Conference Paper

Developing an Interactive Medium for Young Learners: Difficulties Faced By Efl Students in Multi-Level Classes

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Abstract

Developing an interactive teaching medium is one of the solutions to deal with student diverse learning styles. This study attempted to develop an interactive medium to teach english vocabulary to young learners in the form of CD. Borg and Gall's (1989) model of research and development which consisted of nine stages was employed. Needs analysis, planning, product development, product validation, main product revision, main field testing, operational product revision, operational field testing, and final product revision were performed. The data were gathered using interview and questionnaires. Both qualitative and quantitative data analyses were run. The result of prototype tryout to 40 fifth-grade students suggested no significant revision. Thus, the product could be tried out, at a larger scale, to 200 fifth-grade students who were selected randomly to represent ten elementary schools in Banyuwangi. Due to students different levels of proficiency, various problems appeared during the product implementation. Yet, findings of the study in general have confirmed the effectiveness of an interactive medium in improving student motivation to study English vocabulary.

Keywords: Interactive medium, English vocabulary, young

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1. Introduction

An instructional medium plays a key role in the teaching and learning process. An appropriate use of instructional media will help determine the success of the teacher to accomplish instructional goals. Aside from instructional media, the implementation of information technology in the classroom also creates an attractive and challenging learning atmosphere that is beneficial for both the teacher and the students (Rajendra & Sudana, 2018). The integration of information technology and instructional media results in interactive instructional medium. The use of these interactive media can make classrooms more lively and as a result, improve students' achievement (Zin, Sakat, Ahmad, & Bhari, 2013).

One of the advantages of interactive learning is to attract students' attention. Research shows that this type of learning is able to increase the elementary school

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students' interest in learning (Garneli,2014). In addition, multimedia-based instruction also encourages students to get actively engaged in the learning process, makes learning materials easier to understand, and makes the instruction more attractive (Dewi,2012; Amaliah, Daulay & Gafari, 2018). Interactive instructional medium can be used to develop students' listening and speaking skills and improve students' enthusiasm in communicating in English (Guan, Song, & Li, 2018).

The main problem faced by many English learners in Indonesia is the lack of vocabulary (Siahaan,2012; Mariana, Nitiasih, &Budiati, 2013;Susilowati, 2014). The elementary school students, particularly, should be equipped with good vocabulary mastery in order to support the development of their English skills. Content and Language Integrated Learning (CLIL) is a method that has been proved effective in improving the quality of English instruction for young learners (Mayo&Ibarrola,2015). Unlike the other methods of learning, CLIL has yielded more successful outcomes in teaching English vocabulary to young learners (Moghadama&Fatemipourb,2014; Vidal &Roquet,2015).

A variety of interactive instructional media to teach English have been developed in Indonesia (Halimah, 2015; Amaliah, Daulay & Gafari, 2018). Some of them were specifically aimed at developing interactive media to teach English vocabulary (Setyawan, 2011; Ahadiyah, 2013). However, all of the interactive instructional media have not based the development of the products on the Curriculum 2013. Instead, they referred to the Curriculum 2006 to build the content. Therefore, the current study attempted to design and develop an interactive instructional medium by consulting the Curriculum 2013 to construct the content and incorporating Content and Language Integrated Learning as the learning method. Since combining the study of vocabulary and other subject areas could make learning much easier (Shintani,2013), the product of this study would integrate natural and social sciences into English vocabulary. This research aimed at developing an interactive medium to learn Engish vocabulary for young learners. Research and development design implemented in this research is adapted from Borg and Gall (1983).

2. Method

This study aimed at developing a interactive learning medium that can help young learners to study English vocabulary. It adapted the research and development design suggested by Borg and Gall (1989), consisting of nine stages, namely research and information collecting, planning, developing the prototype of the product, preliminary

field testing, main product revision, main field testing, operational product revision, operational field testing, and final product revision.

3. Findings

3.1. Needs Analysis

The needs analysis stage consisted of a questionnaire survey and interview. Twenty five elementary school students were involved in the survey and two English teachers were interviewed. They were asked to fill in a questionnaire which contained questions (scale 1-4) regarding their perspective of English learning, obstacles in learning English, learning style, instructional time allotment, instructional media, and vocabulary teaching. The students admitted that memorizing vocabulary was difficult. Therefore, they preferred learning using an interactive (multimedia-based) medium. They also argued that they needed more time to practice their English vocabulary at school. The teacher rarely used instructional media and various strategies to teach vocabulary in the classrooms. Therefore, the students never had any experience using multimedia-based learning media.

3.2. Planning and Developing the Prototype of the Product

Planning was the process of designing the product content and product interface. The materials were developed by referring to the Curriculum 2006 and Curriculum 2013. The product contained two themes, occupation and state of matter. There were word bank, practice sections, and seventeen nouns introduced for each topic. The blueprint of the product is presented in table 1 below.

TABLE 1: Blueprint of the Product

No	Aspect	Explanation
1	Total vocabulary	Thirty four nouns
2	Part of the product	1. Occupation consists of mini word bank and five activities 2.States of matter consists of mini word bank and four activities
3	Vocabulary stategies	recognizing the spoken form of word, recognizing the written form of the word, recalling appropriate meaning for the word form, producing common association for the word,pronouncing the word correctly and spelling and writing the word

Designing the content and the product interface resulted in the product storyboard. The storyboard of the product was then processed into multimedia file. The product of the present study was an interactive CD with a manual book.

3.3. Preliminary Field Testing

At this stage, expert validation was conducted. Three experts, including an instructional media from State University of Malang, an English teacher, and a multimedia expert were invited to evaluate the product. The results of the expert validation are presented in Table 2.

TABLE 2: The Result of Expert Validation

No	Evaluated criteria	Score	Category
1	attractiveness	3.67	Higly valid
2	Content	4.0	Highly valid
3	user friendliness	3.7	Highly valid
4	Animation	3.85	Highly valid
5	Media utility	4.0	Highly valid
6	Navigation	3.93	Highly valid
7	Sequencing	4.0	Highly valid
8	Method	4.0	Highly valid
9	Consistency between learning objective and content	4.0	Highly valid
10	Interface and graphic design	3.86	Highly valid
11	Audio	3.87	Highly valid
12	Colour	4.0	Highly valid
13	Font	3.5	Highly valid
	Average score	3.87	Highly valid

From the table 2 above, all evaluated criteria are categorized as highly valid which means that the product of this research is eligible to be tried out. However, some suggestions were given. The instructiona media expert suggested avoiding gender bias by not inclining to particular gender (a boy) and the experienced English teacher recommended to revise graphic design in activity 4 of states of matter section. After revising the product, the product is tried out.

3.4. Field Testing and Operational Field Testing

After revising the product based on the experts' suggestions, the product was tried out to forty elementary school students.The students were asked to fill the questionnaire whose results are shown in table 3 below.

TABLE 3: The Result of Small Group Field Test

No	Assessed criteria	Score	Max score	Category
1	Content	3.70	4	Highly valid
2	Usefullness	3.64	4	Highly valid
3	Attractiveness	3.69	4	Highly valid
4	Navigation	3.68	4	Highly valid
	Average score	3.68		Highly valid

From the questionnaires, the evaluation of the product was known. There was no revision made because all criteria had been fulfilled. The product is then tried out to big group.

The big group field test involved two hundred fourth and fifth graders from ten elementary schools in Banyuwangi. The students were asked to fill in a questionnaire which consisted of 32 (thirty two) statements and 3 (three) essays questions. The results of the questionnaire are shown in Table 4.

TABLE 4: Result of Big Group Field Test

No	Evaluated criteria	Score	Max Score	Category
1	Attractiveness	4.7	5	Highly valid
2	Content	4.6	5	Highly valid
3	Difficulty level	4.6	5	Highly valid
4	CLIL implementation	4.6	5	Highly valid
5	Learning motivation	4.7	5	Highly valid
6	Instruction	4.6	5	Highly valid
7	Graphic	4.7	5	Highly valid
8	Navigation	4.6	5	Highly valid
9	Sound	4.5	5	Highly valid
	Average score	4.6		Highly valid

The total mean of all variables of big group questionnaire was 4.6 that indicated the product of the research was eligible to be used as instructional medium to learn English vocabulary.

4. Discussion

Students who never have any experiences in computer-based learning might find using the product problematic while students who have good computer mastery and experiences in bilingual classes find it enjoyable because they are familiar with the computer symbols and ready to explore them. Goldstein (2016) argues that visual material can be used for students with different levels of language proficiency.This confirms the result of present study that the product can help all students to learn English vocabulary although they have different level of proficiency. Students' excitement in using an interactive medium for learning can help create a morelively classroom atmosphere. Interactive learning media can also motivate students and bring positive effects to the students (Setyawan, 2011; Ahadiyah, 2013; Halimah, 2015; Amaliah, Daulay&Gafari, 2018).

Surprisingly, although the students could use the product in this research, in doing the exercises they did not pay much attention to the instructions provided. Instead, they only saw the graphic and decided what to do with the exercises. This is in line with Clark and Mayer (2008) who mentioned that when the eyes are engaged with on-screen text, they cannot simultaneously be looking at the graphics; when the eyes are engaged with the graphics, they cannot be looking at the on-screen text.Thus, even though the information is presented, the learners may not be able to adequately attend to all of it because their visual channels become overloaded. Similarly, Arif and Hasyim (2012) state that compared to words, pictures are more interesting for young learner. Through pictures, the students can be better understand the definition of the words.

Related to the content of the product, the students in the field test admitted that integrating English to another subject was totally challenging and fun. Therefore, many students suggested to integrate other subjects like Mathematics, Arts into English. They also felt that it was easier to learn English by using Content and Language Integrated Learning method. This result confirmed the previous research findings that proved that CLIL was better at improving students' vocabulary compared to the disintegrated content and language learning (Moghadama&Fatemipourb,2014; Vidal &Roquet,2015).

5. Conclusion and Suggestion

The interactive medium to learn English vocabulary in this research has already been developed. It can help the elementary school students to learn English vocabulary and at the same time learn natural and social sciences. The product is also accompanied with the manual book that can help the teacher or the students to operate the program. This product is beneficial for English teachers because this product can be an attractive medium to teach English vocabulary. This medium can motivate the students to learn English in a fun way.

However, there are some limitations to the product. It can only be played in the desktop computer or laptop with DVD room. This product only covers two topics with thirty four vocabulary items in it. Despite the limitations, this product is quite effective in motivating students to learn English. The multimedia-based medium can also provide various types of activity that can enrich students experience in various exercises.

Future researchers are highly recommended to develop a multimedia-based medium which contains more features such as voice recording and self-assessment practices. It is also suggested to integrate other subject areas such as Mathematics, Arts, etc into the content. Finally, it is advisable to establish the android version of the product to make it more practical.

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