Adding Motivation Features to Electronic Portfolios A Case Study at KMUTT
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Adding Motivation Features to Electronic Portfolios

A Case Study at KMUTT

Ananya Tuksinvarajarn and Phanitphim Sojisirikul

King Mongkut's University of Technology Thonburi, Bangkok, Thailand

Abstract

Electronic portfolio is a promising tool for language learning development. The use of technology motivates and facilitates both students and teachers. This paper introduces some motivation features that can be added to the electronic portfolio program. This may help sustain students' motivation and draw students to actively engage with the work. The electronic portfolio program was designed and piloted in the language fundamental course of KMUTT. The study reveals that the program was successful to motivate the students to learn. The study also suggests that electronic pets, treasure boxes and best student charts encourage students to work harder.

Over view of Electronic portfolios

Electronic portfolios have been involved in education for almost two decades. They have been used in many language classes and is considered to be a promising language learning tool.

The term of electronic portfolios varies according to the purpose of its use. In simple definition, it is a purposeful collection of student work using electronic technology to store and exhibit the student's efforts progress, and achievement during a period of time (Arter & Spandal, 1992; Coombe & Barlow, 2004; Watson Todd, 2002). The term "electronic portfolios" may derive from the integration of technology with the paper portfolios. Barrett (2006) states that " …an electronic portfolio uses electronic technologies as container, allowing students/teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text); and using hypertext links to organize the material..."

The characteristics of a good portfolio are suggested by many scholars (Coombe & Barlow, 2004; Hamp-Lyons & Condon, 2000; Moya & O'Malley, 1994; Watkins, 1996) Good portfolios should provide the path for students to develop self-regulated learning including awareness of thinking, use of learning strategies and sustained motivation, therefore, helping students become more autonomous learners. (Nunes, 2004) Portfolios should include interaction and reflection. The first one is the interaction between students and teachers. For example, after students submit their work, teachers have to return the work to the students. The returned work should contain the feedback given on the work of the students. The second one is the reflection. Students have to do the self-reflection upon their learning goal, strength, weakness and learning process. Similarly, Plata (2003) proposes that students should be able to use their knowledge and skills to set their learning goal, to use learning strategies effectively, to be aware of their strengths and weaknesses and to monitor their own progress.

Motivation is another factor that should be considered while designing the portfolio. The integration of technology can be a motivating factor for portfolios, especially if the students can engage in the process of learning, and they have an opportunity to express themselves. The electronic portfolio is not just completing a form on the website, but it must involve individuality, creativity, and ownership. (Barrett, 2006) Learners should be able to feel and to see "themselves" when they look at their electronic portfolios. The information and the work in the portfolio should demonstrate who they are and what they

are interested in. Learner ownership is a motivation factor that should not be ignored. The electronic portfolio should promote the sense of ownership. It should allow students to take control, to add and make changes to their personal information, and to select what they feel is suitable to their learning. Active engagement is another key word for the success of portfolios. "Failure to get students enthused and engaged with their e-portfolio will result in the e-portfolio becoming another hoop to jump through, or something that will be left at the campus gates ..." (Tosh, Light, Fleming, & Haywood, 2005) Then, the learning outcome of using the electronic portfolio needs to be identified and it has to ensure that it relates and supports the rest of the learning course. The learning goal then needs to be explained clearly to the students. Students need to understand what, why and how they work on the electronic portfolio.

A case study of portfolios used at KMUTT

Since 2000, the department of Language Studies, King Mongkut's University of Technology Thonburi (KMUTT) has implemented the paper portfolio to its English fundamental course namely LNG 102: Fundamental English II. The course requires students to complete autonomous language learning outside the classroom largely based on tasks in the Self-Access Learning Centre and learning websites on the Internet, and report on them in writing. For each task, students need to indicate their learning by reporting on it in a record form (Thepsiri, 2001) which includes space for an open-ended reflection concerning content encountered, learning problems and solutions. Portfolios appear to encourage autonomous learning, meet individual needs, and change students' attitudes as well as enable students to develop their English.

Despite their benefits, the emphasis placed on portfolios in LNG102 has been gradually reduced for four main reasons, which indicate the problems associated with paper portfolios:

1. Given the number of pieces of written work handed in as parts of portfolios, teachers have a heavy marking load. In the early year of using the portfolio, each student was required to work on ten portfolio worksheets for a semester.

However, this requirement caused a heavy workload for the teacher. Then, the requirement was reduced to six worksheets. Presently, students need to complete two worksheets per semester. This raises the question whether the students could still benefit from working on the portfolios.

2. Another problem is the difficulty of keeping students working on portfolios. Many students see the portfolio work as a boring burden and do the work just to meet the minimum requirements of the course.

3. In their written reports of work completed, students can, and do, copy from students who have taken the course in previous years and from other students taking the course concurrently. This increases the workload of the teachers since they have to check and compare the works for plagiarism within and among other groups.

4. The marking of portfolios is somewhat invalid and unreliable. Some teachers do not use the provided marking criteria. Some teachers grade their students' work based heavily on grammar correction, while some may focus on other marking elements such as interest of the idea, creativity, the effort the student put on their work, etc.

Designing of electronic portfolios for language learning

We aim to design an electronic database plus web interface for the main purpose of supporting the language fundamental course (LNG 102) and also for the submission, storage and assessment of student language portfolios. The program includes the following features and components designed to overcome or ease the problems previously described:

1. Portfolios will be available online to teachers for assessment and administrative purposes, and this wide availability and the zero physical weight of the work may further assist teachers in streamlining their workload.

2. The electronic portfolio program will include motivation features that will create a relaxed learning atmosphere, create student ownership and the draw the student attention to engage with their work.

3. The electronic portfolio database will include a system to check for plagiarism, to include checks against other work already in the portfolio database.

4. More uniform procedures by teachers for providing feedback on portfolio texts are likely in the long run to lead to greater overall efficiency in student-teacher communications and greater understanding about portfolios.

Main components of the program

In this article, we will introduce only eight main components of our electronic portfolio. To view more, please visit our website http://202.44.15.6/eport2/.

Register

To start, students need to register to use the program. They have to complete a form to indicate their study group and set up their user name and password. Then, if they want, they can upload a photo and briefly introduce themselves. They can also select and name their pet. Registration information can be updated later if necessary. It is expected that adding their own photo, writing brief personal information and naming their own electronic pet may help create the sense of ownership.

Figure 1: Example of register page

Worksheet

The worksheet of the electronic portfolio consists of five short parts. Students are required to complete the form or answer the questions given.

- On the first part, students have to complete information about the skill area, the topic and the source of the text they have worked on. They can attach a file of the activity they did or the text that they used if they want.

- On the second part, students give reasons why they did the activity and specific detail to support their reasons.

- On the third part of the worksheet, students are asked to write a summary of the story or the activity they have worked on.

- On the forth part, they fill in boxes about new words and expressions, grammar points and learning techniques. After the teacher has assessed the work, all new words, grammar points and learning techniques will be automatically stored in the "Treasure Boxes."

- On the fifth part, the electronic portfolio aims to document the reflective thoughts of students on their learning, which is acknowledged as the essential tool of language study and the most important step in the control of their metacognitive process. (Herbert, 2001) There are six groups of reflective questions. The questions cover four areas: need and goal, problem and solution, knowledge and content, and learning idea and method. Students select only one group of questions to reflect upon their learning.

My pet

The electronic pet (e-pet) plays a role as an incentive motivation. It aims to encourage students to work more. There are four different kinds of electronic pets. Students can choose and name their own pet while they are registering for the program. Each pet has eight stages of development. All start from an egg, then, after the first worksheet is submitted to the teacher, the egg will hatch. The first three stages of the pet's development will depend on the number of worksheets students submit, but after that the development of the pet will depend on the quality of their work (the mark students get for the work). If students do not log in for a month, the pet becomes unhappy. To keep the pet alive and happy, students should log in to the electronic portfolio program at least once a month.

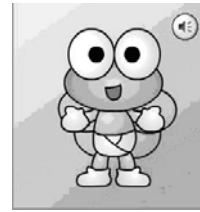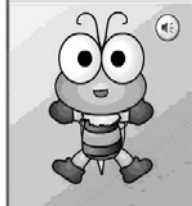*Figure 2: Example of an e-pet and stages of development*
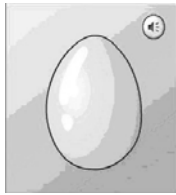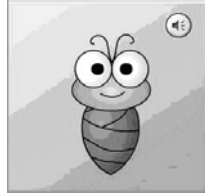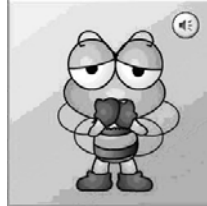
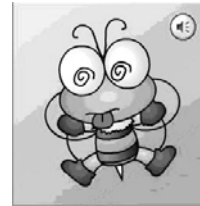| 1. Egg	2. Cocoon	3. Worm	4. Normal

5. Healthy	6. Happy	7. Unhappy	8. Close to death

Pet mail

The pet will send students an e-mail to remind them about its condition and well-being. If students have not worked on their portfolio for four weeks, their pet will become ill - in that case students will need to log in and work on their portfolio. Students' work is the best food for their pet. The more students work, the more their pet will become strong and happy. Pet mail will be automatically sent to a dormant (sleeping) user three times (once a month). If there is still no response or log-in, the student's account will expire.

Example of pet mail

2nd mail
Dear Master/Mistress (Student's name),
This is the second letter from your pet " …(Pet's name)…". Are you alright? If you have any problem or if you need extra help, please let me know. I can talk with your language teachers and ask them for help if you want. I hope you'll log in to your portfolio and do some English with me again!
Love,
Your …(Pet's name)..

Pet mail works as a reminding tool. It softens the feeling of being picked on or forced to study by the teacher. Many students may feel uncomfortable receiving a mail directly from their teacher. Pet mail helps create a closer relationship between the sender and the receiver. However, there are still some disadvantages of pet mail. First, once the mail is sent to the student, it is usually stored in the junk mail folder; so many students may ignore the mail. Another disadvantage is that whenever we enable the program server to send and receive a mail, we allow the server to be voluntarily attacked by hackers or viruses. Therefore, the security system must be carefully equipped and updated.

Treasure boxes

There are three treasure boxes: a new word and expression box, a grammar box and a learning technique box. All information on new words and expressions, grammar and learning techniques the students have put in their worksheets will be automatically stored in the treasure boxes. Students are rewarded with one electronic gold coin for each new word, grammar point or learning technique they have recorded in the worksheet.

Figure 3: Example of treasure boxes
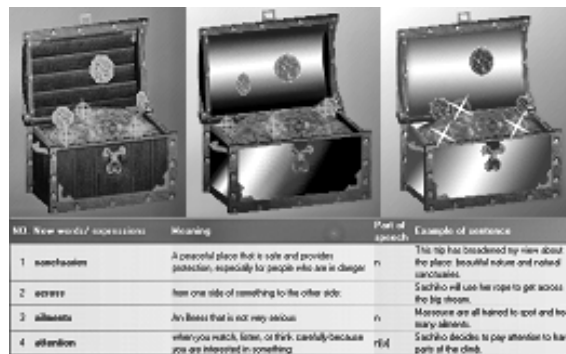
In the language fundamental course students are trained to use an English-English dictionary e.g. knowing the part of speech and finding the right meaning of words according to the passage. So collecting new words and meanings in the electronic portfolio worksheet reinforces the skills of using a dictionary, which is one of the main elements in the course. Reviewing grammar points and raising awareness of learning strategies are other focuses in the study course and this work in the portfolio encourages the students to be aware of the grammar points and strategies they used.

Best students chart

All students can see the twenty best portfolios that were given the highest marks by teachers. In this way students can learn what these best students wrote and see teachers' comments on those portfolios. This could help students, especially the weak ones, to improve their own portfolios.

*Figure 4: Example of "Best Students Chart"*

Assessment and feedback system

As previously mentioned, grading and giving feedback to the students' work causes an excessive workload for teachers. This program was designed to ease this problem by facilitating the teachers with an easy marking form. Teachers just click on "New worksheet" blinking on the teacher page. Then they can access the students' work on the left of the computer screen, together with the rubrics for assessment on the right. Teachers read the work, then, click on the number (1, 2, 3, 4, 5) that represents the mark given to the work. The scores together with the descriptions (e.g. "*You are able to give some reasons to support your opinions, but most of them are general. Some of your reasons do not support your opinions.*") will appear on the feedback page so that student can read. The program also allows the teacher to make any change on the description they like. The use of both L1 and L2 may be catered for in the program. For most weak students, reading the teacher's feedback in L1 could be more beneficial. Right after the teachers complete the grading and feedback, it will be automatically sent to the student

page "List of worksheets". Then, the students can open the page and read the teacher's comment on their work. They can also view the previous worksheets that have been graded and given feedback.

Figure 5: Example of teacher's page for assessment and feedback
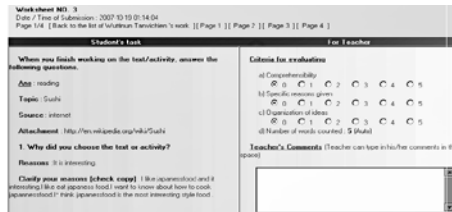
Copy detective

This part of the electronic portfolio enables the teacher to check if students have copied work from other students' portfolios. While grading the student's work, the teacher can click on "check copy". The Copy Detective program will then compare the student's work with that of other portfolios in the KMUTT database and highlight work that has probably been copied, together with the probable source (e.g. student's name, ID number, title of portfolio work, etc.).

Result of the study

The purpose of the study is to investigate the students' motivation in language learning when using the electronic portfolio. There were 392 students (ten group studies) who used the electronic portfolios. These students were studying in the faculty of Engineering, Science, and Industrial Education and they were taking LNG 102: English Fundamental II. In addition, there were six language teachers who volunteered to use the program.

Before the semester started, the teachers were trained to use the program. A teacher manual book suggesting how to use the program and how to train students was also provided. Before introducing the electronic portfolio program, the students were trained how to work on the worksheet and how to write reflection in a similar form of worksheet as used in the electronic portfolios. Then, they were brought to the computer room to register with the program. At the end of the semester, five group studies (192 students) were randomly selected to be the subjects of the study. Then, the questionnaire was distributed to these students. After that, fifteen students of the subjects who were selected according to their portfolio score (high, average and low) and five teachers were interviewed.

The study indicated interesting results. There were four main aspects, which were highly mentioned as motivation factors that helped activate students to learn.

Technology-oriented

Regarding teachers' perspectives, the outstanding point which highly motivated students to continuously make use of the electronic portfolio was technology-oriented. Most of the teachers illustrated that it interested the students, as it was an online program. It was also convenient for them to search for articles and find sources of online help. They were not limited by the place and time of study. Moreover, when they worked on the electronic portfolio, they could access other websites which they liked. This helped them relax when studying. The teachers themselves also said that they could access the electronic portfolio whenever and wherever they felt free to do. Therefore, it could be said that the technology could create high motivation of students in learning.

When the students were asked, the results substantiated the teachers' opinions. Most of students said they liked the online program. It was convenient for them to study anywhere and anytime they wanted. Besides, they stated they could relax themselves while working. As a student mentioned, *"Working through the Internet access is enjoyable. While I was working on the portfolios, I can listen to the songs. It is*

convenient and I like technology." Another student said, *"I like the most when I can submit my work anytime I want. Midnight does not matter."*

The other motivation factors in the use of the electronic portfolio of students were the electronic pets, the treasure boxes and the best student charts.

Electronic pets

The students kept on working since they did not want their pet to be unhappy or die. To keep the pet happy concerned not only a number of works the students had to produce, but also the quality of their work. In other words, the better the quantity and quality of work they produced, the happier the pet was. The teachers stated that the students enjoyed and looked forward to seeing the growth of their pet. Therefore, they would produce as many pieces of works as they could or even log into the program to see their pet and try their best to keep their pet happy. This provided the students not only the active learning motivation, but also a chance for language improvement. A teacher said, *"The pet really motivates the students to learn. They can select from different kinds of pet to feed. They will look forward to seeing their pet's development."*

Most of the students (86.1%) also revealed that the pet was their prior motivation in learning. At the initial stage, they were eager to know what the pet was. After that, they had the responsibility to take care of it to make it happy. Thus, they had to work for their pet. A student mentioned, *"The development of the pet keeps me on working. I want to see its growth. I produce lots of pieces of work since I want to know what the pet looks like."*

Treasure boxes

The treasure boxes encourage students to review their grammar points and to expand vocabulary. In the process of learning, the students had to summarize the text, list a number of vocabulary and grammatical points they had learned from a piece of task. Therefore, after practice, 63.89% of students said this helped increase the number of new words and grammar learned. The following were their illustrations.

"I have a chance to practice more about language in the use of the program. … I haven't known what part of speech is, but, after practice, I have realized what is called as verb, adjective, and so on."

"My grammar, reading, and sentence analysis are improved. I know how to translate the sentence. I also realize what finite and non-finite verbs are. I have more positive attitudes towards English."

Best student charts

The last motivation feature discussed in this study is "Best student charts." The chart motivates some students (44.44%) especially the high proficiency students as one mentioned, *"What motivates me most is the best student charts. I want to be on the top list. When I see my friends work better, I want to compete with them. If they can do it, so can I."* However, the drawback of the best student page is that students can compare the marked works across the groups. Some students may not agree with the high score given to a work compared with another work that they think should be better awarded. Therefore, teachers need to be aware that the criteria and the judgment with which they grade the students' work are not any mystery. They are evaluated by their students.

After the implementation of the program, it was found that the program was successful to motivate the students to learn. Electronic pets, treasure boxes, and best student charts seem to be an incentive motivation that encourages students to work harder.

Conclusion

It could be said that the electronic portfolio not only helps solve the problems in the teaching and learning of LNG102 such as boring learning tasks, plagiarism, and heavy marking loads but also motivates the students to enjoy their learning independently. The four outstanding motivational features revealed in this study include the technological orientation of the program, the electronic pets, the treasure boxes and the best student charts. These features could be integrated not only in the electronic portfolio program, but also in any learning software program. However, further research still needs to be

conducted to improve the program especially regarding the reliability of assessment and the student's reflective questions. We also would like to know if these motivation features in our electronic portfolio program will have a similar impact on students in other school environments.

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