The Integration of Blog Platform and E-portfolio in Art Assessment

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Abstract

E-portfolio features easy storage and management. In the aspect of assessment application, the purpose of mutual assessment carried out in accordance with a feedback system platform can then be achieved. The newly developed Blog platform is equipped with the features of timely feedback and easy operation. If it is coordinated with E-portfolio, it will be most appropriate when used to keep records of art learning and process of art creation and to carry out instant interactions between the teacher and the students as well as the peer assessment among students. The main purpose of the study was to investigate the strategies for and effectiveness of implementing applying Blog as a learning portfolio platform for art assessment. Literature reviewed in this study covered E-portfolio, Blog learning portfolio platform, and the assessment strategies for art portfolio. Some six grade students in an elementary school were selected as research subjects to proceed the study of action research model in art assessment integrated on a Blog learning portfolio platform. The result of the study appears that the art portfolio assessment with Blog platform has fine cooperative learning and peer assessment effects. It recommends the application of Blog

in art curriculums can be added with teachers' reviews and students' journals of creation. The students can also apply Blog to make learning portfolio themselves so as to achieve the goal of applying technology to promote the interaction of art assessment and students' independent study.

Keywords: Blog, E-portfolio, Art Assessment, Peer Assessment

1. Introduction

1.1. Purposes

Portfolio evaluation is the method frequently used in art assessment. The students' thought, creating process and products are recorded in the profile. It has a very high value of reference for the evaluation of art courses. However, collecting and managing profiles consume a great amount of time and energy; many teachers are held back by it. In recent years, the development of information techniques helps to solve some part of file-managing problems. Teachers or students may use information media such as digital cameras, digital videos to record teaching and creating process, and also use the scanner to make creating drafts and products into digital files, input them into the computer, and set up a database of personal or class digital files. Therefore the e-portfolios have become a new type and production pattern for portfolio evaluation, and have been widely adopted by all subject fields.

E-portfolio features are easily storage and management. In the aspect of assessment application, the purpose of mutual assessment carried out in accordance with a feedback system platform can then be achieved. The newly developed Blog platform is equipped with the features of timely feedback and easy operation. If it is coordinated with E-portfolio, it will be most appropriate when used to keep records of art learning and process of art creation and to carry out instant interactions between the teacher and the students as well as the peer assessment among students. The main purpose of the study was to investigate the strategies for and effectiveness of implementing applying Blog as a

learning portfolio platform for art assessment. Some six grade students in an elementary school were selected as research subjects to proceed the study of action research model in art assessment integrated on a Blog learning portfolio platform. Finally, suggestions were proposed for the applications of Blog in art curriculums.

1.2. Method and Limitations

The research is aimed at the 111 six-graders of a certain elementary school in Taipei, proceeding "creative architecture" theme courses and making the researcher's self-set Blog the platform of e-portfolios, the duration is 4 months, when the courses finish, an peer assessment for e-portfolios will be conducted by using the rating scale, and also find out students opinions towards e-portfolios and Blog platforms with questionnaires.

2.The E-portfolio and Art Assessment

2.1.The E-portfolio

The "learning process portfolio" means collecting students' homework or works systematically and purposely so as to create portfolios which can be the basis of evaluation. The electronic learning portfolio is in accordance with the contents of traditional portfolio, but E-portfolio has features of being features easy storage and management, and it can save many spaces of classrooms. In addition, scholars point out keeping an E-portfolio can provide an opportunity for students to reflect his or her growth as a learner, and provide them different ways to show their knowledge, skill, and artistic abilities. E-portfolio allows teachers and students to better assess students' work for evaluation purposes and for monitoring development and achievement levels. (Dorn & Sabol, 2006).

2.2. The Application of E-portfolio in Art Assessment

The earlier works about the application of E-portfolio in art

assessment include three types: "E-portfolio system and application", "the assessment of E-portfolio", and "the E-portfolio platform" (see Table 1).

Table 1 Earlier works about the application of E-portfolio in art assessment

Type	Author	Title	Domain	Abstract
1. E-portfolio system and application	Wen,H. C.(2003) Master's Thesis	The application of web-based portfolio in Arts and Humanities instruction	Art Education	Two elementary school teachers, Wen and Chou, collaborated to design the curriculum and install the web-based portfolio system for an application in "Arts and Humanities" instruction. This study centers the discussion on the development strategies in Art Studio, based on "the characteristics of arts and humanities in 5th and 6th grades". Moreover, it also assesses how the satisfaction and the learning achievement are in terms of such functions as collection, feedback, interaction and peer assessment.
	Chou, F. C. (2005) Master's Thesis	The development of web-based portfolio system and research on network behavior in different learning styles & cognitive styles	Information Education	
2. Assessment of E-portfolio	Dorn & Sabol (2006) Journal article	The effectiveness and use of digital portfolios for assessment of art performances in selected secondary schools.	Art Education	This is a report of an experimental study that focused on actual and digital forms in order to determine the effectiveness of evaluations. The study participants included 178 students of 29 secondary teachers from four schools in Florida and Indiana.
3. E-portfolio platform	Lu, P. C. (2006) Journal article	The integration of e-learning platform in Arts and Humanities curriculum: The "Digital picture book" project-based learning.	Art Education	This project-based learning refers to the e-learning, the "ADDIE" model, which includes five teaching procedures: Analysis, Design, Development, Implement, and Evaluation and integrates the "e-learning platform" into the curriculum to assist teaching and learning.

Type	Author	Title	Domain	Abstract
3. E-portfolio platform	Lin,Yang, Hung,& Wang. (2006) Journal article	Web-based appreciation and peer assessment for visual art education.	Art Education	This study describes the application of a Web-based portfolio for appreciation and peer assessment of visual-art education in elementary school. Besides examining the effectiveness of the proposed system in enhancing visual art education, this study also addresses how Web-based portfolios can help teachers assess student's learning progress and facilitate peer assessment.

The results of earlier works show the functions and properties of the application of e-portfolio in art assessment:

(1) The e-portfolio is contributive to interactions among teachers and students, and has effectiveness of cooperative learning.

(2) The records of e-portfolio can help teachers implement formative assessment of students' learning process.

(3) The e-portfolio in accordance with the "mutual assessment function" of the learning platform system can be applied in peer assessment.

(4) The evaluations of actual works of students and E-portfolio of them are statistically similar. This result proves the validity and reliability of the application of e-portfolio in art assessment.

Consequently,the E-portfolio can be applied in art assessment with the interactive model of the E-platform, and be implemented in formative and peer assessment. But the strategies of integrating E-portfolio in art assessment plan still need to further investigated.

3.The Strategies of Integrating "Blog E-portfolio Platform" in Art Assessment

3.1. The"Blog E-portfolio Platform"and Applications

A Blog (short for web log) is a user-generated website where entries are made in journal style and displayed in a reverse chronological order. Since Blog was coined by John Barger in 1997, it has been rapidly developed on the Internet. Currently, Blog is mostly applied for personal publications and is increasingly used for commercial and educational purposes. (Wikipedia, 2000). It is mentioned in the book "Blog Story" that the reasons why people use Blog are : to express oneself, share information with others, and interact with one another. The essential motive will be using it as one's memorizing tool, recording and integrating the activity process, and the information revolution brought by Blog make individuals and the world truly interact and change the internet observers into creators. (Shih, 2006). The steps for using Blog are simple. It can be applied to writing about personal affairs, expressing one's ideas, and it can also provide the social group with an opportunity for writing about common affairs and criticizing current events. Because most Blog software provides the automatic file-saving function according to the way of organizing set by the user, it has a good function of a reminder plus information managing and saving (Hung, 2005). The formation of Blog reflects the features of being open to public participation in web. 2.0, that is to say, the internet media going back to the "interacting, participating and sharing" spirits emphasized at the beginning when the internet was just invented. (Sung, Chen, & Huang, 2007)

Lin, Wang, and Tsai (2006) pointed out the properties of Blog in the research of The use of Blog as interactive learning portfolio platform: (1) easy functions for publishing articles; (2) an interactive responsive system; (3) RSS subscription; (4) the numerous and personal styles; and (5) the manageable portfolio. To sum up, Blog has advantages of interactive sharing, portfolio, search, comment, RSS function, and etc. The "Blog portfolio platform" in this study contains the above functions. Teachers can use Blog to store teaching materials and students' portfolios as well as the final works, which can be later used as the basis of curriculum evaluation and peer assessment.

Because the Blog platform is easy to use, requires low information technology, and provides interactive functions, it has been widely applied in various domains and disciplines, such as science,

Table 2 The comparisons among the Blog, traditional learning process portfolios, and webpage learning process portfolios

	Traditional process portfolios	Webpage process portfolios	Process portfolios used Blog as a platform
Way of editing portfolios	Through paper and pens	Through computers, Internet	Through computers, Internet
Difficulty for portfolio editing and modification	easy	difficult(requiring techniques for webpage-making, ftp-uploading)	Easy (just requiring typing skills)
Way of saving portfolios	Paper portfolios occupy lots of space and the information get lost easily	Digitalized saving, does not occupy any space	Digitalized saving, does not occupy any space
Way of portfolio requesting and difficulty	Way of human labor, not easy to request	Checking webpages by order, not easy to request	Request by time, themes and key words
Way of portfolio-sharing	Difficult	Difficult	Easy
Way of portfolio feedback	Difficult	Difficult	Easy
Way of portfolio subscribing	None	None	Simple, easy
Multi-media function	Just words, pictures	Multi-media can be added in	Multi-media can be added in

From: Lin, K. Y., Wang, K. H., & Tsai, W. J. (2006). The use of Blog as interactive learning portfolio platform. *Audio-Visual Education Bimonthly, 47*(4), p.32.

information technology, language, and literature education. The related research is focused on the study of Blog platform system function (Wang, Lin, Chou, 2006), the effects of cooperative learning and the application for assistant teaching (such as the problem-based learning) (Oravec, 2002 ; Stiler & Philleo, 2003 ; Sung, Chen, & Huang, 2007; Yi, 2005; Chuang, 2005). Oravec (2002) think Blog has the features of openness, and the type of journal helps the development of students' criticizing and thinking . Blog can become the discussion section for the interaction between teachers and students and the online classroom, as well as the place for students to express their opinions. It will help to proceed introspection and high-level cognitive

thinking. For the related research of Blog application of education, please check table 3.

Table 3 The related research of Blog application of education

Dimension	Researcher	Title	Domain	Abstract
General application of education	Oravec (2002), Journal essays	Booking the world: WeBlog applications in education	Education	Study the ways and effects of weBlog application in educational activities
	Stiler & Philleo (2003), Journal essays	Blogging and Blogspots: An alternative format for encouraging reflective practice among preservice teachers	Education	The researcher aims at the students of 2 sections of courses(Multi cultural Education and Technology in Education) using 2 types of weBlog(teacher-guided and student-oriented), coordination with the courses to make it a place for feedback and interaction, research the satisfactory level of students' Blog using, interacting condition and conduct the self-evaluation of students' online journal . The result shows that Blog helps positively in interacting actively. The factors that affect students' using of Blog and satisfactory level of journal-making are: students' information ability, Blog system services and stability and privacy.
Cooperative learning	Guo-liang Yi (2005), Master thesis	The impact of problem-based learning in Junior-high school physics by web-based cooperative learning	Information technology integrated in education	The research mainly studies how to achieve learning effect assessment of cooperative learning by using Blog, and apply it to word processing courses of business management department at vocational college, make a massive research on the influence of students' learning accomplishment and motive, and make a quality research

Dimension	Researcher	Title	Domain	Abstract
				on the satisfactory level of cooperative learning and opinion poll . The result shows that Blog can be used as a tool for cooperative learning.
Problem-based learning	Guo-liang Yi (2005), Master thesis	The impact of problem-based learning in Junior-high school physics by web-based cooperative learning	Information technology integrated in education	The researcher aims at junior high school students, conducting it with experimental method, the experimental group and control group have their teaching conducted in a web-based learning (using Blog as a platform) and classroom-based learning environment, and apply problem-based learning method to discuss the differences of students learning effects .The result shows that students respond positively to the weBlog cooperative learning platform .
	Shiu-Te Sung, Yan-Chu Chen, Yi-Jeng Huang (2007), Journal article	An exploratory study of the application of Blog to problem-based learning: An example of the computer graphics classroom	Information technology integrated in education	Conduct a documental study and analysis by using examples of application of problem-based learning at Blog and the teaching of computer graphics classroom.

3.2. The "Creative architecture" Project

The researcher conducted a file collection of e-portfolios with "Creative architecture" project-based currculum between December, 2006 and March, 2007, and used Blog as an interactive platform for e-portfolios. The design concept of this project is focused on the comprehension and appreciation of the features and forms of "Creative architecture", finding the creating elements of "Creative architecture" and furthermore leading it into creation, and was conducted in small

groups. The content of the activity design is as the table 4:

Table 4 Activity design of the "Creative architecture"

Activity 1 : A tour of creative architecture		
Objectives	Activity processes and procedures	Time
1. To know several types of "creative architecture"; 2. To be able to summarize the concepts and elements of "creative architecture"; 3. To be able to express opinions about "creative architecture".	1. Teachers conduct the guided-appreciation teaching of "creative architecture" by using the self-made PowerPoint slideshow (examples for "creative architecture": The glass pyramid of Louvre in France, Guggenheim Museum in Bilbao, Taipei101 and Sydney Theater etc.) 2. Teachers and students discuss and summarize the creating sources and elements of architecture. (1) Environment elements : cultural traditions, climates, landforms. (2) Form elements: styles, colors, expressing themes and materials. 3. Express opinions about the types and features of "creative architecture" and share them with classmates.	A week (art class 80 minutes/ week)
Teaching resources		
1. Self-made PowerPoint slideshow by teachers 2. Lin Fang-Yi (2005). Architecture goes forward. Taipei : You-shi Culture		
Evaluation :		
1. Be able to describe the creating sources and elements of "creative architecture". 2. Be able to describe the types and features of "creative architecture". 3. Record the afterthoughts of learning.		
Activity 2 : Instruction of using the Blog and creating e-portfolios		
Objectives	Activity processes and procedures	Time
1. Understand the function of Blog and way of operation; 2. Understand the concepts and types of e-portfolios.	1. Teachers operate, demonstrate and introduce the contents, functions and using instructions of the teaching Blog. 2. Teachers introduce the concepts and types of e-portfolios. 3. Teachers and students discuss the contents and ways of making of "e-portfolios" that belong to this project. ※ The summary of e-portfolios of the "creative architecture" project includes : the class records, creating process records, work records, and the PowerPoint slideshow of the learning achievement.	40 minutets

Teaching resources :
Notebook , Projector, wireless Internet
Evaluation :
Blog platform feedback records
Activity 3 : Children architects

Objectives	Activity processes and procedures	Time
1. To know how to use tools and materials 2. Be able to work with classmates and finish the creation of "creative architecture" 3. Be able to make the e-portfolios of the group 4. Be able to conduct opinion feedback on Blog and share learning ideas	1. Teachers explain the creating processes and assessment focuses(works, e-portfolios, Blog opinion feedback and peer assessment). 2. Students proceed the creation of "creative architecture" in groups. 　(1) Discuss in groups the themes and forms of "creative architecture". 　(2) Distribute work and collect related information. 　(3) Plan the design drafts. 3. Teach the use of tools and materials. 4. Proceed creation and recording of e-portfolios of Blog. 5. The peer assessment activity of e-portfolios of Blog.	10 weeks (art class 80 minutes/ week)

Teaching resources :
1. The PowerPoint slideshow, notebook , projector. 2. Digital cameras, scanners. 3. The rating scale of peer assessment.
Evaluation :
E-portfolios (45%), works of creation(40%), Blog platform feedback records(10%) peer assessment results (5%)

3.3. The Portfolio Assessment in Art Curriculums

Beattie (1997) pointed out that in art curriculums, the portfolio is used as a mean of understanding and revealing learning processes. Its definition is to collect students' works purposely in order to understand students' efforts, progress or achievements, and is an important tool of course assessment. The evidences of portfolio assessment includes: the goals of schools, courses or students; the discipline areas, meta-cognition, art skills, values, attitudes and interests; the process of students' selection, reflection and justification, performance standards, learning achievements etc. Besides, the portfolio also includes a table

of contents or outline of portfolio organization. He also pointed out that how art learning can combine with traditional strategies: tests, questionnaires, visual identification, and performance assessment strategies: (1) portfolios ; (2) journals, diaries, logs; (3) integrated performances; (4) group discussion; (5) exhibition; (6) audio tapes and video tapes; (7) computers etc. (Beattie, 1997: 15). Portfolio assessment can make up for the individual learning problems and unexpected learning achievement that can't be revealed by standardized tests. Its qualitative content can help teachers gain a complete understanding of students' learning and their teaching, diagnose problems, and then reach the goal of "authentic assessment". The portfolio especially applies to the evaluation of art curriculums, because it can record the creating process completely, and provide an opportunity for reflection while checking portfolios. As for portfolio assessment standards, Beattie (1997: 133−137) presented a scoring rubric (standards 1−5). Dorn, Madeja, and Sabol (2004) presented assessment standards applicable for 6−8 graders. Both of the evaluation standards concern students' high−level cognitive ability and art performance assessment (see table 5). The standards can be used as reference for portfolio assessment and communicate with students before class in order to make them understand the assessment standard.

Table 5 Portfolio analytic scoring rubric in art curriculum

	Standard	Criterion
Beattie	1. Very Limited Achievement 2. Limited Achievement 3. Sound Achievement 4. High Achievement 5. Very High Achievement	• Researching • Creating • Responding • Resolving • Communicating
Dorn, Madeja, and Sabol	1. INADEQUATE (LEVEL 1) 2. SATISFACTORY (LEVEL 2) 3. VERY GOOD (LEVEL 3) 4. EXCELLENT (LEVEL 4)	• Uses of elements and principles • Uses of media • Self−direction and inspiration • Uses observation, imagination, and personal feelings • Work shows both depth and scope

3.4. The Assessment Strategies of E-portfolio

(1) To store and present E-portfolio with Blog and use Blog as e-learning materials and a communicating place for the curriculum. The researcher stored the students' E-portfolios of the "Creative architecture" curriculum, including the records of instruction (photos, records of discussions), the process of creation (the design draft, the pictures of every week's progress), pictures of the final work, and PowerPoint slide show of each student group (ideas of the work, procedures, drafts, process of creation, the final works, self evaluation, feedbacks and afterthoughts, and references). Students can present the E-portfolios on the Blog platform installed by the teacher, interact and communicate with each other.

(2) To provide students with an instant feedback platform with comment functions of Blog as teacher's basis of diagnosis and assessment for the curriculum. The Blog platform provides an easy and instant feedback function. The teacher and students can use it to discuss and exchange problems and afterthoughts of the instruction. It also helps students learn from each other's works. The competitions and learning from peers becomes a good interactive model.

(3) To provide links to teaching resources on other websites and to use peer assessment to promote cooperative learning. This instruction uses the Blog platform as an area for exchange. The researcher presents students' works by the digital photo albums, and implements the evaluation anonymously so as to raise the objectivity of the grades. In addition, the peer assessment implemented in groups and classes will promote the cooperative learning.

(4) To design an art portfolio rating scale for peer assessment so as to advance the cooperative learning. The items of the curriculum evaluation include feedback in the process (the comments on Blog), reviews after the instruction, the learning achievement (the slide shows students have created), and the final creations. These contain the qualitative descriptions and the quantitative statistics of rating scales.

Therefore the structure of e-portfolio platform of Blog is to apply the Blog functions of portfolio managing and saving, feedback, connecting website resources and integrating e-portfolio in art assessment, proceeding peer assessment and opinion exchange. Its

applied mode is as shown in the following figure 1. It is an interactive, inter–assisting and linking mode.
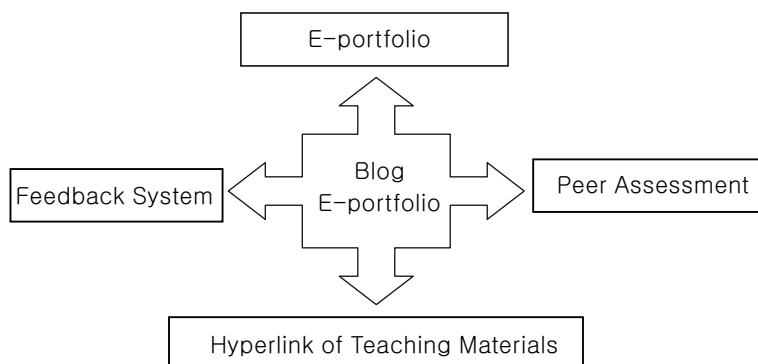
Figure 1 The applied mode of the "Blog E-portfolio platform"

4. Results

4.1. Data Analysis

A questionnaire survey was administered to the 6th grade students who participated in this curriculum. A total of 111 collected questionnaires were effective, 52 from boys and 59 from girls. The statistic analysis results of the questionnaire are provided as follows:

4.1.1. Situations of using computers and surfing internet

The statistic result has revealed the students are on net average 5–hours a week. The main purpose students use computers is to surf internet and play computer games, secondly, to collect information and write homework, and the other purpose includes chatting on the net and listening music. Obviously using computer has become one of the main habits of the six–grade students in the elementary schools. According to what the researcher has asked and understood, the time of getting on line limit by the parents' regulations, and most students only can use computers in the specific time or limited hours. Therefore when teachers design the information technology integrated in curriculum, they may invite parents to join the courses and understand the students' situations of using computers so as to promote the

learning activities and train students to use computers for learning. In addition, the result shows 91.9% of students have network equipments at houses, and most of whom have broadband network. They can surf internet at homes and in the classrooms. The result reveals the time and environment has matured for integrating e-platform in the teaching.

Table 6 The average hours of every week students use computers

Options	Number of students	Order
More than 30 hours	5	4
15–30 hours	10	3
5–15 hours	21	2
Less than 5 hours	75	1

Table 7 The main purpose students use computers

Options	Number of students	Order
Searching or writing homework	39	3
Getting online	77	1
Playing games	68	2
Playing software	11	4
Others	5	5

Table 8 The internet equipment at home

Options	Number of students (n=111)	Percentage
Yes	102	91.9%
No	9	8.1%

Table 9 The location students are surfing internet

Options	Number of students	Order
Computer classroom	29	2
Common classroom	2	4
At home	98	1
Others	3	3

4.1.2. Experiences of using Blog

The result shows 29.7% of students have viewed Blog (not including the researcher's Blog), and the contents of these Blogs covered a variety of topics, including frame of mind, idols, popular music, sports, online games, sharing of internet materials, and etc. But the proportion of elementary school students who have viewed or used Blog is not high. The instruction and extension of Blog need to be further developed and promoted. From the percentage of gender, a significantly higher percentage of girls have viewed Blogs and had their own Blogs. The contents of their Blogs cover almost diaries, jokes, idols' news, and so on, which can reflect the interests and hobbies of teenagers in Taiwan. Hence, how to integrate materials of students' interests into curriculum and Blog is an issue of developing instructional

materials in the future. In addition, the sharing of Blogs created by classmates among peers also affected students' using behaviors and frequencies of accessing Blogs. The responses of students who shared Blogs are better, and their interactions are also more positive. This result revealed the impact of peers and the importance of using it to advance cooperative learning.

Table 10 Experiences of viewing Blog

Item	Boy	Girl	Times (n=111)	Percentage
Yes	6	27	33	29.7%
No			78	70.3%

Table 11 Has one's own Blog

Item	Boy	Girl	Times (n=111)	Percentage
Yes	5	21	26	23.4%
No			85	76.6%

4.1.3. Opinions in the E-portfolios and curriculum

According to opinions in the E-portfolios, students thought that presenting work files on digital photo albums is clear and convenient for viewing. They also approve the contributions of E-portfolios in art creations. The "procedures of every week" and the records of "works" allow students to control and monitor their learning. Most students thought that group cooperation can arouse learning interests, and the discussions of communities also help for training communicating skills as well as saving problem together. Besides, the part of the peer assessment implemented in the E-portfolios, students thought that the method of peer assessment by E-portfolios is convenient and can promote the motivation of learning. But students conceived that the grades of peer assessment which could be easily influenced by opinions among peers or other prejudices are not objective.

Table 12 The E-portfolio of "Creative architecture" curriculum

		Degree of agreement (score from high to low) n=111					Average
		5	4	3	2	1	
The E-portfolio of "Creative architecture" curriculum							
E- portfolio	1. I think recording the E- portfolio can make me work harder in creating art works.	19.9	33.3	40.5	3.6	2.7	3.64

E- portfolio	2. I think the E-portfolio can make me understand contents and progresses of the curriculum.	23.4	47.8	24.3	2.7	1.8	3.88
	3. I think presenting the works with digital files is clear and is convenient for me to view other students' works.	29.7	41.5	24.3	4.5	0	3.96
	4. I think viewing other classes' E-portfolios is interesting and helpful for my creations.	27.9	34.3	34.2	3.6	0	3.86
	5. I want to create E-portfolio myself later.	19.8	23.5	45	9	2.7	3.49
Feedback of the curriculum	1. I think the group collaboration method of creating is interesting and very meaningful.	35.1	38.8	21.6	3.6	0.9	4.04
	2. I think the slideshow can make me more understand contents and achievements of learning.	24.3	32.5	38.7	4.5	0	3.77
	3. I think it is easy to create slideshow of learning achievements.	22.5	18.9	40.6	9.9	8.1	3.38
Peer assessment	1. I think implementing mutual evaluation of groups can make me work harder in studying and creating.	24.3	27.9	40.6	6.3	0.9	3.68
	2. I think implementing mutual evaluation by using digital files is convenient.	30.6	31.5	32.5	5.4	0	3.87

Peer assessment	3. I think mutual evaluation be-tween groups is fair.	28.8	27.9	25.3	11.7	6.3	3.61
	4. I think mutual evaluation be-tween classes is fair.	27	27.9	32.5	12.6	0	3.69
	5. I think peer as-sessment is help-ful for creating and learning.	26.1	36.9	31.6	4.5	0.9	3.83
Total average							3.75

4.1.4. Opinions about using the Blog Platform

Because the functions of the Blog Platform are easy to use, most students expressed that it's no problem for them to use the Blog and approved the conveniences of applying the "comment function" to interact among the teacher and students. In the aspect of the "layout design" of Blog, students thought that it is beautiful and the articles and portfolios posted on the Blog are arranged orderly. The best advantage of the "layout design" is helpful for fast viewing and finding articles. However, student's active participation in online discussion and creating their E-portfolios still need to be enhanced.

Table 13 Opinions in using Blog Platform

Opinions in using Blog Platform							
Contents of the Blog platform	1. I think the article teacher posted on the Blog and links to websites can help me study.	23.4	28.8	43.3	4.5	0	3.86
	2. I think surfing the Internet and viewing articles on the Blog is very easy.	38.7	21.6	33.4	3.6	2.7	3.9
	3. I can quickly find the files I want to view.	32.5	29.7	28.8	7.2	1.8	3.84
Comment function	1. I think it is easy to use the comment function.	34.2	27.9	30.7	5.4	1.8	3.87
	2. I think using the comment function to discuss with classmates or the teacher is very interesting.	27.9	29.7	31.6	8.1	2.7	3.72

Comment function	3. I think using the comment function to discuss with classmates can help me study.	27.9	24.3	42.4	5.4	0	3.75
	4. I will actively go on Blog and comment on the discussion subject.	11.7	18.9	44.2	44.1	10.8	3.06
	5. I hope that I can discuss with other students or exchange afterthoughts on the Blog very often.	19.8	14.4	38.8	18.9	7.2	3.18
	6. I hope that I can create my own Blog and share with classmates.	27	23.4	29.8	11.7	8.1	3.5
Layout design	1. I think the layout design of the Blog is beautiful.	31.5	27.9	36.1	3.6	0.9	3.86
	2. I think the layout design of the Blog is clear so I can easily find articles I want to view and the functions I need.	29.7	35.1	32.5	0	2.7	2.89
Total average							3.68

4.1.5. General opinions

Therefore, students held the positive attitudes of the Blog platform and E-portfolios. They thought that the "interactivity" and conveniences of the evaluation were the best help for learning arts.

Table 14 General opinions

General opinions						
1. I like to view and use the Blog platform.	14.5	45	22.5	14.4	3.6	3.52
2. I think the Blog platform can help me communicate and share with classmates and teachers.	21.7	44	27	5.4	1.8	3.78
3. I think E-portfolios can help me learn arts.	21.6	42.3	30.7	4.5	0.9	3.83
4. I think interaction and peer assessment by the Blog are helpful for learning arts.	24.3	42.4	27	5.4	0.9	3.83
5. I hope that the teacher can often integrate the Blog platform in the curriculum.	19.8	35.2	29.7	9	6.3	3.53
Total average						3.69

4.2. Other Opinions

Other opinions gained by a way of students filling in answers to e-portfolios and suggestions of Blog using.

4.2.1 E-portfolio

As for the e-portfolio, students state that besides reminding themselves of learning schedule, the main function of the e-portfolio is to record their creating process, and the great help for art learning is being able to observe other people's works, and so as to compare other people's advantages and disadvantages, using it as reference to their own creation.

S105: E-portfolios can help us understand the contents and progress of the courses.

S102: E-portfolios can make me learn from other's advantages.

Secondly,students mention how e-portfolio can help with learning motives, efficiency raising and communication among team members.

S28: I think file recording makes me learn more actively.

S70: I think file recording makes me find the item I would like to learn more quickly.

S62: I think e-portfolios can improve the interaction in a group.

S73: I will be able to know what my teammate think and also improve the weakness.

Besides, as for the contents of e-portfolio, the students think they are abundant, substantial and they also think recording their own creating process is refreshing and interesting, as for future additional items, the students express that they hope teachers' comments and exchange of journals between teachers and students can be added, in order to communicate ideas with each other.

4.2.2. Blog

The results of research finds that the use of Blog is not popular concerning Internet-using behavior among 5-6 graders in elementary schools, students don't have much experience of using Blog, and so do for Blog owners. It reflects from students' responses that most of them don't have the habit of browsing Blog, and girls' interests in keeping Blog are higher than boys'. As for how Blog help with art learning, it is thought that Blog platform provides a place for convenient interaction, idea and opinion communicating.

S27: I can share my creating products with everybody on Blog .

S82: I can share how I feel about my creation on Blog.

S95: Everybody can express their opinions on Blog and stimulate ideas about learning.

As for Blog-using problems, because it's easy to use without any difficulties, the trouble that interferes with connection is caused mostly by signal – cutting. And as for the additional contents of Blog, most students express their interest in audio-video media, mentioning that they hope art work graphics and innovative audio-video design can be added. And they also hope that they can learn more about Blog creating skills, observe other people's Blog creation and more types of Blogs so as to use it as reference for the future instruction.

5. Conclusions and Suggestions

The conclusion of e-portfolio Blog platform integrated in art assessment can be done in the three aspects of the "creative architecture" project, "e-portfolio", and "Blog platform" : (1) "creative architecture" project : Students respond well to "creative architecture" project curriculum, think that they can comprehend the "creative' elements of architecture from the courses, and use it in their own creation. The great help for future art creation is in the forms of group creation and the cooperative learning experience led by problem –solving process. (2) "e-portfolio" : Students say that making "e-portfolio" is a new learning experience. The records of e-portfolios are useful for checking creating process, reflection on ideas, opinion exchange and work-observing. However the research shows that the students' motives for participating in course feedback (mostly due to teachers' rewards) and making e-portfolios in the future are a little inadequate. It requires more learning experiences to make students familiar with the forms of e-portfolio and cultivate the habit of active recording. (3) The use of "Blog platform": Students' feedback records and questionnaires show that it conforms to the expectant interaction and cooperative learning results, but there are still some students who don't participate in discussion feedback. The researcher summarizes the factors influencing students' learning motives are: the lake of

computers and internet equipments at students' homes, the time limit of getting online, and the unsteadiness of Blog connection. And as for the peer assessment using e-portfolio of Blog, the objectivity of scoring is still inadequate, in the future, the confidentiality will be put into consideration (for example: setting account authority and password) and the add-on scoring system to modify it .

In summary, the researcher think that integrating the Blog platform in the art curriculum and assessment in the future, students' interests will be the starter, and also extend the content of "e-portfolio" as well as the function of Blog application. The following are the possible approaches:

5.1 Keep Art Learning Journals:

Teachers' teaching records and students' learning journals can be added into the art portfolios. Keeping art learning journals can help with students' grip of their learning progress and the meta-cognition generated by self-reflection. The exchange of journals among students, teachers, and peers can generate the exchange the learning results and ideas, and can also be the important diagnostic evidences for the evaluation.

5.2 Organize Web-based Learning Community:

The research results show that teaching feedback and response are better among those classes with prevailing exchange of Blog. The researcher think it can enhance students' willingness to actively participate in learning if they are organized into web-based learning community through classes or small groups, encouraged to set their own Blog and use it as a platform and make use of the RSS subscribing function of Blog to exchange one another's Blog, to share their art knowledge and creating process in a project-based research approach, and the interaction and learning result assessment among peers can also encourage each other in order to enhance the learning effects .

5.3 Diversify the Categories of Art Curriculum:

The contents of students' Blogs make us understand teenagers' favors towards popular things such as cartoons, comics, animated pictures or other forms of popular culture. Integrating the content of popular culture in art curriculums at a proper time will help to enhance students' learning motives. And it can also encourage them to interpret popular culture form a critical view, learn how to display their styles and give their opinions through the process of setting a personal Blog.

Generally speaking, the feature of Blog platform combining audio-video media enhances the application in art assessment, and also makes e-portfolio display with multiple faces, in the meantime provides a convenient interacting platform for teachers and students. Besides, the easy usage of Blog has an absolute advantage in the future education promotion. In the trend of Blog popularity, art educators should understand it and make good use of its advantages and features, as well as make Blog an effective assisting tool for art teaching and assessment.

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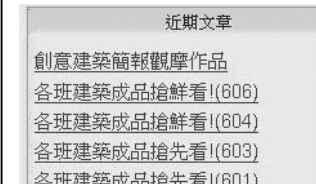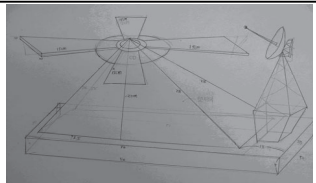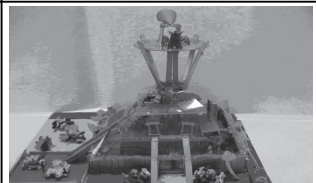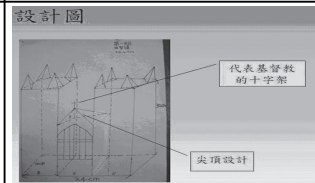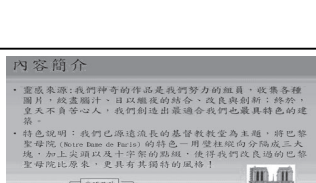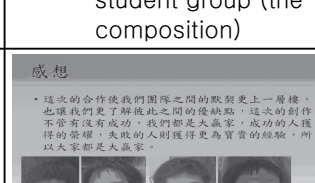
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Appendix 1 The records of project teaching and e-portfolios

Fig.1 The homepage of the Blog Platform	Fig. 2 The list of articles	Fig. 3 The photos of the instructions
Fig. 4 The e-portfolios on the Blog	Fig. 5 Records of creations	Fig. 6 Students' feedbacks on the Blog (the comment function)
Fig. 7 The digital photo albums of final works	Fig. 8 Discussion before creation	Fig. 9 learning process (design and create)
Fig. 10 The drafts of creation	Fig. 11 The product of creation	Fig. 12 The PowerPoint slideshow of the student group (the composition)
Fig. 13 The concepts of design	Fig. 14 The process of creation	Fig. 15 Students' afterthoughts

Appendix 2 The Rating Scale of Peer Assessment

"Creative architecture" Rating Scale

Class:_____   Group:_____
Members:

_____

1. "Creative architecture" products (please fill in 1-5 points in the blank space)

Item / Group	Structure	Form	completion	creativity	Whole	Total points
601 Group 1						

※ The Degrees of peer assessment by groups: _____
Comments of the best group: _____
Comments of the worst group: _____

2. "Creative architecture" slideshows (please fill in 1-5 points in the blank space)

Item / Group	Layout	Animation	completion	creativity	Whole	Total points
601 Group 1						

※ The Degrees of peer assessment by groups: _____
Comments of the best group: _____
Comments of the worst group: _____

3. Rating criteria（please choose one proper standard）

1. How many proportions are the grades of peer assessment by groups to total？
   □ 30% □ 20% □ 15% □ 10% □ 5%

2. How many proportions are the grades of peer assessment by classes to total?

☐ 30% ☐ 20% ☐ 15% ☐ 10%

Appendix 3 Student's questionnaire

To students：
This questionnaire is for understanding your opinions about "creative architecture" teaching and the usage of Blog, and it will be for teachers' reference in later teaching. The results will not be included in scoring, please answer seriously according to your actual opinions, choose the most proper answer and make a check in ☐, thank you for your help .   Teacher Peggy   2007/3/23

A. Basic information:
1. Class:_____grade_____class   Age：_____
2. Gender：☐ male   ☐female

B. Filling in answers:
1. Conditions of using computers and the Internet:
(1) The number of hours that you use the computer every day ?
   ☐over 30hours   ☐15~30hours   ☐5~15hours   ☐less than 5 hours
(2) The main purpose you use the computer is ?
   ☐collecting information or doing homework   ☐ getting online
   ☐ playing games   ☐ playing with software ☐ others
(3) Where do you usually get online? (Multiple choices)
   ☐ computer classroom   ☐ regular classroom
   ☐ home (continue with No.2)   ☐ others_____
(4) Is there Internet equipment in your house?
   ☐ Yes, there is (by broadband or connecting)   ☐ No, there isn't
(5) Did you have the experience of browsing Blog? (Not including the teaching Blog in this course)
   ☐ Yes, _____
      (Please write down the names of Blog or types)
   ☐ No_____
(6) Do you have your own Blog?
   ☐ Yes, _____
      (Please write down the name of your Blog and the general content)
   ☐ No

C. Opinions in e-portfolios and the "Creative architecture" curriculum

Items		Agree strongly	Agree	Ordinary	Disagree	Disagree strongly
The E-portfolio of "Creative architecture" curriculum						
E-portfolio	1. I think recording the E- portfolio can make me work harder in creating art works.					
	2. I think the E- portfolio can make me understand contents and progresses of the curriculum.					
	3. I think presenting the works with digital files is clear and is convenient for me to view otherstudents' works					
	4. I think viewing other classes' E- portfolios is interesting and helpful for my creations.					
	5. I want to create E- portfolio myself later.					
Feedback of the curriculum	1. I think the group collaboration method of creating is interesting and very meaningful.					
	2. I think the slideshow can make me more understand contents and achievements of learning.					
	3. I think it is easy to create slideshow of learning achievements.					
Peer assessment	1. I think implementing mutual evaluation of groups can make me work harder in studying and creating.					
	2. I think implementing mutual evaluation by using digital files is convenient.					
	3. I think mutual evaluation between groups is fair.					
	4. I think mutual evaluation between classes is fair.					
	5. I think peer assessment is helpful for creating and learning.					
Opinions in using Blog Platform						
Contents of the Blog platform	1. I think the article teacher posted on the Blog and links to websites can help me study.					
	2. I think surfing the Internet and viewing articles on the Blog is very easy.					
	3. I can quickly find the files I want to view.					

Items		Agree strongly	Agree	Ordinary	Disagree	Disagree strongly
Comment function	1. I think it is easy to use the comment function.					
	2. I think using the comment function to discuss with classmates or the teacher is very interesting.					
	3. I think using the comment function to discuss with classmates can help me study.					
	4. I will actively go on Blog and comment on the discussion subject.					
	5. I hope that I can discuss with other students or exchange afterthoughts on the Blog very often.					
	6. I hope that I can create my own Blog and share with classmates.					
Layout design	1. I think the layout design of the Blog is beautiful.					
	2. I think the layout design of the Blog is clear so I can easily find articles I want to view and the functions I need.					
General opinions						
	1. I like to view and use the Blog platform.					
	2. I think the Blog platform can help me communicate and share with classmates and teachers.					
	3. I think E-portfolios can help me learn arts.					
	4. I think interaction and peer assessment by the Blog are helpful for learning arts.					
	5. I hope that the teacher can often integrate the Blog platform in the curriculum.					

D. Other opinions:

1. What do you think of e-portfolio? (types, contents, ways of assessment, and items)
2. What contents do you hope to be added into later e-portfolio?
3. In what way do you think e-portfolio has helped art learning?

4. What are the main problems when you use "Blog" platform?
5. What contents do you hope to be added into the teacher's teaching Blog?
6. In what way do you think "Blog" platform has helped art learning?

Appendix 4　Opinions and feedbacks of the curriculum (Abstract)

1. Afterthoughts of the curriculum

S01: In the activities of creative architecture design, I can apply actual 3-dimensional concept to make my own little house, and also make use of this opportunity to train my leading ability, precisely distribute work items and avoid being in bustle.

S06: I don't think constructing a house is easy, it has to be done step by step so the house will be strong and not easy to collapse. The inspiration it gives us is that we must concentrate on what we do, in a serious manner, do not always want to seek an easy way out, or we will fail in whatever we do.

S20: At this creative architecture activity, our team work has been developed, making us realize how powerful teamwork can be ! This activity is to develop everyone's strength of cooperating and face the problems then try to solve them, it furthermore lets us gain lots of knowledge.

S43: During the process of making a house, I realize how happy it is to finish one thing all together. When the job is done, I start to think of the happy time when we do it together, everything is so beautiful! After observing other groups' works, I find that their works are pretty good. After all, it is really hard work which everybody makes their efforts and start from pieces of wood to a house. After this activity, I find that no matter how bad-looking it is, it's one work that is done by all of us, so in our mind, our own work will always be number 1!

S44: I realize the importance of teamwork through this activity. Maybe the finished work isn't as good as we picture in our mind, but the efforts are truly made! Other groups' houses are delicate, the exterior, the furnishing etc, everything is very nice, so our group should work as hard as other groups to make our house much better!

2.Responses about the Blog

Response 1: I think the work made by group 2 of 605 is great! Reason: Theirs is transparent, and the style is good! I'm traveling through time! I'm a future architect (Keroro Gunso, a Japanese cartoon character)! I can use your design for my reference! My favorite "Gundam models" are everywhere in my future house!

Response 2: I was going to make this style of architecture, but didn"t have any inspiration so I gave up!! I really admire your work, very impressive!

Response 3: This style of architecture has greenery and a beautiful garden, making me feel sweet. It's like being back to the country, so I think they have done a great job!

Response 4: I'm so happy that we finally finish this work. Though it's not the most beautiful, but we really learn a lot from it. Thank you, teacher!

Response 5: After looking at these works, I really think they are beautiful! Keep up the good work, really nice works, just like really ones!