices of answers of the 25 questions in each unit could be considered as good distracters. It was since almost other choices except the key answer were also answered by the students. In addition, the results also showed that all of the units were having reliability. It was since the entire reliability test was above 0.70. It also meant this instrument can give the same result whenever it is used.

Besides validating the content of the developed supplementary reading exercises through content validity as well as empirical validity, the media used in integrating the content of the exercises were also examined. It involved one expert of media, that is I Ketut Trika Adi Ana, M.Pd. The expert was given an expert judgment sheet which was developed based on the criteria of Good-E Learning. The main aspect of the criteria of good e-learning is Documentation and Supplementary Exercise, Presentation, Effectiveness, Audience Appeal and Suitability and Ease of Use (Bitter and Legacy, 2010). The total score for the quality of the media was 74. Based on the table of the criteria of the quality of media, it can be concluded that the quality of the media was very good media.

Further, the quality of the developed supplementary reading exercises was also seen from the teacher’s and the students’ opinion toward the developed exercises. Overall, based on the result of the questionnaire as well as interview in the finding, the teacher and the students gave their positive response toward the developed reading exercise. The teacher argued that the developed supplementary reading exercises could help them to integrated ICT in learning process as what is expected in the curriculum. The students also stated that they were happy to learn using their Smartphone. They could learn whenever or wherever they want as long as they have internet connection. They also could use their Smartphone to improve their reading comprehension ability rather than only for accessing social media or online game. Moreover, the supplementary reading exercises contained interesting video, pictures as well as illustration that make the students motivate to do the reading exercises.

CONCLUSION
Based on the study, it can be concluded that:
1. Based on the syllabus analysis and existing exercises analysis, the appropriate supplementary reading exercises which should be developed are: 1) exercises which can integrate the use of ICT; 2) exercises which is based on the basic competencies needed by the teachers in SMP N 2 Singaraja; 3) exercises which is differentiating the instruction.
2. There were four units developed in the electronic supplementary reading exercises for the slow learners at SMP N 2 Singaraja based on the basic competencies needed. The basic competencies are further divided into 5 indicators for each unit which was in accordance with the aspects of reading comprehension. Every unit contains 3 parts, namely Lesson, Pre-exercises and the last part was Main exercises.

3. The quality of the developed reading exercise are seen from content validity, empirical validity, quality of the media and the teacher and student’s opinion toward the developed reading exercises. The result shows that the developed electronic supplementary reading exercises were very high quality.

REFERENCES


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