The Potential Effect of Developed Reader Response Strategy-Based Mobile Reading for Students’ Establishing Character and Comprehension Achievement

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Abstract:

Mobile learning is nowadays utilized by educators to meet the students' mode of learning in this digital era. This current study’s objective is to develop the mobile learning of reading based reader response strategy for comprehension achievement and character establishment of the eleventh grade students of SMAN 4 Lubuklinggau with 29 student. By employing development research with Analysis, Design, Development, Implementation, and Evaluation (ADDIE) research design, reading test material was delivered to determine the potential effect of students. The result of the study were: the developed product for reading material was effective by showing 26 students (89.65%) out of 29 students achieved the minimum mastery criterion (70) and the students' answers showed students' moral knowing and moral feeling in relation to the character building. In term of moral knowing, it showed that students comprehension about moral value inside texts. Students were able to put themselves in moral knowing stage of character building. Besides, the students expressed what they felt and what should they do if they should face the condition.

Keywords: mobile learning, mobile reading, Reader Response Strategy students’ character, reading comprehension

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Introduction

Reading is important skill to acquire information. Language learning should drill students in reading to take information from textbooks, magazines, brochures and invitations as learning materials. According to Farhady, Jafarpour & Birjandi (1994), reading is the most important of all skills for most language learners in general and for EFL learners in particular. Furthermore, Davies and Pearse (2000, p. 90) state that reading is an activity to confirm the specific topic and each change of topic that bases the readers’ previous ideas in mind about the topic and readers’ knowledge of the language of the texts written. It is in line with Nunan (2003), reading is a fluent process of readers combining information from the text and their own background knowledge to build meaning. It inferred that in reading, readers build idea connection between readers’ background information and messages from the texts.

In relation to reading, comprehension is the ultimate goal of all reading, that is the ability to understand a text underlies all reading tasks (Hans & Hans, 2015, p. 61). In the other words, reading comprehension refers to how people understand and interpret what they read in an appropriate way (Alshammari, 2015). According to Kwiatkowska-White (2012), comprehension process involves simultaneously activity of extracting and constructing meaning through interaction and involvement with written language. Particularly, a prosperous reading comprehension necessitates the active participation by the reader, commencing and arranging the reading process on his own (Aksan & Kisac, 2009, p. 835).

According to Almerico (2014, p. 3), one way to bring character education into a crowded curriculum is to make it part of the literacy program by embedding character lessons in reading and language arts instruction through the vehicle of high quality children’s literature. In addition, Floriasti (2011) argues that in character education, it is a demand of teachers to be more creative in designing innovative materials. Therefore, teachers need to integrate learning material with moral value inside the reading materials. Similarly, Barnett (1993) explains there is a need to serve moral literacy and it can help students to achieve virtues from reading material. In short, there is a chance and challenge to teachers of English to develop reading materials with character building which are needed to deliver moral value and establish students’ character.

Related to curriculum objective in basic competence, eleventh grade students of senior high school have to be able to comprehend narrative text and share information from narrative text. Narrative is to amuse, entertain and to deal with an actual or vicarious experience indifferent ways. Narrative deals with problematic events which lead to a crisis or turning point of some kind, which in turn finds a resolution (Wardiman, 2008, p. 98). The eleventh graders of senior high school have to be able to comprehend character value from sequence of generic structure of narrative text. Teachers also have chance to develop reading material and reading strategy in teaching narrative text. In the 21st century of learning, both teachers and students should adapt with digital media. Generally, narrative text is written in paper-based and it is a chance to develop narrative text in digital-based. Digital based in mobile reading initiatives may have more impact than traditional, paper-based interventions (UNESCO, 2014).

In term to teaching reading material, there were many strategies available and used. Most of strategies were concerning with text features such as identifying text structure and reading comprehension solely. The readers identified all aspects of reading after applying such strategies. This study applied Reader-Response-Strategy (RRS) to stimulate and to invite reader’s responses not only cognitive but also affective domain in criticizing character in narrative text. Therefore, students were able to judge character education inside the narrative text.

RRS was proposed by Beach and Marshall (1991), they are describing, conceiving, explaining, interpreting, engaging, connecting and judging. There are such guiding questions which were developed by Inderawati (2012a) as contribute to sharpen cognitive aspect as well as affective. This strategy is used to appreciate text as student’s response not only sharpen student’s intelligence with reading text, but also strengthen student’s character with moral value inside text. Anderson (2012, p.26) explains reader-response theories generally posit the implied author as a combination of a person that is both textually inferred and constructed by the actual reader from personal knowledge and experience of narrative life. According to Inderawati (2007), literature learning process a few year ago until this time was still applies old paradigm, structuralism approach. Teachers taught narrative texts in senior high school only in reading and answering related questions however literature appreciation was limited by intrinsic features from narrative story. It showed students get lack of value inside narrative text because they did not have chance to give their responses and share to other students. RRS consists of guiding questions to invite...
students’ higher understanding in appreciating narrative text. Guiding questions built students’ perceptions of character value inside texts.

Relevant to this, Hans and Hans (2015, p. 65) suggest making reading an active, observable process can be very beneficial to struggling readers by stimulating some good reader strategies: predicting, connecting, inferring, summarizing, analyzing and critiquing. A good reader interacts with the text in order to develop an understanding of the information before them. Most importantly, Lickona (1991, p.50) states that good character is good thing that we expect from our children. He, further, explains that the fundamental operative values of character education which consists interrelated part of moral knowing, moral feeling anf moral moral action. The eighteen operative values have been identified by the Ministry of Education and they should be integrated in every lesson. The components of character building are categorized as scaffolding relations which are started from relation to God, relation to self, relation to other, relation to environment and relation to nation. The character values are Spiritual, Honesty, Discipline, Perseverance, Creativity, Independence, Curiosity, Reading Interest, Responsibility, Appreciation, Friendliness/communication, Love of Peace, Democracy, Social Awareness, Tolerance, Nationalism, Patriotism, Environmental Awareness(National Education Ministry, 2010). Similarly, in the same vein, Adi (2013) states character describes the ethical and moral strength of the individual, as well as attributes and abilities that will ultimately correspond to their life choices.

UNESCO (2014) shows the estimated 7 billion people on Earth, over 6 billion now have access to a working mobile phone. The statistics has relation to the 21st century teaching and learning, students were already used technology as part of daily life and increasingly expected to use it daily school (BECTA, 2010). In relation mobile phone in teaching reading, bringing new technology in classroom created innovative learning media in teaching reading. According to Yuntoto (2015), developing learning media as mobile based can increase students’ attention to learning process. Easier way is in accessing media will make students are often to open learning material outside of classroom to review their material. It can be denied that everybody has and brings mobile phone everywhere. Both the e-learning or mobile learning allude to the use of mobile devices and applications supporting their use in educational environment. It facilitates student to access educational resources without need to be physically present at the working environment (Nachiketa, Rahatekar, Dotre & Saoji, 2013, p.36). Technology developed quickly and it was shown developing of mobile operating system such as Android. In conclusion, developing mobile phone as learning media increased students’ attention, made students easy to access learning material and made students were not bored reading text.

For the purpose of this study, a preliminary observation in SMAN 4 Lubuklinggau had been conducted. School principal of SMAN 4 Lubuklinggau also revealed that school always supported teachers to develop their own material in order to get better students’ achievement. Teachers were supported by school to use technology media in teaching and learning process especially in implementing curriculum of 2013. Students were permitted by school principal to bring their mobile phone in term of good use of mobile phone in learning process such as looking for references related to learning materials, but concerning to the students reading comprehension in SMAN 4 Lubuklinggau, there were some insufficient factors related to English teaching and learning.

First, teachers of English in SMAN 4 Lubuklinggau taught with structuralism strategy where students are only asked to read and answer the question of texts. It meant that teachers did not assess students understanding about vocabulary and whole meaning of text. In addition, teachers did not use any media in teaching reading. Theoretically, teacher should be able to choose or develop reading material based on students reading ability therefore students understood whole message of text. Furthermore, reading works do not only function at entertaining, but also gives moral values to influence students’ behavior and to strengthen the establishment of character and personality (Inderawati, 2012a).

To support this study, some previous studies were put forward. First, Anofrizen and Fadlan in 2016 had developed interactive learning Android based which is cover reading material with appropriate reading level to students. In learning process, researcher found their students’ attention is shifted by students’ smart phone. Students are busy with their smart phone during learning activity. Interactive learning with Android based was developed to drive back students’ attention inside classroom and outside classroom so students can still use the application not only at school but also at home. Second, Intensive reading material Android based had developed by Rinadi in 2016. The application was developed to increase students’ interest in reading and the potential effect of intensive reading material Android based was good in teaching reading. Rinadi argued teaching and reading material are almost in paper-based but digital-based have been dominant in over the world so it was important to develop digital-based of reading
material. The limitation of previous studies in Android-based reading material were not developed with cloud system to deliver the information from students to teachers. It was a deliberation to develop Android-based reading material with cloud system because cloud system was able to facilitate students sent their responses to teachers with their smart phone.

Based on the theories, problems and facts, it was inferred that teaching English not only transferring knowledge but also attracting them to learn. Reading materials should not come from textbook, teacher used authentic materials in teaching English or teacher can develop reading material to make students attract to read such as digital reading material. It stated that teacher should prepare, teach and evaluate reading material. Teacher should be innovative to take students intention in reading thus students will get meaningful learning process. In addition, teachers should be aware about technology development in students’ daily life and it can be used as learning media. Professional teachers should be able to develop global perspective material in using technology because students should have current experience in learning process. According to Abukhadrah (2016, p.35), they are in need of educators who are capable of developing a global perspective on issues, decision-making and solutions within their own profession of teachers’ education. For this reason, a recent study was done: Developed Reader Response Strategy-Based Mobile Reading for Establishing Character and Reading Comprehension Achievement for students to have innovative, joyful and meaningful learning process with exploring student’s response of text to build character from reading and facilitate students’ learning media with their own mobile.

UNESCO (2012) states that mobile learning with technology look promising as a vehicle to extend educational opportunities. Ally (2007) explains mobile learning is learning with mobile technology wireless which may everybody to access information and learning material everywhere and every time. Darmawan (2012, p.15) states mobile learning is one of alternative that education service can be done wherever and whenever. He also explains development of mobile learning because of quick access with mobile device. mobile device is easier to be used than PC. Mobile device can be used as learning media. Scope of mobile learning will make learning is not only in classroom formally but also out classroom non-formally. Mobile learning is apart from learning in classroom traditionally where students only sit, move, and intent to teacher in front of classroom (Woodill, 2010, p.31). Mobile Learning is a type of e-learning that delivers educational contents and learning support materials through wireless communication devices (Cabanban, 2013, p.3). Mobile learning alludes to the use of mobile devices and applications supporting their use in educational environment. It facilitates student to access educational resources without need to be physically present at the working environment (Nachiketa, et.al, 2013,p.36). In relation to mobile learning, mobile reading is part of acquiring information from reading digital content. Mobile reading is the act of reading and consuming digital content on mobile devices such as phones, tablets, PCs, e-readers and which covers e-books, e-newspapers, e magazines, and mobile cartoons (China Publishers, 2013).

According to Hadi (2015, p. 14) the curriculum of 2013 is a concept of education and culture that aims to develop good character on the part of students. From the perspective of knowledge and skills, students are encouraged to nurture creativity, innovation, and positive thinking in the development of a stronger and tougher generation of Indonesians in the future. This curriculum emphasizes the development of character in addition to skills and cognitive abilities. Inserting character values in reading text is important as to educate students the life values as it is assigned by the government. It can be in the form of personal descriptions, stories and or experiences and also personal opinions. By doing so, it is hoped that the knowledge and values transferred through the reading material will be beneficial to the students. It implies that a good quality of reading material delivered in the teaching learning process should be effectively developed. A good quality of reading material will provide appositive contribution to the success of the teaching learning process (Suputra, Nitiasih, & Sudiana, 2011). In relation to a good quality of reading material, finding shows significance differences in terms of behavior changes after reading material which is combined with reader responses in responding character values of texts in literature appreciation (Inderawati, 2012b).

**Method of The Study**

This current study employed development research method to develop mobile reading based reader response strategy. Akker (1999, p.10) states formative evaluation holds a prominent place in development research, especially in formative research. The main reason for this central role is that formative evaluation provides the information that feeds the cyclic learning process of developers during the subsequent loops of a design and development trajectory. He also states that during development processes, the emphasis in- criteria for quality usually shifts from validity, to practicality, to effectiveness.
Validity refers to the extent that the design of the intervention is based on state of the art knowledge (content validity) and that the various components of the intervention are consistently linked to each other (construct validity). Practicality refers to the extent that users (and other experts) consider the intervention as appealing and usable in 'normal' conditions. Effectiveness refers to the extent that the experiences and outcomes with the intervention are consistent with the intended aims.

Next, ADDIE model of instructional design with 5 stages: Analysis, Design, Development, Implementation and Evaluation was utilized in developing reading material. Analysis phase is the foundation in investigating, knowledge, skill, learner needs, instructional goal and learning objectives. Design phase creates blueprint how the draft of instructional can be delivered effectively. Developing phases shows creating and organizing actual material that will be used during the instruction. Implementation phase is actual delivery of instructional design and promoting developed instructional design. Evaluation phase is to measure and evaluate the effectiveness and efficiency of developed instructional design (McGriff, 2000; Aldoobie, 2015; Cheung, 2016). The model was used due to the systematic stages of ADDIE which was suitable in digital-based environment development. According to Aldoobie (2015) design and development stages in ADDIE model were sequence stages as character in digital-based environment needed and integrated in education environment and process.

![ADDIE Model](http://ai2.appinventor.mit.edu/)

The other two important things to consider are MIT App Inventor and Cloud Computing. Firstly, MIT App Inventor is open source program which is served by Google. This application is used to create free mobile application. MIT App Inventor serves online application maker with Google account to use this application. This application has serve ready made coding therefore programmer can create application with ready commands. Programmer just drag and combine the command to run the program. MIT App inventor can be visited in http://ai2.appinventor.mit.edu/. App Inventor has two main parts which are App Inventor designer and block editor. App Inventor designer is a part of App Inventor is to add component and layout design among users (user interface). App Inventor designer runs in web browser (web-based). In App Inventor designer, there are many pallet component which shows basic component collection of user interface such as button, label and textbook. In component addition, user only drags and drops component to project. Editor block is a part of App Inventor which is used to create logical programs of components in App Inventor Designer.

Meanwhile, cloud computing is receiving a great deal of attention, both in publications and among users, from individuals at home. Cloud computing is a subscription-based service where you can obtain networked storage space and computer resources (Huth & Cebula, 2011). In the same definition, cloud computing is a computing paradigm, where a large pool of systems are connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly (Harris, 2017). Dialogic (2017) explains cloud computing refers to the many different types of services and applications being delivered in the internet cloud and cloud computing was coined for what happens when applications and services are moved into the internet cloud. Cloud computing are divided into Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS). In education sectors, Platform as a Service (PaaS) is often used by developer and consumers purchase access to the platforms, enabling them to deploy their own software and applications in the cloud. The operating systems and network access are not managed by the consumer, and there might be
constraints as to which applications can be deployed. In developing product, Google Cloud Engine is freely accessed by developer to develop and maintenance the cloud to send and receive information among mobile device and Google Cloud Engine is one of MIT App Inventor data based service in developing application.

This research conducted at SMAN 4 Lubuklinggau. The population of this study was the eleventh grade students consisting of six classes in academic year 2017/2018. The subjects of this study were selected based on their English proficiency which are low, medium and high proficiency (Dick, Carey & Carey, 2005). Every phase of formative evaluation used different class with cluster random sampling since there is no purposive students’ distribution. There were 29 students which students participating in one to one and small group evaluation were not involved anymore in this stage. In this phase, instruction always analyzed in terms of core competence, basic competence, the availability related to materials of narrative text with character building, readability of the text and checking the syllabus to the eleventh grade students of senior high school as document review. Document review is a way to gather data from existing material in order to collect background information, understand program and determine program plans (CDC, 2009). In analyzing the existing reading material, it analyzed narrative text the character value inside the texts form available books. The character were five characters related to the main characters in education characters curriculum of 2013. The main characters are relations to God, self, others, environment and nation.

A questionnaire was also administered to the eleventh grade students to obtain the information of their needs and problems dealing with English reading material. The students need analysis is to give a comprehensive view of learners needs and represent the students interest (Richard, 2005, p.63). The results obtained was a basis for developing Mobile learning based reader response strategy material with character building. The information from questionnaire was beneficial for the writer for developing the product.

After gathering information of comprehensive students needs and students interest, the next phase was design and development. Design phase is the next step in ADDIE model. This phase is really about applying the instruction. In fact, the instructional designer in this step thinks about how design instruction can really be effective in ways that facilitate people’s learning and interaction with the materials you create and provide. Furthermore, in design phase the instructional designer evolves and focuses on designing assessment for (his/her) topic, select a form of the course, and creating their own instructional strategy (McGriff, 2000).

Therefore in this phase, the developed reading materials and reading comprehension test were designed in form of mobile-based design. In this design, narrative text instructional reading material with reader response strategy guiding questions as reading appreciation was conducted. Therefore, the first activity collected and analyzed the character building inside of available narrative text. These reading texts calculated automatically in term of their readability levels by using Readability Tool Online (http://www.webpagefx.com). that matched to the students’ reading level. Developing phase of reading material conducted in developing Android application with MIT App Inventor.

This study aimed to develop Android reader-response-strategy-based reading material of narrative text. The instruments were used in determining its validity, practicality, and potential effect. Those were questionnaires and reading comprehension test. To know whether the product valid or not, the validation sheets from the expert review related to the content and instructional design of Android based reader response strategy reading material was analyzed quantitatively and qualitatively.

To find out whether Android based reader response strategy reading material developed had potential effect, the result of reading comprehension test was considered to determine of potential effect. The developed materials were classified to be effective if the students had already reached and passed the criterion. The criterion was the minimum mastery criterion (KKM). The standard score of English lesson in this school was 70. Guskey (2000) states taken as a reference in which stated that the product developed will be effective if the students acquired the intended knowledge and the skill.

**Finding and Discussion**

Since ADDIE model were used to analyze the findings, there were four phases put forward. Firstly, Document Review & Existing Reading Material Analysis. In this phase, instructional design of eleventh graders of SMAN 4 Lubuklinggau was analyzed in 2013 curriculum. The eleventh graders learnt about
narrative text in basic competence 3.5 and 4.5 in form of short story and biography. Existing reading material analysis of narrative text was found in 1st semester and 2nd semester government books of eleventh graders, a supplementary book entitled “English for a Better Life” published by Pakar Raya and a worksheet published by Citra Pustaka. Teachers of English eleventh graders used books from government as compulsory book in 2013 curriculum, a supplementary book entitled “English for a Better Life” in school based curriculum and a worksheet.

From the distribution of narrative texts from three books and a worksheet above, it could be seen that available narrative text were at level 4, 5, 6 and 13 after analyzed with readability tool online (www.webpagefx.com). The character building was analyzed based on the character values proposed by Ministry of Education (2010). The character values were categorized into five main categories of character building: relate to God, relate to self, relate to others, relate to environment and relate to nation. The main categories of narrative texts in character building were classified from schematic structure of narrative text proposed by Knapp and Watskin (2005). There were spiritual relates to God, preserve and independence relate to self, preserve, nationalism, and patriotism relate to self and nation, social awareness relate to others, love peace and tolerance relate to others also, carefulness and curiosity relate to self, and still many other character building could be profoundly dug up from the narrative texts.

To know the students’ characteristic, questionnaire was used to portray the information about students’ reading competence, students’ interest in reading, the process of teaching and learning, the eagerness of students in reading, students’ opinions about types of question, students’ opinion toward text difficulty in available reading materials, students’ opinions about character building in reading materials, students’ opinions about Android as media in reading. There were 25 questions and there were 29 students who participated in answering the questionnaire. The results were: (1) students’ reading competence was low but the other side, the students agreed that having competence in reading English texts was very important; (2) students’ interest in reading was low and it was shown by students’ frequency in reading activity was seldom; (3) teacher of English used lecturing teaching method and seldom even never used innovative one; (4) students’ eagerness in reading was high; (5) students’ opinion in essay question was very high; (6) students agreed that reading with electronic media was more interesting; (7) students agreed that digging up character moral value was important; (8) students agreed that reading material should have reader response guiding questions; (9) students never used Android as learning media; (10) students revealed that reading materials in the textbook were difficult to understand and were not suitable to students’ reading level.

Another one is Students Reading Level Analysis. Students’ reading level was evaluated to find out the students’ reading grade which was as recommendation level of text in developing narrative. The instrument which was used in analyzing the students’ reading level was Jenning Informal Reading Assessment. Whole text level from level primary, 1, 2, 3, 4, 5, 6, 7, & 8 were given to students. Since the students’ reading level at level 4 was not categorized in independent stage, the students’ reading level was not continued. The results of this analysis were described as follow:

<table>
<thead>
<tr>
<th>Text Level</th>
<th>Frustational (Correct Number =≤5)</th>
<th>Instructional (Correct Number 5½ - 6½)</th>
<th>Independent (Correct Number 7-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOS* %</td>
<td>NOS* %</td>
<td>NOS* %</td>
</tr>
<tr>
<td>Level Primer</td>
<td>0 0%</td>
<td>7 24.13%</td>
<td>22 75.86%</td>
</tr>
<tr>
<td>Level 1</td>
<td>6 20.68%</td>
<td>10 34.48%</td>
<td>13 44.82%</td>
</tr>
<tr>
<td>Level 2</td>
<td>8 27.58%</td>
<td>16 55.17%</td>
<td>5 17.24%</td>
</tr>
<tr>
<td>Level 3</td>
<td>19 65.51%</td>
<td>7 24.13%</td>
<td>3 10.34%</td>
</tr>
<tr>
<td>Level 4</td>
<td>24 82.75%</td>
<td>5 17.24%</td>
<td>0 0%</td>
</tr>
</tbody>
</table>

Based on the distribution of students’ reading level above, it can be seen that students were in independent stage (75.86%) for text level primer and (44.82%) for text level 1. For text level 2, students were (55.17%) in instructional stage. While for text level 3 and level 4, students were in frustrational stage with (65.51%) and (82.75%). In short, it could be concluded that students’ reading level was in level 2 since the highest percentage of instructional stage was in level 2.
The potential effect of the mobile reading to the students’ reading comprehension was conducted in a real class of eleventh grade students of SMAN 4 Lubuklinggau with 29 students. The students participating in One to One Evaluation and Small Group Evaluation were not involved in this phase. Reading comprehension test application was delivered to determine the potential effect of developed product to students criteria minimum mastery. From the result of reading comprehension test, the developed product was effective. It showed that 26 students (89.65%) out of 29 students in reading comprehension test accomplished the minimum mastery criterion was 70.

Based on the result of developed reading material, students paid much attention and participated actively because it was their first experience in having mobile learning. There were enthusiastic and interested in reading every passage both reading material and reading comprehension test in relation to character building. Unfortunately, both teacher and students never dig up character value inside narrative text deeply with Reader-Response-Strategy. Then, reading passages provided by government was not match with students reading level and the character value provided by Ministry of Education was not cover eighteen character values.

Potential effect of reading material was measured in evaluation phase. Reading comprehension test was effective since most of students passed minimum mastery criterion. Duration in conducting evaluation phase was obvious limited since field trial was conducted at once. It showed finite information about potential effect of developed reading comprehension test. “teaching material and tests are highly quality, have been carefully selected and developed, and regularly reviewed and revised” (Richard, 2005, p.204).

**Conclusion**

The developed product of Mobile Reader-Response-Strategy-Based reading material was effective as reading assessment. It was considered by the result of students’ reading comprehension test was (89.65%) covered by intended learning of 2013 curriculum. Students were enthusiastic in following the learning activity since the learning activity used their mobile phone to share their responses about texts. In addition, the students’ answers showed their ability in appraising moral value and in judging good character which should be implemented in daily life.

**Reference**


