

## Development of Simultaneous Conversation Evaluation Program with Electronic Whiteboard in Public Elementary School English Activities in Japan

Kayoko Fukuchi<sup>1</sup>, Naoshi Kanazawa<sup>2</sup>

<sup>1</sup>Kobe Kaisei College, <sup>2</sup>National Institute of Technology, Nara Campus (Japan)  
[fukuchi@kaisei.ac.jp](mailto:fukuchi@kaisei.ac.jp), [kanazawa@lbe.nara-k.ac.jp](mailto:kanazawa@lbe.nara-k.ac.jp)

### 1. Introduction

The investigation of "Simultaneous Conversation Evaluation Program with Electronic Whiteboard" has been carried out at some elementary schools. In this report, Fukuchi and Kanazawa introduce the result of the investigation and the advantage of the RPG in the elementary school English education, and how much this research contributes to an evaluation of elementary school English as an official subject.

The evaluation of the elementary school English education is performed only by description of the sentences and cannot be performed by numerical value. However, Ministry of Education, Culture, Sports, Science and Technology announced in 2013 that English would be taught as an official subject in 2020 [1]. It means that numerical value evaluation is necessary. This project solves the problem instantly. In Japan now, English 'activities' as compulsory education in all elementary schools of Japan started in 2011, and it is 'not' taught as an official subject. It means an evaluation of the elementary school English activities should be performed not only by description of the sentences, but also by numerical value [2]. The research project must be a useful tool for a pleasant numerical value evaluation.

Children enjoy communicating with others on the Role Playing Game (RPG). Moreover they are never aware of taking diagnostic tests. When an RPG is used as an activity in elementary school English class, the game becomes the pleasant evaluation tool. The RPG can measure how well children understand the communication, and the numerical evaluation will be a part of the activities that children enjoy and further be motivated.

The computer software and the system between iPods and the electronic board intercommunication system of RPG have been developed with Voltec, an ICT company, Mr. Murata, an animator, and Newton Press, a publisher, under this research project. RPG system has connected the electronic board in class with an iPod, which each learner has in their palms. The RPG pilot version has been developed with the sound effects for three years.

### 2. The aim of this research

The investigation clarifies how well enjoying the RPG contributes to lower affective filter, how well this program works, and, as a result, how much the RPG contributes to understanding the contents of the diagnostic test deeply.

The RPG consists of three parts; the story of this RPG, the conversation of shopping as a diagnostic test, and shopping confirmation scene. The following three issues were investigated;

(1) In the first part of the RPG,

How much children enjoy the RPG story

How well the background of the RPG story helps children understand the context and lead children to the next shopping scene.

How much enjoying the story contribute to lower children's affective filter [3]

(2) In the second part, each child joins the program of the RPG, and talks with the character. Children take the diagnostic test simultaneously in class without noticing it is a test.

The diagnostic tests on the game evaluate how well the children understand the communicative contents in English class at once.

(3) In the third part, each child checks the items the character wants. Listening to the character check each item, children understand the result immediately and simultaneously in class with 40 students.

### 3. Procedure of the research

The RPG and the test have been carried out at some elementary schools. 114 Koriyama fifth graders 67 Mino-oka fifth graders and 112 Midorigaoka fourth graders participated in this investigation in

February, March, 2014. First a main character Newton was introduced using RPG and then children enjoyed the quiz of the space. They were very interested in the quiz. The beginning of the RPG "Space Quest" attracted children. In the second part of the RPG, Newton goes shopping with children in the story. At each shop, children ask Newton on the screen what he wants, Newton answers items he wants, and children choose the answer. A teacher is a facilitator who promotes the talk between children and Newton. Children do not feel that they take a diagnostic test but enjoy shopping pleasantly. In the third part of the RPG, children and Newton finish shopping, and ten items they bought are checked. Children understand immediately the result, whether each item, the answer, is correct or not.

## 4. Findings and Discussion

### 4.1 The result of total score

The correct answer rate of fifth and fourth graders was high, and fifth graders' was very high, however, fourth graders' rate was not bad, but lower than the fifth graders. In Japan, English activity is a compulsory subject for fifth and sixth graders, and they experience English activity of 35 hours a year, however, fourth graders are not taught it as a compulsory subject. Midorigaoka elementary school fourth graders study it for 17hours a year. Learning time affects the difference.

### 4.2 Each correct answer rate of fifth graders and fourth graders

Each correct answer rate of fifth and fourth graders is very high except two items, No5 and No.9 (Table 1). As Table 1 show, fifth graders' rate No. 5 is very high, while fourth graders' one is extremely low. The difference of learning time might affect the results. As for No.9, the tricky distractor might affect the result of fifth graders and especially the result of fourth graders.

Table1. Correct answer rate of 5th graders and 4th graders

	1 A blue cap	2 A blue pencil-case	3 A pair of yellow shoes	4 a pair of long socks with purple lines	5 a dinosaur with a long neck	6 an orange cup with flowers	7 a black and red bag with a white cat	8 a black T-shirt with flowers	9 a white umbrella with red hearts	10 a big pink cotton candy	Total Score
5th & 4th graders	92.5%	96.6%	94.2%	81.6%	75.8%	92.2%	92.2%	94.2%	47.3%	86.3%	85.3%
5th graders	97.8%	98.9%	97.2%	89.0%	94.5%	97.8%	96.7%	98.3%	61.7%	91.7%	92.4%
4th graders	83.9%	92.9%	89.3%	69.6%	45.5%	83.0%	84.8%	87.5%	24.1%	77.7%	73.8%

### 4.3 Six each questionnaire

The learners' attitude survey in class shows six questions and they answer each question out of 4 multiple choices. It reports how well they understand and enjoy communicating with Newton, interactively. Children evaluated their attitude with four stages. Each number shows the higher, the better.

(1) Did you enjoy the story? 3.3 point average

The 3.3 point average of Question No.1 shows children understand the story very well. There can be seen a lot of comments that the story was interesting. The background of the RPG story helped children understand the context and led children to the next shopping scene.

(2) Did you enjoy shopping? 3.2 point average

The 3.2 point average of Question No.2 shows that children enjoyed shopping. "The comments show that children could enjoy talking with Newton and a diagnostic test as a game in class, simultaneously.

(3) How well did you buy for Newton? 3.1 point average

The 3.1 point average of Question No.3 is high. It shows that a diagnostic test as RPG shopping game went well.

(4) Do you like to use the computer in English Activity Class? 3.0 point average

(5) Do you like computer games? 3.3 point average

(6) How did you enjoy today's English activity?



The 3.0 point average of Question No.4 is lower than the 3.3 point average of Question No.5. Question No. 4 is not low at all, and it is rather high. Question No.4 asks how much children like the computer ‘learning’, and No.5 asks how much children like computer ‘games’ Children in Japan spend considerably much time for computer games [4] [5], and playing computer games is a part of their lives now [6]. It may indicate children notice the delicate difference.

## 5. Summary

The RPG played a role as a pleasant diagnostic test. This program became a tool of “Simultaneous evaluation in class with 40 students” and “Simultaneous results in class with 40 students” instantly. The research data has been collected and analyzed more on this report. Based on the feedback, the system is revised and rebuilt, to make the system and the RPG better.

English will be taught as an official subject in 2020. That numerical value evaluation is necessary. This investigation proved that the system solved the problem instantly. The research was carried out and the result made it clear that the diagnostic test by RPG is very effective, and the evaluation has become a pleasant activity for children in class. About forty children evaluated themselves ‘simultaneously and pleasantly’ in class and the result of the diagnostic test fed back to all the children ‘simultaneously and instantly’ in class.

Children wrote the comments about the beginning part of RPG, the story; “English was a little difficult, but the movie was fun”, The background of the RPG story helped children understand the context. Children’s affective filter was lowered through enjoying the story.

“I could talk with the computer”, shows that each child joined the RPG world. It leads to the high correct answer rate. Each child talked with PC in class of 26-39 at the same time. Children joined shopping, that is, taking diagnostic test simultaneously. The results made it clear that RPG worked well as a diagnostic test. It is important that the RPG helped “Simultaneous evaluation in class with 40 students” fairly. In this process the game could measure how well children understood the communication simultaneously.

“What a shame I lost two questions”, express that each child wants to play again. “Simultaneous results in class with 40 students” stimulated the motivation for each child to play the RPG again.

This is the first experience that ‘each’ child communicates with the character on the PC screen. For each child, this is only his or her drama. Besides, it is the drama that children experience it simultaneously. The diagnosis was carried out, but the learners are never aware of the test. Furthermore, it led to raise children’s motivation. You could see how much the students enjoy the RPG and how well the system works at elementary schools.

## References

- [1] MEXT (Ministry of Education, Culture, Sports, Science and Technology), 2013 *English education reform enforcement plan corresponding to the globalization*  
[http://www.mext.go.jp/b\\_menu/houdou/25/12/\\_icsFiles/afieldfile/2013/12/17/1342458\\_01\\_1.pdf](http://www.mext.go.jp/b_menu/houdou/25/12/_icsFiles/afieldfile/2013/12/17/1342458_01_1.pdf)
- [2] MEXT, 2010, *University Education and Global Human Resource Development for the Future(Third Proposal)*  
<http://www.kantei.go.jp/jp/singi/kyouikusaisei/teigen.html>
- [3] S. D. Krashen and T. D. Terrell, 2000 *Natural Approach*
- [4] Benesse, 2007, “Survey data clip A Child and Education” CLIP0005B, Benesse Educational Research & Development Institute, <http://berd.benesse.jp/berd/data/dataclip/index.html>
- [5] MEXT, 2001 *Research about a child and the video game by the NPO*  
[http://www.mext.go.jp/a\\_menu/sports/ikusei/04033001/002.htm](http://www.mext.go.jp/a_menu/sports/ikusei/04033001/002.htm)
- [6] FUKUCHI, 2013 *The Numerical Evaluation by Role playing Game That Children Enjoy*