

Effects of Teaching and Learning Using Edutainment on Children's Learning English*

Jie Young Kim, Si Yeon Gu, Ji Hae Jeon

Chung Ang University

Kim, Jie Young, Gu, Si Yeon, & Jeon, Ji Hae. (2010). Effects of teaching and learning using edutainment on children's learning English. *Modern English Education*, 11(1), 18-35.

This study aims to investigate the effects of teaching English through Edutainment on children's general English competence, interest and confidence levels, and long-term memory of vocabulary. To achieve this goal, twenty students in third to fifth grade were selected for the study based on the results of the pretests. Ten students were in the experiment group studying using various edutainment contents and the other ten were in the control group using normal classroom materials. Both groups learned four different topics for six weeks. After six-week treatment, posttests were taken to all students. To identify teaching and learning using edutainment's effects on long-term memory of vocabulary, a delayed posttest was conducted four weeks later. The results of this study were as follows: First, the result of posttest didn't show a statistically significant difference in general English competence between two groups. Second, edutainment-based learning resulted in positive effects on interest and confident levels as a result of the post survey. Third, edutainment-based learning had a positive influence on children's long-term memory of vocabulary. To sum up the above results, classes using edutainment contents will draw children's interest and be an effective learning tool which can help improve their confidence, and consequently, it will affect positively on long-term memory of vocabulary.

[edutainment/English learning/children/vocabulary
에듀테인먼트/영어학습/초등학생/어휘]

I. INTRODUCTION

The development of information technology since the mid-1990s has led to the

* This research was supported by the Chung-Ang University Research Scholarship Grants in 2007.

advancement into the 20th century's knowledge-based society and digital era. This change in the modern era has brought about an educational paradigm shift from an instructor-centered education to a learner-centered one, triggering huge innovation throughout the educational field. In late 1999, Hankyung Daily ran a special column entitled "21 Big Predictions for the 21st Century," reporting opinions of experts of each area with the advent of a new millennium; globalization, smart cards, edutainment, and mass culture were focused on among other topics. At present, we are already going through a variety of changes regarding education and realizing that the educational value of edutainment is increasing.

The time spent and energy devoted by children on online games, TV, and movies are enormous, and these media make both parents and teachers recognize the fun they provide as a very important factor of motivating children about learning. At the same time those parents and teachers have a negative sense of "lack of control" and "addictive nature." Children's unlimited potential for learning would be manifested through educational usage of games, when proper guidance of such consumptive games is required. Successfully experiencing games in an effective and educational manner will be helpful in parents' and teachers' search for an efficient use of children's consumptive time and energy. It represents the educational expectation for and possibility of edutainment, defined as the mixture of entertainment and education.

Researches on edutainment have been written extensively, but studies on edutainment in English education are now just in an initial state, and thus there has not been much information on the topic. As mentioned above, however, continual study should be carried out, given edutainment's unlimited potential in English education. Encouraged by edutainment's positive potential for educational use, this paper aims to examine the effects that education in edutainment has on children's English learning.

The purpose of this study is to find out how English teaching and learning using edutainment influences learners' English learning—more specifically, how the use of edutainment content such as broadcasts, films, and games affect children's English learning and their degree of interest and confidence, and how such learning using edutainment affects vocabulary learning and long-term vocabulary memory. Accordingly, answers to the following research questions were sought:

1. Do teaching and learning English using edutainment have a positive effect on children's general English abilities?
2. Do teaching and learning English using edutainment raise children's degree of interest and confidence?
3. Do teaching and learning English using edutainment have a positive effect on the children's long-term memory of their vocabulary?

II. LITERATURE REVIEW

1. Edutainment

Recently, the definition of educational technology has evolved and included the term edutainment which was coined to mean the integration of *education* and *entertainment* (Kazanci & Okan, 2009,). Buckingham and Scanlon (2000) define it as a hybrid genre that relies on visual material, on narrative or game like formats and on more informal less didactic styles of address.

Edutainment is defined as a method or program that learners enjoy and learn as if playing games by adding entertainment to educational software. Generally, edutainment refers to software that aims for a learning effect through conversational entertainment based on multimedia images and, in a broader sense, includes learning methods, programs, images, publications and toys enjoyably, aiming for an educational effect as if playing games (Young-jo Choi, 2003).

Edutainment is interpreted from two distinct perspectives of “playful education” and “educational game.” Both conceptual understandings are regarded as complying with the edutainment spirit in that they have “educational effects” while being a “joyful process.” The premise is that the level and effect of joy or way of using edutainment can vary in accordance with which aspect is emphasized. If an “educational game” is pursued, the element of joy is preserved to great extent, but it has limits in educational content and effects and if a “playful education” is pursued, educational content may be sufficient, but attraction as a play would be significantly reduced. Therefore, as a result, there will be differences in effects as an education and methods of applying edutainment (Ju-yeon Lee, 2001).

In the past, main edutainment forms were off-line such as publications, textbooks and other educational tools, and CDs. However these days online edutainment content is being developed, expanded, and diversified with the help of the Internet’s penetration and diffusion. In addition, the rapid development of wireless Internet technologies is encouraging development and diffusion of mobile edutainment content for busy people today. Convergence of educational software and entertainment software is being intensified, and therefore the edutainment market is naturally growing along with the individual growth of the two markets.

Jae-hyuk Go and Sung Choi (2002) came up with general traits of edutainment content as follows. First, they should be produced and ultimately developed with educational purposes. Second, there should be both realistic rules and artificial ones based on imagination or common sense. Third, they should be challenging and competitive through the combined structure of competitive game participants and challenging opportunities.

Fourth, motivation for learning should be provided through the combined form of reality and fantasy so that the games of war, strategy, investment, or sports containing some dangerous elements can be played safely. Lastly, edutainment games should be fun, provided that such fun is used to maximize motivation for learning and effects of learning.

Young-keun Bak (2005) proposed the idea that could introduce entertainment to education using elements from films, broadcasting productions, and games; he divided edutainment into edutainment in broadcasting productions, edutainment in films, and edutainment in games. Young-keun Bak (1995) argued that the benefits of using edutainment as an educational tool were increased motivation for and interest in learning, making learning more meaningful, contributing positively to forming the concept of ego, and improving the learning environment.

Because of the advantages above, edutainment is gaining ground as a method of learning. In particular, as better hardware and diverse media are developed, efforts to actively utilize software for learning and make use of entertainment elements for educational benefits are needed to maximize children's learning effects.

2. Teaching Vocabulary

In English education, which places importance on communication in its purpose, vocabulary has played the most important role in L2 learning. Accordingly, teachers' search for ways to help learners accumulate and output vocabulary as their role has become an important issue. Watts (1995) argued the following principles for effectively teaching vocabulary: Learners should repetitively encounter vocabulary in diverse contexts; words should be taught in contexts of stories, themes or content areas; learners should be helped to activate previous knowledge when learning new words; new words should be taught by linking them with words or ideas learners already know; students should go through a profound brain process by interacting with words.

Wilkins (1972) classified diverse methods of vocabulary teaching into direct and indirect methods. Direct vocabulary teaching involves giving explicit attention and concentration and assigning part of a class to vocabulary teaching (Nation & Newton, 1997). Those who advocate the direct vocabulary teaching method emphasize the need for such teaching, noting that emphasis on allusive teaching or accidental learning to facilitate the learning of a foreign language has some problems. In direct vocabulary teaching, there are practices or learning activities focusing on vocabulary--that is, vocabulary exercises, guesswork of word meanings in the given context, memorizing of words, and vocabulary games. Direct vocabulary teaching deals with vocabulary in a systematic manner by introducing words' meanings, identifying whether the learner understood them, and having the learner use them in practice, thereby improving vocabulary. Therefore, the purpose of elementary

English is to enhance basic communication capability, and direct vocabulary learning makes up a large part of this phase.

On the other hand, indirect vocabulary learning is done in an unsystematic manner through reading and listening. In other words, its approach is that if it is possible to understand overall meaning and guess the meaning of a new vocabulary word by using the given context, vocabulary learning can be achieved to a great extent even though the learner is not interested in the vocabulary itself (Young-suk Kim, 2002). The number of vocabulary words is countless, and therefore learning all the vocabulary words in a direct way is impossible. Thus, most vocabulary words are acquired by indirect learning. Many studies show that a large volume of reading and high exposure to listening materials can boost indirect vocabulary learning (Collins, 2010; Duquette & Painchaud, 1996; Webb, 2008).

The most conventional tool for indirect vocabulary learning is reading materials. Context inference is necessary for indirect vocabulary learning through reading. In a similar context, Nation (2001) said that indirect learning by inferring meanings from the context was the most important among methods for learning vocabulary words, and many other scholars as well as Nation and Coady (1988) also recognized that a major method to increase vocabulary knowledge was through context learning.

The effect of such indirect vocabulary learning is that learners develop a vocabulary in depth through reading and to help them acquire perfect syntactic and semantic traits of a given vocabulary by encountering it in diverse contexts.

Vocabulary learning is a comprehensive area of activity where a new vocabulary is sensed, understood and encoded. Then the encoded vocabulary information is preserved and stored in the brain and regenerated and used whenever needed. Memory consists of an encoding process that transforms physical information into a kind of code that can be accommodated by memory, a storing process, which maintains the encoded information, and a regenerating process, which searches for necessary information from the stored information and uses it.

It has been considered that human memory has three components: sensory memory, short-term memory, and long-term memory. First, information that flows into the brain is input into sensory memory where the information is manipulated and processed into a minimum size and selectively transferred to short-term memory. While the information stays in short-term memory, part of it is sent to long-term memory through replay. Long-term memory accumulates information transferred from short-term memory, and when needed it is output and used (Thorn & Page, 2009).

Among countless vocabulary words that are contacted and input before the knowledge is combined into the system of the target language, most are lost in the process and only a small number of words reach the stage of perfect acquisition and are used by the learner.

To successfully learn vocabulary words, therefore, memory loss resulting from not using the learned vocabulary for prolonged periods of time should be minimized so that the effect of vocabulary learning can last for longer periods of time.

Ebbinghaus (1885, cited in de Fockert, Davidoff, Fagot, Parron & Goldstein, 2007) in his classic study concluded that human memory retention and squared time have an inverse relationship and argued that to permanently preserve memory as long-term memory, learning should be rehearsed at suitable points in accordance with the cycle of the forgetting curve. This is called *Ebbinghaus Forgetting Curve theory* and emphasizes the effect and importance of repetition. According to him, forgetting starts from 10 minutes after learning, and the learner forgets 50% in an hour, 70% in a day, and about 80% in a month. He found out that to preserve memory from forgetting, the most effective method was to repeat, and that to make what was learned long-term memory, repetition after ten minutes, repetition after a day, repetition after a week, and repetition after a month were necessary.

Based on these theories, this study tries to help students memorize learned vocabulary as part of their long-term memory by testing them for simple vocabulary word meanings at least every class and also by providing outer stimulation of various edutainment materials and examines the result.

III. Method

1. Participants

The original pool of participants were 76 students of basic-intermediate-level English who are third- to fifth-grade elementary students and who have learned English for one year or more in a language institute located in Gyeongsangnam-do. Since students' age and proficiency levels were not the same, a pretest was conducted to select participants.

Based on the test results of the 76 students, twenty students were selected who were average in their vocabulary ability and who could participate in the testing; ten were placed into the experimental group and the other ten into the control group. Table 1 showed basic information about participants.

2. Procedure

This study used a pretest-posttest nonequivalent control group design to find out English learning effects on such as achievement and interest of the experimental group, to which a learning method of utilizing edutainment was applied, and of the control group, to which

Table 1
Information about Participants

	Male			Female			Total
	3rd grader	4th grader	5th grader	3rd grader	4th grader	5th grader	
Experimental group	1	2	1	2	3	1	10
Control group	2	2	1	2	1	2	10

a theme-based instruction method was applied (Brog & Gall, 1989; Cook & Campbell, 1979).

In this study, to verify homogeneity of participants, an English ability test, a vocabulary test and a questionnaire on their interest and confidence as pretests were conducted. The treatment period for the two groups was six weeks, and that lasted for a period of twelve class time. Classes on the four topics were given for six weeks, and they were given twice a week, with each class time lasting two hours. During the first class and the twelfth class, both a pretest and a posttest were conducted. A delayed posttest on vocabulary was carried out without prior notice, four weeks after the posttest in order to verify the edutainment's effect on long-term vocabulary memory.

3. Instruments

Pretest/ posttest for general English improvement: For high reliability and validity, the content of the pretest consisted of a *TOSEL BASIC Trial Exam*, an English certificate test held by the Educational Broadcasting System. As for the posttest, *JUNIOR G-TELP LEVEL 3* was used as a general English ability test to ensure the reliability and validity of the test. English ability test (50 points in total) included listening comprehension (25 points) and reading comprehension (25 points).

Vocabulary test: As a pretest, a basic vocabulary test (60 points in total) related to the four topics of weather and seasons, verbs, daily schedule, and things in a house, which the students would learn during the treatment. The purpose of the basic vocabulary test was to identify students' basic vocabulary comprehension ability before their learning of certain words. The two groups learned about 60 new words on four topics during their twelve class times. As for a posttest and a delayed posttest, the 60-item production test (60 points in total) was conducted.

Questionnaire: The questionnaire used for the pretest and posttest consisted of 25 questions in 9 categories (English study starting date, study materials, home-study habits, degrees of recognition in each area, study method preference, interest in studying English,

confidence in studying English, classroom English participation level, Vocabulary study). Each question was measured on a five-point Likert scale with a middle item (3) designation of *Neutral*. The scale range from *strongly agree* to *strongly disagree*.

4. Teaching and Learning Materials

To achieve the goal of this study, the experimental group learned by using diverse edutainment contents as learning tools, and the control group learned by using a theme-based instruction method.

The two groups' learning topics in all their classes were the same, but the materials used in the classes were different. For example, the learning topic of the two groups in their second class was weather and seasons, but the experimental group used part of the movie *Home Alone* and fairytales and chants on the Internet as learning tools, and the control group used painting cards, word cards, and I.Q. game cards based on the content of the study book. Both groups received two 50-minute classes each time for the six weeks.

There were 12 classes, and the contents of them are shown in Table 2 below.

Table 2
Class Schedule

Class	Class content	
	Experimental group	Control group
1st	Pretest and questionnaire	
2nd	Weather & Seasons (1/2) "How Is the Weather Today?"	
3rd	Weather & Seasons (2/2) "How Is the Weather in Korea?"	
4th	Verbs (1/2) "I Can or I Can't"	
5th	Verbs (2/2) "What Are You Doing?"	
6th	Daily Schedule (1/3) "I Am Washing My Face"	
7th	Daily Schedule (2/3) "What Time Do You Get Up?"	
8th	Daily Schedule (3/3) "My Daily Schedule"	
9th	Things in a House (1/3) "Things in a Living room, a Kitchen, and a Dining room"	
10th	Things in a House (2/3) "Things in a Bedroom and a Bathroom"	
11th	Things in a House (3/3) "It's My House"	
12th	Posttest and questionnaire	

5. Data Analysis

To analyze the data, the following procedures were used. First, regarding the results of an English ability test and of a vocabulary test as a pretest and a posttest, one point was given to each question, an average was calculated, and then a t-test was conducted. Second, to analyze questionnaires on the two groups' interest and confidence before and after the treatment, a t-test was used. The SPSS 14.0 program was used to analyze all the statistical data.

IV. RESULTS AND DISCUSSION

To confirm the two groups' homogeneity, the pretest results were analyzed, and a t-test was performed on it. Table 3 showed that the two groups' difference of TOSEL exam was not statistically significant ($t=0.568$, $p=.577$), and their results on the vocabulary test were also not statistically significant ($t=-.980$, $p=.340$).

Table 3
Results of Pretest of TOSEL and Vocabulary

		N	M	SD	t	p
TOSEL score	Exp. group	10	32.60	6.059	.568	.577
	Control group	10	31.20	4.894		
Vocabulary test	Exp. group	10	13.60	6.769	-.980	.340
	Control group	10	16.30	5.478		

In other words, the two groups were homogenous, and the difference in English ability and vocabulary skill level after the test was able to be judged due to the difference in their learning methods.

With pretest of general English ability and vocabulary skill, questions on interest and confidence were conducted before the treatment. The results were shown in Table 4.

Analyses of two groups' interest level showed that there was no significant difference between the experimental group (means: 3.02, SD: 0.9313) and control group (means: 3.07, SD: 0.8664, $t=-0.124$, $p=.0902$). A t-test revealed that there was no significant difference in confidence between the experimental group and control group ($t=-0.054$, $p=.0958$). The result of analyzing learners' questionnaires revealed that two groups were homogenous.

Table 4
Results of Pretest Questionnaire

Item	Group	N	M	SD	T	p
Interest	Experimental group	10	3.02	.9313	-.124	.902
	Control group	10	3.07	.8664		
Confidence	Experimental group	10	2.97	1.0236	-.054	.958
	Control group	10	3.00	1.0540		

1. Results

For research question 1, whether the teaching and learning English using edutainment has a positive effect on children's general English abilities, English ability test scores for two groups were analyzed. The result of the t-test was shown in Table 5.

Table 5
Posttest Results of English Ability Test

Item	Group	N	M	SD	t	P
English ability test	Experimental group	10	26.40	4.926	.481	.636
	Control group	10	25.40	4.351		

The experimental group's score on the English ability test was an average of 26.40 (SD=4.926), and that of the control group was an average of 25.40 (SD=4.351). The difference was not statistically significant ($t = 0.481$ ($p > .05$)). In other words, there was no difference in English ability improvement after the posttest between the experimental group which used edutainment, and the control group which did not use it.

For research question 2, whether teaching and learning English using edutainment raises learners' degree of interest and confidence, a posttest questionnaire was conducted to verify change in interest and confidence of the experimental group and the control group. The analysis of the result is in Table 6.

Table 6
Posttest Results of Questionnaire

Item	Group	N	M	SD	T	p
Interest	Experimental group	10	4.07	.6775	2.998	.005
	Control group	10	3.12	.7383		
Confidence	Experimental group	10	3.97	.9313	2.441	.025
	Control group	10	2.90	1.0354		

The result of the posttest of the experimental group's interest was an average of 4.07 (SD=.6775), and that of the control group was an average of 3.12 (SD=.7383). The difference was statistically significant ($t=2.998$, $p=.005$). Regarding confidence, the result of the experimental group was an average of 3.97 (SD=.9313), and that of the control group was an average of 2.90 (SD=1.0354). This time, the experimental group again had a higher average, and the two groups' difference was statistically significant ($t=2.441$, $p=.025$). That is to say, in the two areas of interest and confidence, there were differences between the experimental group and the control group, and the experimental group had a higher result in both cases.

For research question 3, whether teaching and learning English using edutainment has a positive effect on the learners' long-term memory of their vocabulary, a vocabulary test was conducted three times as a pretest, a posttest, and a delayed posttest and the difference was compared. Through the pretest, the two groups were proved homogenous, and through the posttest and the delayed posttest, the question as to whether there was any difference in their vocabulary ability improvement was resolved. The t-test result of the posttest and the delayed posttest is as follows.

Table 7
Posttest Results of Vocabulary Tests

Item	Group	N	M	SD	t	P
Vocabulary posttest	Experimental group	10	53.80	4.566	.938	.361
	Control group	10	52.00	4.000		
Delayed posttest	Experimental group	10	49.80	4.803	5.422	.000
	Control group	10	34.10	7.795		

As the table 7 showed, the experimental group's average on the posttest was 53.80 (SD=4.566), and the control group's average was 52.00 (SD=4.000). But the difference between the two groups was $t=.938$ ($p=.361$, $p>.05$) and statistically insignificant. Thus, the two groups' difference in vocabulary ability improvement was statistically insignificant.

However, the result of the delayed posttest conducted four weeks after the posttest is noteworthy. In this test, the experimental group's average was 49.80 ($t=.938$ ($p=.361$, $p>.05$)), and the control group's average was 34.10 (SD=7.795), showing a considerable difference between the two groups. The t-test result on the difference was $t=5.422$, $p=.000$, and it was statistically significant.

2. Discussion

Using edutainment in language learning has a great potential to teach students English without much effort and pain. There have been some studies showing positive effects supporting teaching and learning various subjects using edutainment over the other teaching methods on students' academic achievement (Kara & Yesilyurt, 2007; Simpson, & Clem, 2008). The findings of this study concerning the effects on students' English achievement, however, are not consistent with the ideas of previous studies. It was revealed in the study that the difference between the experimental group using edutainment and the control group was not statistically significant.

This result could be explained by the fact that the period of the study was just twelve class hours in 6 weeks and so it was hard to identify overall improvement in English ability in such a short period of time. A longer treatment period would have produced a more positive result, and it is necessary to perform a follow-up study by extending treatment time.

This study tried to answer the research question whether interest and confidence of the experimental group was higher than that of the control group. The analysis of the results showed that the difference of interest and confidence between the two groups was statistically significant. Kraemer, Ahn, Hillman, and Fei's study (2009) showed similar results that a multimedia language learning system which shared some of same features with edutainment applications in this study had positive effects on user's confidence, interest, and motivation for studying the target language. In a similar vein, Zheng, Young, Brewer, and Wagner (2009) also claimed that learning English in a 3D game-like virtual world increased language learners' confidence and comfort, which in turn led to overcome some barriers for learning English.

The results of this study showed that there was no statistically significant difference between the experimental group and the control group in posttest on vocabulary. It might be due to the fact that as the learning objectives and topics of two groups were the same and that the two groups had repetitive quizzes regarding previously learned words for five minutes before each class started, the two groups' posttest on vocabulary scores have been similarly improved.

However, the result of the long-term memory of vocabulary test, which was conducted four weeks after the posttest without prior notice, is noteworthy. The experimental group's average score of the test was significantly higher than that of control group. This could mean that multimedia components in edutainment contents in this study led students to retain the meaning of vocabulary longer. Kim and Gilman's study (2008) showed the similar conclusion that an effective way to improve learning of English vocabulary is to

offer graphics that illustrate what the vocabulary means. Yanguas's study (2009) also showed that multimedia gloss groups noticed and recognized significantly more of the target words than the control group.

To sum up the results above, English teaching and learning using edutainment raises learners' interest and confidence and has a positive effect on long-term memory in vocabulary learning.

V. CONCLUSION

Recently, efforts to utilize edutainment in education have increased, but just using broadcasting productions, film, or games for education does not mean they are edutainment. Only when educational and entertainment elements are harmonized, edutainment's educational effect can be maximized. There has recently been a lot of such effort. Against this backdrop, this study aimed to examine the educational effect of edutainment by applying it to learning English.

To achieve the purpose of this study, two homogeneous groups were studied: a control group and an experimental group. The experimental group received treatment using diverse edutainment contents, and the control group had classes using conventional learning materials like flash cards, learning papers, and off-line games. After all the classes ended, to identify learners' change in achievement, vocabulary, interest and confidence, a posttest was conducted. Summing up the results, this study concludes as follows.

First, the posttest on English ability resulted in the experimental group's score being higher by one point; however, the difference was not statistically significant. Second, the questionnaire carried out after the treatment ended revealed that classes using edutainment improved learners' interest and confidence. Third, The posttest results of the two groups were not statistically significant, but the delayed posttest on vocabulary conducted four weeks after all the treatment ended showed that English teaching and learning for children using edutainment had a positive effect on long-term vocabulary memory. To sum up the results above, edutainment content can be a good learning tool that stimulates learners' interest, motivates them, and improves their self-confidence, and learners' indulgence in diverse edutainment multimedia materials ultimately has a positive effect on long-term vocabulary memory.

This study did not reach a conclusion as to whether classes using edutainment improved overall English ability, but it was suggested that a short period of classes for about six weeks was insufficient for improving English ability. Given that the posttest showed the experimental group's average to be slightly higher than that of the control group, it was suggested that a longer period of experiment could lead to a statistically significant result

in English ability improvement. Especially, as the other two results were all positive, a follow-up study would be needed. Because classes using edutainment have a positive effect on improving learners' long-term vocabulary memory, interest and confidence, to develop study regimens efforts for continuous study on and interest in the edutainment area are needed to provide enjoyable and exciting classes tailored to learners.

So far, edutainment has not obtained agreement from parents. There are two reasons for this. First, edutainment has not provided outstanding results in learners' language ability improvement. Second, problems accompanying edutainment dwarfed its effect as an educational tool. But as we proceeded with this study, we noticed that confident and enjoyable learning would boost learners' willingness to learn and maximize educational effect. Therefore, we would like to propose the following points for a follow-up study on English teaching and learning using edutainment.

First, to enhance the effect of English teaching and learning using edutainment, teachers' proper understanding and adequate use of edutainment is needed. Currently, there are diverse edutainment content, and the number of such content is increasingly growing. Some who misunderstand edutainment claim that using edutainment for classes would definitely lead to a productive result, but if used carelessly and excessively in classes all the time, the effect would rather be halved. A teacher's role is to judge what form of edutainment would be the most effective for a specific topic and apply it to classes accordingly, so the teacher should understand edutainment materials properly. Furthermore, to efficiently deliver true advantages of edutainment to learners, a teacher should appropriately apply relevant materials to learners.

Second, formation of or support for teachers' communities is needed to share edutainment content. As briefly mentioned above, many diverse edutainment materials are currently available. But it is not easy to find materials suitable for education or tailored to class content and teacher's preferences. In fact, regarding materials needed for class, some were obtained easily, but many had to be recreated in accordance with class objectives and plans. Indeed, preparation for edutainment classes cost two to three times as much time and energy as that needed for such classes themselves, and in many cases other experts' creative ideas and help are necessary. In developing edutainment content, educational researchers, teachers, and expert developers should collaborate to create content tailored to learners' traits and levels, so support on a national level is needed. With regard to teachers, if they formed a community in which to share materials and creative ideas previously utilized, a much improved English education would be possible.

Lastly, study on edutainment is still in its incipient state. Most of the studies on edutainment are related to elementary students and to tools and content focusing on games and mobile materials for them. However, given the current status of the nation's classrooms and edutainment's positive aspects, follow-up studies should deal with more

diverse topics, and the subjects should be expanded to young children and to junior and high school students.

REFERENCES

- Bak, Young-keun. (1995). *Learning software design*. Seoul: Gyoyukgwahaksa.
- Bak, Young-keun. (2005). *Understanding and utilizing edutainment*. Seoul: Jungil.
- Brog, W., & Gall, D. (1989). *Educational research-An introduction* (5th ed.). New York: Longman.
- Buckingham, D., & Scanlon, M. (2000, January). *That is edutainment: Media, pedagogy and the market place*. Paper presented to the International Forum of Researchers on Young People and the Media, Sydney.
- Choi, Young-jo. (2003). *Research of marketing method for Edu-Game in Korea*. Unpublished master's thesis, Sejong University, Seoul.
- Collins, M. F. (2010). ELL preschoolers English vocabulary acquisition from storybook reading. *Early Childhood Research Quarterly*, 25(1), 84-97.
- Cook, D., & Campbell, T. (1979) *Quasi-experimentation: Design & analysis issues for field setting*. Chicago: Rand McNally College Publishing.
- de Fockert, J., Davidoff, J., Fagot, J., Parron, C., & Goldstein, J. (2007). More accurate size contrast judgments in the Ebbinghaus illusion by a remote culture. *Journal of Experimental Psychology*, 33(3), 738-742.
- Duquette, L., & Painchaud, G. (1996). A comparison of vocabulary acquisition in audio and video contexts. *Canadian Modern Language Review*, 53(1), 143-172.
- Go, Jae-hyuk & Choi, Sung. (2002). Technological study in order to develop edutainment game inserting fun elements. *Korea Game Society*, 11, 251-257.
- Kara, Y., & Yesilyurt, S. (2007). Assessing the effects of tutorial and edutainment software programs on students' achievements, misconceptions and attitudes towards biology. *Asia-Pacific Forum on Science Learning and Teaching*, 8(2), 1-23.
- Kazanci, Z., & Okan, Z. (2009). Evaluating English language teaching software for kids: Education or entertainment or both? *The Turkish Online Journal of Educational Technology*, 8(3), 30-38.
- Kim, D., & Gilman, D. A. (2008). Effects of text, and audio, and graphic aids in multimedia instruction for vocabulary learning. *Educational Technology & Society*, 11(3), 114-126.
- Kim, Young-suk. (2002). *Teaching vocabulary in primary English*. Seoul: Hangukmunhwasa.
- Kraemer, A., Ahn, S., Hillman, S., & Fei, F. (2009). Innovative learning modules for

- language in context: MIMEA. *CALICO Journal*, 27(1), 187-204.
- Lee, Ju-yeon. (2001). *A web-based Korean language learning edutainment for children*. Unpublished master's thesis, Incheon University of Education, Incheon.
- Nation, P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nation, P., & Coady, J. (1988). Vocabulary and reading. In R. Carter, & M. McCarthy (Eds.), *Vocabulary and language teaching* (pp. 97-110). New York: Longman.
- Nation, P., & Newton, J. (1997). Teaching vocabulary. In J. Coady & T. Huckin (Eds.), *Second language acquisition* (pp. 238-254). Cambridge: Cambridge University Press.
- Simpson, E., & Clem, F. A. (2008). Video games in the middle school classroom. *Middle School Journal*, 39(4), 4-11.
- Thorn, A., & Page, M. (2009). *Interactions between short-term and long-term memory in the verbal domain*. New York: Psychology Press.
- Watts, S. (1995). Vocabulary instruction during lessons in six classrooms. *Journal of Reading Behavior*, 27, 399-424.
- Webb, S. (2008). The effects of context on incidental vocabulary learning. *Reading in a Foreign Language*, 20(2), 232-245.
- Wilkins, D. A. (1972). *Linguistics in language teaching*. London: Arnold.
- Yanguas, I. (2009). Multimedia glosses and their effect on L2 text comprehension and vocabulary learning. *Language Learning & Technology*, 13(2), 48-67.
- Zheng, D., Young, M. F., Brewer, B., & Wagner, M. (2009). Attitude and self-efficacy change: English language learning in virtual worlds. *The Computer Assisted Language Instruction Consortium Journal*, 27(1), 205-231.

APPENDIX

Questionnaire

© Please read the items and mark the appropriate numbers below.

1. When did you start learning English?

[※ Write your starting age in the brackets]

- ① Before elementary school (years old)
② 1st~2nd grade in elementary school (years old)
③ After 3rd grade in elementary school (years old)

2. Do you have any materials for studying English at home?

① Yes.

② No.

[※ If you answered “Yes” for question 2, answer question 3.]

3. Choose all of the materials that you use to study English at home.

① books

② Video tapes (or DVDs)

③ Cassette tapes

④ computers

⑤ MP3s

⑥ PMPs

⑦ etc.()

4. Do you study English only at your elementary school?

① Yes.

② No.

[※ If you answered “Yes” for question 4, answer question 5.]

5. Choose all of the ways that you study English at home.

① private lesson

② home study materials

③ EBS

④ after school class

⑤ phone English

⑥ Internet English

⑦ etc. ()

6. What is your favorite area of studying English? ()

① speaking

② listening

③ reading ④ writing ⑤ vocabulary

7. Which area of English are you most confident studying?

① speaking

② listening

③ reading ④ writing ⑤ vocabulary

8. Which area of English study do you like the least?

① speaking

② listening

③ reading ④ writing ⑤ vocabulary

9. Which area of English study is the most difficult to you?

① speaking

② listening

③ reading ④ writing ⑤ vocabulary

10. Choose all of the English class activities that interest you.

① textbook learning

② pair work or group work

③ chants or songs

④ games

⑤ role playing

⑥ computer or multimedia classes

11. Choose all of the ways that you don't like to study in English class.

① textbook only

② pair work or group work

③ chant or song

④ games

⑤ Videos or DVDs

⑥ computer activities

⑦ TV programs

⑧ etc. ()

※ Read the sentences below and circle the numbers properly.]

(5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly agree)

No.	Question	5	4	3	2	1
12	I like English.					
13	I look forward to English class.					
14	I enjoy English conversation and stories.					
15	I like English class activities.					
16	I think I am better than other students at English.					
17	I want to be better than other students at English.					
18	I can confidently repeat English sentences I hear in class.					
19	I raise my hand often to answer questions.					
20	I can express what I learned briefly by using pictures or words.					
21	I participate in class activities enthusiastically.					
22	I think memorizing vocabulary is important.					
23	I think I am good at memorizing vocabulary.					
24	I think I am able to remember English vocabulary for a long time.					
25	I do my best to memorize English words.					

Jie Young Kim

Department of English, Chung-Ang University

456-756 Naeri-San, Ansung-si, Kyunggi-do

Tel: (031) 670-3154

Email: jk221@cau.ac.kr

Si Yeon, Gu

Chung-Ang University

Email: creamsoda99@empal.com

Ji Hae Jeon

Chung-Ang University

Email: 5655hot@hanmail.net

Received 30 January 2010

Revised 26 March 2010

Accepted 10 April 2010