Research Article

Digital-Game-Based Language Learning for Children: A Study in Vocabulary

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Abstract

In modern age, people can learn or acquire a second language with the help of technology. The development of technology allows people to create an application called Digital-Based Language Learning (DGBLL). An example of a game application used during research is Studycat's "Fun English". This thesis discusses the useof DGBLL in the learning of English vocabulary as a second language. This research is aimed to identify phonemes that are difficult to be pronounced by Indonesian children, to identify the supporting factors for second language acquisition, and to compare the results of before and after the use of DGBLL in children.The writer uses the purposive sampling method, participant observation or referred as the Simak Bebas Libat Cakap technique, and recording technique in collecting data. The recorded data will be analyzed in contrastive analysis method to investigate which phonemes are difficult for children to pronounce.There are three findings of the research. First, the findings show most of the children as subjects find it hard to pronouncethe phonemes [ʤ]; [ʧ]; [ð]; [θ]; [æ]; [ʌ]. Second, the findings show that an essential part a second language learning is motivation to learn the language. Third, DGBLL is a useful tool to improve the subjects' English vocabulary.

Keywords: DGBLL; second language acquisition; contrasitive analysis

1. Introduction

In the modern world, there are many kinds of second language learning. We can learn speaking, translating, reading, writing, and many more. However, one of the most popular way of learning the second language in this era is by using digital games. Since many Second Language Acquisition researchers have begun to use traditional methods in psycholinguistics, they want to develop SLA. They are more aware that acquiring target language involves second language knowledge (L2) and the ability to place that knowledge for use during real-time processing [1]. This is answered in the evolutionary of Computer

Assisted Language Learning (CALL), namely DGBLL. DGBLL is a tool that takes advantage of games as a medium for bringing the learning contents. It is all about influencing the power of digital games to attract and involve player for a specific purpose, such as to expand new knowledge and skills. In this approach, children can interact with online games that are dedicated to the world of education.

Digital-Game-Based-Language Learning is a software that utilizes the features of video and computer games to generate interesting and fascinating learning activities for specific aims, effects, and experiences. DGBLL is widely utilized in higher education, telecommunications, financial, healthcare sectors, manufacturing, energy or utilities, retail, pharmaceutical, public departments, hospitality, construction, computer technology, and computer software. Games are used mainly for entertainment.

Fun English by Studycat is an application that has received several awards, namely The Best Educational App 2017 by Tutora, Best Educational App and Learning Tools by Tutorfair, The Recommended Educational App Store, and many more. Fun English by Studycat is developed by a group of professional tutors who have begun to convert their classroom-tested literature studies to smartphones and tablets. Fun English integrates structured English lessons with interesting and enjoyable games. In each lesson Fun English teaches vocabulary. The example of the vocabulary concludes animals, colors, numbers, parts of the body, fruits, and more. Fun English uses female and male voices with both British and American accents. In Fun English songs arealso used in the lessons. The game creates enjoyment and amusement as the motivating factor in language acquisition, mainly because songs can help children improve their pronunciation, listening, and speaking skills.

In the SLA approach, some methods of approach helpto utilize the ability that might advance over what people can directly achieve both in speaking and developing vocabulary. Other than staying helpful in evaluating L2 ability, the approach through online digital media is very important for the efforts of children's development in acquiring a second language. It is because, in this era, technology is one of the most important tools in developing human skills. Furthermore, this research is focused on how DGBLL affects the children while learning English as a second language.

The study is focused on Game-Based Research, which will be useful to educate the children. The contents of the game will be animals, colors, numbers, parts of the body, fruits, and many pictures. All the contents are basic of vocabulary that will be easy to learn and interested in children to play it. The participants of this study are five female children who have turned 8 or 9 years old. Before they learn through digital games tools, they will be given a pre-test. They also will be given another test after they learn digital games tools. After several processes of analysis, the research is then focused on the.

2. Research Method

In this study, the writer conducts a descriptive method, especially in longitudinal or developmental research methods. The developmental research method will require three months to collect the data.

In this research, the data of the study were obtained from the answers of the pre-test and the final test from 5 children; the writer also inspects the grammar and the pronunciation of children when they pronounce the vocabulary as the phonology data. The material of the test will be in riddle pictures that are shown in the game. The populations of this research are 5 female children who have turned 8 to 9 years old. This study applies the purposive sampling method which uses 5 female children as the subject of the sampling technique. This is to find out the child's development in language learning before puberty.

The data will be taken from the pronunciation, pre-test, and post-test. The research applies participant observation or referring technique "Simak Bebas Libat Cakap" technique and recording technique. The writer will directly be involved in the learning process. In learning process the children will listen to a song for every topic of vocabulary, and then they will play a game. The game can be a puzzle, a riddle picture, and a task of composing vocabulary words. If the children cannot pass the game, the writer will explain to the children how to pass the game. It is necessary that the writer will help the subjects in each process since they are only children.

In examining the data, the writer uses the Padan Referential method and Descriptive Qualitative method. The Padan Referential method is used for the part of articulatory phonetic. The Descriptive Qualitative method is applied to composed data. After the data are composed, the writer will compare the data from the children.

3. Data Analysis

The writer finds three discoveries. First, the positive outcomes of the Digital Game-Based Language Learning, which impact factors of learning a second language. Second, the mispronunciation when the respondent pronounces the vocabulary. The third finding of this research shows the result of pre-test and post-test.

Table 1. The Positive Findings of the DGBLL Impact factors on Learning Second Language

Positive findings
Increased new vocabulary
Motivation enhanced in learning Second language (motivation)
Improvement in listening
Positive feedback from all children (attitude)
Children's feedback shows enthusiasm and satisfaction in learning second language with digital game (attitude)
The younger learner can learn the vocabulary quickly and easily (age)

First finding, the positive findings of the DGBLL impact factors on learning second language There are several essential supporting elements in acquiring a second language,

like language attitude, motivation, age, intelligence, language aptitude, personality, and
learning styles.

Table 2. The Number of Mispronunciation word for Children

Mispronunciation word in topic	Name Of Children				
	Aiko	Alea	Andien	Avara	Fanes
Animal	0	0	1	4	4
Fruit	1	0	0	1	1
School tool	1	1	1	1	4
Vegetable	0	1	0	4	1
Food	0	1	2	3	3
Sea animal	0	0	0	2	1
Clothes	2	0	2	0	2
Part of body	1	4	2	3	0
The house furniture	1	0	1	5	4
Family	0	1	4	2	1
Transportation	0	3	0	3	2
Sport	0	0	1	2	0
Total	6	11	14	30	23
Score : 140 : 14 = 10	134 : 14 = 9,5	129 : 14 = 9,2	126 : 14 = 9	110 : 14 = 7,8	117 : 14 = 8,2

The second finding, the mispronunciation by the children. This finding shows the
amount of mispronunciation of children to speak the vocabulary topic. The writer
discovers several certain English phonemes which are very difficult to pronounce by Aiko,
Alea, Andien Avara and Fanes. The phonemes are [ʤ]; [tʃ]; [ð]; [θ]; [æ]; [ʌ].

Table 3. Pre-Test and Post-Test Scores

Name	Pre-Test score	Post-Test score
Aiko	11	99
Alea	17	92
Andien	23	85
Avara	19	86
Fanes	0,7	79

The third finding is the pre-test and post-test scores in writing vocabulary. The result
of the test is quite impressive. The writer stated that DGBLL had many positive effects
related to the acquisition of second language vocabulary. It is supported by the results
obtained along three months of observation, which shows that the pre-test is valued at

15,4% meanwhile the post-test score is valued 88,2%. It means that the range of scores increases by 72.8%. It is because the impact of learning effects using DGBLL is significant in increasing learning motivation. The motivation comes from the application of DGBLL. By providingfun English learning, DGBLL makes children very happy to learn English, it is because in using DGBLL they like the animation, the animation looks real, and the game is played so variedly.

4. CONCLUSION

In this chapter, the writer concludes the analysis outcomes, which have been presented in the earlier section. The conclusion will be divided into three parts. First, the results of the contrastive analysis, second, the results of the second language acquisition supporting factors, and third, the results of DGBLL.

First, after doing a contrastive analysis, the writer discovers several certain English phonemes which are very difficult to pronounce by Aiko, Alea, AndienAvara and Fanes. The phonemes are [dʒ]; [tʃ]; [ð]; [θ]; [æ]; [ʌ]. Children will tend to replace these phonemes with the phonemes of their sound stock.

Second, there are several supporting factors in acquiring a second language, namely motivation, language attitude, age, intelligence, language aptitude, learning styles, and personality. From these seven supporting factors, motivation has such a significant impact. Motivation can improve a child's mood and make children more engaged in second language acquisition.

Finally, in this three-month research, DGBLL gave impressive results. The average score of children after using DGBLL is increased by 72.8%. It proves that DGBLL is very usefulin improving children's English vocabulary. It is because DGBLL increases children's learning motivation,leading the children to be delighted to learn English.

References

[1] White, C. (2003). *Language learning in distance education.* Cambridge: Cambridge University Press.