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Animated drawing guide for basic art education

Guan-Jong Hwang

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ANIMATED DRAWING GUIDE FOR BASIC ART EDUCATION

A Project
Presented to the
Faculty of
California State University,
San Bernardino

by
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ABSTRACT

The researches have shown that art education could influence students' behavior and performance in various ranges. According to the educational researches, there were some major barriers existed in the art education recently, such as classroom size, teaching material, and district funding. In order to conquer the problems which limited the students' development of the art education, the research is aimed on multiple-media course design for enhancing students' capacity of the art works. How can educators properly manipulate the technology based resource to engage students' better understanding of the art education is the main purpose of this developing project. By using the well designed software to create an animated drawing guide to teach students art learning in the beginning age would provide them a clear scene about what is the fundamental concepts of basic art education. Compare with the traditional oral-teaching style, the developing project also offers the self-learning environment for students studying and creating their art works simultaneously. The developing project is not only provides the opportunity for improving students' motivation toward art education, but also focus on students' potential ability to approach individuals
achievement. Moreover, effectively apply the instructional technology in multiple-media course could shape students’ extend sight of vision when they have the chance to execute their understanding in divers performance.
ACKNOWLEDGMENTS

The development of this thesis has involved diverse learning, designing, and practicing through the whole process. From beginning to ending, each step has been discussed and experimented with various methodologies.

Without some certain peoples, I won’t be able to complete this task. First of all, I would like to appreciate Dr. Eun Ok Baek who is my first reader and advisor. She taught me how to develop this thesis from theory to practical, and guided me with the accurate direction. Secondly, I would like to appreciate Dr. Amy Leh who is my second reader. She provided the precious opinion for my revising, and helped me to correct the defective sections.

By going through this whole process, I recognized every single skill or knowledge which I learned and shared from other people was the fundamental structure that provided me the great resource to develop this thesis project. This is the biggest challenge in my life, especially for a foreign student. I wasn’t quite sure if I can finish this complicate procedure when I enrolled the graduate program two years ago. Because of the greatest support which came from my family and friends in my back, I can quickly stand up every time when I fell down. I am
so appreciated what they have done for me, without all of them, I couldn't approach my destination.
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CHAPTER ONE
INTRODUCTION

Technology is a key to open the knowledge door when educators engage students learning with the plentiful access. Nonetheless, it is also a big challenge to perform the newest concept for students, especially based on the highly developed learning environment. What we used for teaching students might become an old stuff in next minute, because the technology never stops for evolving. How can we manipulate the proper pace of the learning will be the essential concern for sufficient education. By using the convenience of the Internet, educators can always upgrade and provide the newest information in the course, and also enhance the potential capacity of the students' extend learning. I strongly believe this will be the new trend in the further education, and it can also apply in the different subjects.

Purpose of the Project

The main purpose of the project is to create an animated drawing guide for first grade students. According to the previous researches, using educational technologies in art curriculum have an obvious improvement in recent years. How could educators engage students by using the
technology based course would be the main target of the study.

Yet, in recent years, many studies have emphasized the importance of art education through each grade levels. "Beginning with a 1988 National Endowment for the Arts report detailing the poor quality of school arts programs, research has shown arts programs help improve students' overall school performance" (Noel, 2002, p. 15). In order to provide the more useful teaching method in art education, developing the technology based course should be the key point to connect students' insufficient performance.

Significance of the Project

According to the research, "Students who studied the arts had higher grades, scored better on standardized tests, had better attendance records and were more active in community affairs than other students" (Noel, 2002, p. 15). The statement explained why that is so important for educators to pay more attention on students' art education, and also indicated the purpose for revising the art curriculum will enhance students' potential in diverse performance. Still, school art curriculums have struggled for several years to gain credibility as major section of
students' education. However, these efforts were often closed once the budgets got tight. No matter how significant researchers have created in the art education, the fund could cause any great invention either failed or disappeared in the final step. To prevent such situation happened in the learning environment, the project design of the art education is really challenged the highest boundary of the limited resource.

Nonetheless, the network system has been effectively using in instructional technology recently, and also could be used in various subjects with multiple-function. By using this powerful tool in art education properly, educators may have the chance to seal the gap which caused the limitation in art teaching. Furthermore, web-based learning environment involved the mutual communication, not just like the traditional oral-teaching style.

By offering multiple-media designed course for students to create their art works, students can transfer their understanding on their individual expression, and also reflect what section is insufficient when they didn’t reach the course requirement. This teaching method would benefit instructors’ sight while students reflected their feedback on their understanding degree; instructors would
be able to see the reason for causing the fail and replacing the better solution for further course design.

Briefly, there are some benefits for building this model to apply in the art education. First of all, compare with the tradition teaching method, using animated teaching style can catch students' attention mostly. Simply because the active and lived graphics can explain the difficult theory in more enjoyable learning process, and also engage students in positive learning motivation toward the art education. When some students couldn’t understand the meaning from the textbook, the animated series drawing guide provide the better chance to help them catch the big idea. This is the same function as the most popular cartoon which structured by the animated and colorful design.

Secondly, publish the drawing guide on the internet can extend students vision of the sight, and could offer them the biggest learning environment to reinforce what they have learned. For example, students will see the different design and tutorial skills when they browse the different web sites, and this information can enhance and reinforce their original knowledge to thoroughly understanding. The precious experience which shared by the various web sites will guide them to build their own art
works better and better, when students have the chance to learn the same skill but from the different corner. Besides, students will learn more concepts to apply the same skills in different patterns, and accumulated this knowledge with their own words.

The biggest advantages from this animated drawing guide were students not only learn the art skills but also get the chance to manipulate the multimedia at the same time. Before students begin to use the animated drawing guide, they must understand how to use the material, such as computers, internet access, and browsers. By executing this project in the art learning process, students don’t need to spend the extra time for learning computer manipulation. This procedure can really match the idea of course integration, because the course provides the two different objectives by only using the one scheduled timeline. More significant is schools can have the more flexible application to use the limited budget properly on each student. This is another essential goal the application wants to reach in every district. In short, create an animated drawing guide could have the advantages that attract students’ learning attitude properly, extend students’ deeper understanding sufficiently, and also combine the multiple-learning simultaneously.
Generally speaking, the project will develop a series of animated drawing guide which created by computer software-Macromedia Flash MX. Based on the multimedia designed learning, the develop project will concentrate on the diverse technologies with art teaching for beginning level students. Namely, the development process will apply the different concepts which contrast with the traditional teaching style of the art for students to learn. The project will offer more effective and attractive methods to help students to learn and create their art works. This is the main idea of the development process which combines the theory and technique with the various instructional technologies in specific subject.

Limitations and Delimitations

During the development of the project, a number of limitations and delimitations were noted. These limitations and delimitations are presented in the next section.

Limitations

The following limitations apply to the project:

1. The time constrain is the first issue which affect the range of this project development, from beginning to ending.
2. Conducting the survey could encounter the rejection from administrators of public school.

3. The download speed of the internet access will affect learners' attitude. Concerning with the target audience, students' patient could be the biggest issue that instructors need to conquer first.

Delimitations

The following delimitations apply to the project:

1. The primary purpose of this project is designed to act as an on-line learning tutorial for art works. Nonetheless, consider of the students' age, the parents patrol will be necessary, when students use the internet at home to browse the animated drawing guide website.

2. This project is designed to demonstrate the elementary art works for first grade students, and the range of the students' age is around six to eight years old.
Definition of Terms

The following terms are defined as they apply to the project.

**Animated drawing guide** - Use software to create the animated feature to present the drawing tutorial.

**Basic shape combination** - Assemble diverse shape to create the picture.

**Basic color mixer** - Mix various colors to create the new colors.

**Drawing** - Use various tools to create the picture.

**Macromedia Flash MX** - A very popular and useful software, which created by Macromedia for animating project design.

**Microsoft FrontPage 2002** - A common used software for creating the website.

**WWW** - World wild web which consisted of diverse websites on the internet.
CHAPTER TWO
REVIEW OF THE LITERATURE

The multimedia designed courses have transferred the ideal teaching style became truly method in the art education recently. By integrating the technology in lesson plans, art teachers have more plentiful resources to access the class settings. In fact, the multimedia designed courses also improved the quantity and the quality for each student, since the web based classrooms arranged at the school. Before conduct the development of design, the project examined and compared the benefits from various view points, and discussed the similar features of each reference to support the design strategies. The following literatures will describe the main issues of the multimedia designed from theory to practice, and also illustrate the assessment for estimating students' art performance. Without these pertinent concepts, the procedure of the project development won't be able to follow the accurate track.

Communicate Students' Learning by Art Education

Educators often pay more attention on the students' major subjects, such as math, writing, and reading. Oppositely, there were only few voices that supported the
art education as one of the major subject, when the poor performance displayed the unpracticed skills. Nowadays, the stronger supplements have raised the educators’ focus, and start to shape the learning process. The balance between each subject has begun to maintain the equal level, and act the role as the required objective. The art education became the connection which transferred the diverse subject in students’ understanding degree, and provide the opportunity to elicit students’ potential capacity.

According to the educational study Arts in the city, the author has mentioned the following: Art teachers can observe diverse improvement from students’ overall school works, especially when students’ achieve the higher standard level, art education continually reinforce the equipped skills become more practiced for advanced learning. Based on this point, the value of the art education should be linked with the major subjects, and students all need to be aware of the main purpose toward the art education (Soep, 2002).

As the study mentioned, if educators can illuminate students’ art learning from plentiful resources, it may offer the precious opportunity to conquer the insufficient learning material in classroom.
School as a Multi-function Art Classroom

In addition to provide the useful learning material, educators also need to consider: what is the best way to combine the theory and technology in the art education with the students' attitude toward the positive motivation. Another study School as Studio: Learning through the Arts has stated that course integration between arts and curriculum can provide the better quality of the teaching and learning for students. The art education shouldn’t be separated form the main academic majors, because art education was the fundamental structure which supported students to approach their learning objectives at the required ranges (Stevens, 2002).

Education through the Arts

Education through the arts will not only help students to develop the better personality, but also assist students to execute the higher performance both in school or society. The following statement obviously identified the essential objection which embedded the necessary implementation to achieve education through the arts.
Education through the arts guided a person to develop an optimistic personality by enhancing the aesthetic sense of the around environment. The students should be engaged in such atmosphere, because the schools were the best place to develop the organized personality and elegant culture.

The art education, therefore, should help students to develop their personality with abundant engagement. By through the learning process, students will discover the deeper feeling that embedded in the art and present their understanding in the personal life. The art will enrich and enhance their emotional, physiological, and intellectual development, not just simply to complete the art assignment. Students will be able to appreciate the art from the various view points when they touch the art every time. Art is also a fundamental communicate skill when students presented their art works with the certain type, that will enable the extended meaning connect the mental organization with the physical reaction. This process can access students’ memory from exterior to interior, so the learning will affect the mind gradually not overwhelmingly, just like the soft music which released the sensational sense from audiences’ heart once they reached the spirit range (Stevens, 2002).
Bringing Accountability to Elementary Art

Moreover, using technology-based material to design the course in art education involved two different practices for students to manipulate what they have learned and understood from the learning environment. By examined Richard Siegesmund’s study, there was a clear description in the following statement:

Art is not an impractical “break” from serious learning: it’s an essential part of that learning. On the other hand, the physical location of art classrooms within schools is often a metaphor for the role of art in the curriculum. Traditionally, the art classroom is set apart from the other activities of the school. In this special space, the art teacher has his or her own agenda for creative growth and releasing young imaginations. During the past 35 years, real progress has been made in securing the role of the art classroom. The reform associated with comprehensive art education has had a lasting impact on the field, including curriculum tools to enrich instruction (Chapman, 1994; Hurwitz & Day, 2001; Ragans, 1995). A concurrent focus in developing standards for student learning and teacher preparation has emerged (Consortium of National Arts Education Associations 1994; National Art Education Association 1999a; 1994b; National Board for Professional Teaching Standards 1996). The National Assessment of Educational Progress even addressed student achievement in visual art—the first such assessment in nearly 20 years (Persky, Sandene, and Askew 1998). All of these efforts reflect the growing national concern for understanding learning in and through the arts. (2002, p. 24)

The beginning level of the art education always included the interesting objectives, so the students are
willingly toward the art education. This is just the natural behavior when the students during this young age, they like to use their art skills to express their real thinking from mind. Consider about the necessary for the efficient teaching, the class setting of the elementary art classroom should be arranged as the standard. In contrast, most schools didn’t focus on the elementary art classroom, and simplify the equipment as many as possible. This is a huge blind point that affected the major role of the art education which offered the essential leaning objectives for keeping the positive motivation at school. Because of the neglect, there was no place for art teachers to execute their lesson plans, and more sorrowful situation was art teachers dropped self-confidence within the art education. The basic respect was too weak to support the sensational wound, and couldn’t maintain the original structure of the elementary art classroom. There was no accountability existed when the most attention were focused on the major subjects, and the fantastic space almost disappear from the initial space. Since the argument between support and against never stop merging the limited teaching resource, the accountability has approached in the elementary art education via the various reforming (Siegesmund, 2002).
Performance Assessment in the Arts

In short, art teachers also need a fair assessment to evaluate students' performance of the art works, not just simply grade their art works by giving a letter.

Namely, to adapt a well-organized assessment could extract the deeper understanding of the art education. Based on this point, the develop project will focus on the link between attitude and performance, not just grading the surface art works when the students perform the various expression. For instance, if all of the students use the same software or equipment to complete their art works, they still need to be graded in different scores. The same method could generate the diverse manipulation, and also create the different performance. Some students may spend more time to learn the new software, because their positive attitude guides them toward the advanced challenge, and also enhance their capacity to develop the higher performance in the same art works. Therefore, the process should get more attention then the final outcome, when art teachers execute the performance assessment. The author of Performance Assessment in the Arts has indicated the following:

Students who didn't have the art talent will not fail the course, and they still can pass the course as the
talent students did. Such attitude was the common situation which existed for a long time in the art education. Initially, the art education hasn't been treated as the major academic subjects, so the performance quality of the students’ art works were far behind the expected level. Nevertheless, the accountability, standard, and test have been rapidly extended in the academic setting. The neglect in art education will be asked to make up for the insufficient performance criteria which didn’t evaluate the art education as the essential courses previously.

The assessment for the art education is always the complicate process, and the balance between fair and quality are the main issue to affect the outcome. Art teachers never stop seeking the objective based assessment to evaluate students’ performance of art works. However, the representation of the students’ art works is not the only section to judge the whole performance. Each single unit has been chained together to influence the final performance, such as the attitude will affect students’ motivation toward the learning objective either positive or negative. If students have been engaged in positive motivation, the result will obviously higher than the negative motivation. Nonetheless, that doesn’t indicate
students who poorly perform their understanding in the art works can't approach the same level as the talent students did. With the certain practice, students who below the average still can catch up by gradually direct and encourage. Without concerning all of the possible conditions which caused students behind the standard were insufficient criteria for grading the surface performance. Indeed, the assessment could be a very tough task to conquer all of the obstacles, even though the high-quality controlled manufacture, sometimes still need to recall their products for reproducing. Therefore, the minor errors should be acceptable for the judgment, and could identify the defective parts directly for further improvement. If the criteria for grading students’ art performance can provide the learning achievement from objective to cognitive, the performance should not be underestimated with the standard level because that wasn’t fair enough to describe the learning result for each student (Clark, 2002).

Summary

Recently, the creation of the multimedia designed art learning are tremendously extended in the art education. Instructors have more options to manipulate the class
setting and lesion plan. The benefits of the multimedia designed art courses could offer the virtual environment to engage students' art works form beginning to advance level. Because of the accessible and portable feature, students can learn the art works in anywhere by using the internet access.

On the other hand, the multimedia designed courses assist instructors to manipulate the course integration in diverse subjects. By using the same structure, the subject could be switched to math, science, or history etc. Indeed, the purpose of the multimedia designed art courses are focused on students' learning motivation, attitude, and personality in better progress. Because the course design is based on "easy to learn and fun to use," so if students can be engaged in a joyful learning environment, they will have a positive attitude toward learning objectives.
CHAPTER THREE
DESIGN

Analysis

The project applied the flash's strength for developing the whole series animated drawing guide, and then publish on the internet. The drawing guide will focus on the basic concept of the drawing skills (circle, square, triangle etc.), and also offer the basic color (red, yellow, and blue) match skills for young students. Such as assembling the different shapes to create one picture, or apply the diverse line shapes in the picture. The drawing guide will demonstrate the drawing skill from simple to complicate art works, and also direct each step by animated direction. Afterward, the drawing guide will illustrate how to use and match the color in blank picture, and offer the example to explain the theory of the color match. Concerning about the students' ages, the elementary art education should be designed in proper level, not just provide the simple drawing skills, but also stimulate students learning motivation. "How can we teach children if they are not interested in art works?" and "What kind of method can art teachers apply to inspire students learning motivation?" should be two essential
objectives that must be analyzed before conducting the next design process.

Design

Introduction

The main purpose of the web site is to create an animated drawing guide for first grade students in art education of the learning process. By using the animated drawing guide, students will be engaged in two major objectives. First of all, students will be able to assemble the various shapes in one picture, after they learn the basic shape combination (triangle, square, and circle etc.). Secondly, students will have better sense to paint the diverse colors in the blank picture after they learn the basic color mixer (blue, yellow, and red). In fact, the animated drawing guide is created as an assist tutorial that guides students to learn the basic drawing skills step by step, and then inspires students' capacity of the creation to higher level.

Navigation

The first section of the web site is Introduction which provides the general information of the design strategy and statement of the purpose. These subtitles offer the blueprint of the web site structure, and display
the connection of each section. So the users can clearly understand the whole web site's organization, when they examine the Introduction section. Basically, the main function of this design is to provide a clear scene of the whole web, just like a site map or direction. If the users can understand each order of this web site before them start to use it, they will have more flexibility to apply each section properly. Because all of the directions have been obviously arranged in the specific position, students can quickly locate the right section efficiently.

The second section of the web site is Direction which provides the guideline for students to quick start or step by step. There are two subtitles under the Direction section which are User Manual and Explain Demo. Both of them are act as the students' support which offers the necessary information to assist students, and also provide the example to illustrate how it works. The purpose to design this section is just like the merchandise or tool has their own user manual which demonstrate the detail information for users to conduct the best performance. In order to manipulate the web site practiced, students should be familiar with the using method before they start to apply the each function.
The third section of the web site is Drawing Guide which is the essential section of this web. It includes two unit sections: Basic Shape Combination and Basic Color Mixer. Each of them is focus on different objectives. The Basic Shape Combination is to demonstrate "How to combine the diverse shapes become one material's outside surface." On the other hand, the Basic Color Mixer is scope on "How to mix red, yellow, and blue three colors to create the various colors." After students created their artwork, they can apply the color to match different part. By learning both of the Drawing Guide, students' art work will not just simply have black and white two single colors. Namely, their art work will become plentiful and colorful, not just the simple sketch without the color. The main purpose to design the animated drawing guide is to create a willingly learning environment. Compare with the traditional learning process, if students can only learn the concept from text book without visual tutorial and hands-on activity, they will not have the high performance in their art education. Students should be engaged in positive learning attitude toward their art work, and then they can extract their potential ability imperceptibly. Briefly, the design strategy is from cartoon, and commonly all of the young students like to watch cartoon. Because
it is animated, attracted, and pleasured. If the learning environment is similar to the cartoon’s feature, students will happy to learn no matter how hard the subject will be. This is the main reason for applying this design strategy to approach the high-efficient learning quality.

The next section of the web site is Evaluation which provides the mutual-communication with users that exchange the opinion or recommendation for revising the insufficient section. The purpose of the evaluation is to examine and check each section of the designed project, and get the feedbacks from participants. By doing this assessment, the developers will have the chance to see if all of the function are working as the expected result. Besides, the evaluation is one of the major criteria for project examination, and also included the observation of the performance. While the evaluation has been executed, the developers not only get the feedback immediately, but also observe the unexpected outcomes simultaneously. For example, the initiate design of the navigation bar is to provide the convenient access for users. However, to determine the right position for arranging the navigation bar may not match the developer’s original design. Namely, even though the developers can create the elegant design in their project, that didn’t mean the true useful
percentage will be equal. Therefore, the developers still have to replace the failed design, no matter how exquisite that design was. Briefly, without the evaluation, the developers may not see the blank spot and defective sections in the project obviously. On the other hand, the developers will get the precious feedbacks for revising the project, and then enhance the quality of the performance better and better. This is the essential purpose for performing the evaluation with the participants. On the other hand, Online Survey and Discussion Board are two different subsections under the evaluation section. Users can fill out the online survey to express the experience of the web site, and also point out the detective of the web site. After collect all of the feedback, the creator can count and analysis all of the questions, and find out what are the most commonly questions that users asked, and which section has been mentioned need to improve the quality of the performance. On the other hand, users can use the Discussion Board as the virtual-classroom to ask questions or share the advice instantly. The Discussion Board will also offer the online tutorial for users who are seeking for self-instruction learning, and they can manipulate their own pace with the self-confidence. In short, the Evaluation not only design
for the users' feedback but also provides users' guideline.

The last section of the web site is Reference which lists all of the electronic resource and reference articles. In this section, users can link to divers web sites and examine the more detail information about the subject which has been sited in each section. Otherwise, users can understand more about the subject from different corner. Such as different color match skill or advanced shape combination. By providing the Reference section, users can extend their understanding from simple to complicate concept, and also shape their capacity of the research.

Motivation Strategies

To develop an efficient multimedia design, this project applied Keller's ARCS (attention, relevance, confidence, and satisfaction) model which included four essential categorizes of motivational strategies to structure the main function (Wesselhoff, 1998). Wesslehoff summarized variability, one of strategies to get attention in Keller's model as follows:

An instructor may use variability by incorporating a combination of methods in presenting material. An example would be to have the learners read an article or watch a video, then divide the classroom into groups to review
the material and to answer questions posed by it. By using a change in the instructional format you can both stimulate and maintain interest in a subject.

This is the main reason to adapt the animation feature in this project to gain the learners' attention. Moreover, this project also used the big icons and graphics to attract learners' attention. Consider about the target audiences' age, picture based content and big navigation button will be the essential issue for the elementary learners.

In relevance strategy, animated drawing guide use the basic shape (circle, oval, and triangle etc.) to educe learners' capacity of the shape assembling. Because learners already familiar with the diverse shapes, so they can easily integrate their understanding with the new concept. For instance, the project demonstrated how to assemble the different size circles to create the new picture, and then learners can quickly to apply the same method in their art works, because they already knew how to draw the circle. By using this relevance strategy, the difficulty of learning new subject will be reduced. Furthermore, the Basic Color Mixer one was designed by the color based text to demonstrate the color mix theory. This design strategy helps learners to understand the theory
and observe the color simultaneously. For example, when the Basic Color Mixer illustrated mixing red and yellow will generate orange, the color was represented by each word, such as the word red represented the red color, the word yellow represented the yellow color, and the word orange represented the orange color. This visual assistance helped learners to catch the big idea from the abstract concepts more easily than just observed the non-color based demonstration.

In confidence strategy, the project created eight series animated drawing guide which involved eight different drawing levels from simple to complicate. The learners can enhance their self-confidence gradually, when they complete each drawing level. Each level embedded various challenges for learning objective, and learners will build their drawing skills step by step. For instance, learners can complete first drawing level in six steps, and just use the circles to create the pictures. Afterward, learners will need eight steps to complete the second drawing level, and not only use the circle but also include the oval.

Continuously, the eight series animated drawing guide were designed by natural sequencing which demonstrated the drawing step from above section toward the under section,
and also illustrated the equability of each step to match the consistent standard in the satisfaction section. For example, when the animated drawing guide demonstrated the pig's drawing step, the start point was the pig's face section, and then drew the body section; the four limbs will be the final drawing step. On the other hand, the same parts will be drawn at the same time, such as eyes, ears, and limbs. This design strategy applied the natural sequencing to organize the drawing steps, and also categorized each drawing series in equable order. The main concern to apply this strategy was to provide an easily follow method for learners to achieve each drawing objective, so the learners will not be confused when they approach the complex drawing level in the latter drawing series.

In order to approach the effective learning, the develop process will focus on the "easy to learn, and fun to use." By analyzing the common habits for age between the first grade students, the most popular thing is the animation which included the humor script and the funny action. According to this general character, the project used the same theory to develop the animated drawing guide for elementary art education. Once the animated drawing guide attracts students' most attention, the learning
attitude will become more willingly and positively at the same time, and the quality of the effectiveness will be increased by students' high learning-motivation.

Furthermore, this project can be used in diverse media platform, so the ability of the access is quite equal to common require. There is no special requirement for applying the animated drawing guide in the classroom, the basic stuff just computer, projector, and software. Once the internet access is not available, the users still can use it by using the CD-ROM edition, and the PowerPoint format will also be provided for art teachers' demonstration. Subtracting the limitation of the learning process is the most important consideration when the project was designed, and the precautionary measures have been added in the develop structure. Besides, the further instructional technology will be combined with the advanced animated drawing guide for extended learning procedure. Namely, the project will involve the backward design to measure students' learning result for improving the better course design in the further step.
Development

Development Tool

Briefly, the Macromedia Flash MX is the professional standard for producing high-impact web experiences. Macromedia Flash MX delivers an intuitive, approachable authoring environment to enable both designers and developers to more easily create next-generation web sites and applications. There aren't many programs that are as fun and easy to use as Macromedia Flash MX. Flash helps designers create stylish interfaces and animation that zip through the internet pipeline at blazing speeds. The Flash movies can be as simple as moving text or as complex as its robust active script will allow. Macromedia Flash MX contains a suite of clever drawing and animation tools that easy (and fun) to learn and use. Macromedia Flash is one of the best tools designer will find for adding some special effects and animation to the web site. Not only does it produce highly efficient content, but also virtually everyone who surfs the web is already equipped to view the flash movies. Because of the above advantages, Flash MX can really be a great tutorial and design tools for art teachers to produce the multiple-media teaching in art education, and this is the main concern to adapt flash MX to conduct this project.
Structure of the Animated Drawing Guide Website

The fundamental structure of the development which created by Microsoft FrontPage 2002 will involve the following sections: (Appendix A)

1. Introduction section
   a. Statement of the purpose: Describe the main purpose of this project.
   b. Plan and story board: Demonstrate the design strategy of this project.

2. Direction section
   a. User manual: Provide the direction for users.
   b. Explanation demo: A preview example for users to practice the manipulation.

3. Drawing Guide section
   a. Basic shape combination: Included eight series animated drawing guide.
   b. Basic color mixer: Included two series basic color Mixer.

4. Evaluation section
   a. On-line Survey: A survey for users to provide the feedbacks.
   b. Discussion board: A place for users to exchange the opinion or ask the question.
5. Reference section
   a. Electronic resource: Provide some websites for users to browse the flash animation.
   b. Reference links: Provide some websites for users to understand the design theory.

6. Contact Me section
   a. E-mail me: Use e-mail to contact the author.

Structure of the Basic Shape Combination
(Appendix B)

This section was created by Macromedia Flash MX.

1. Series 1: Demonstrate how to draw the mouse by using the circle and curves.

2. Series 2: Demonstrate how to draw the fish by using the circle, triangle, and oval.

3. Series 3: Demonstrate how to draw the squid by using irregular lines, triangle, and semicircle.

4. Series 4: Demonstrate how to draw the crab by using circle, oval, curves, and irregular shapes.

5. Series 5: Demonstrate how to draw the penguin by using circle, sector, and irregular shape.
6. Series 6: Demonstrate how to draw the pig by using circle, triangle, irregular shape, and oval.

7. Series 7: Demonstrate how to draw the turtle by using oval, irregular shape, oval, and pentagon.

8. Series 8: Demonstrate how to draw the cow by using irregular shape, circle, oval, and trapezoid.

Structure of the Basic Color Mixer

This section was created by Macromedia Flash MX.

1. Series 1: Explain the essential color red, blue, and yellow mix theory, and then explain how to mix each color to generate the new color.

2. Series 2: Explain the unit color red, orange, yellow, green, violet, and blue mix theory

Implementation

After the project has been tested and revised, the author uploaded and published the website on the WWW. The website was open to the public users on the internet. The purpose is to approach the accessible feature for every learner who is interested in the elementary art works. The website offered the evaluation section which included online survey and discussion board for each learner to
express their opinion or advice. These useful feedbacks will help author to improve the higher quality for enhancing the website function.

Evaluation

The project adapted a fairly concern assessment which match the standard criteria to evaluate students performance in their art works. The most important consideration is not just grade students’ performance from the surface of the art works, but the real purpose is to find out the degree of the understanding behind the students’ reflection. Nonetheless, the learning result may not match the expected outcome, especially for art education. Art teachers can’t assume all of the students will perform the same level in art works, so the evaluation for students’ divers expression are always hard to maintain the objectivity. This assessment will guide art teachers to determine which section should be maintained and which part should be improved. When art educators see students express their art works in different way, that didn’t mean the students should get the lower grade or should be labeled unwise performance, because to find out the revising source is more important than the letter represented meaning.
This project adapted quantitative evaluation to investigate the execution of the website, and the primary evaluation was assessed by using the survey which was part of the website. The main purpose is to accumulate the feedbacks from users, and then analysis the necessary revising of the website for better performance. The following statement explains the procedure for conducting the survey.

1. Survey (see Appendix C)
   A questionnaire has been designed under the evaluation section of the website. The main purpose for creating this survey is to accumulate the users' feedbacks after they browsed the website. On the other hand, the collected surveys offered the clear guideline for author to improve the website's higher performance.

2. Findings
   After executed the assessment of the animated drawing guide, the result simply identified some features from eight participants. First of all, all of the participants were excited about the computer manipulation, such as using the mouse, clicking the keyboard, and browsing the website.
etc. Secondly, most participants enjoyed the animated drawing guide, and experienced the novel feeling of the multimedia designed learning. For instance, participants were curious about what will be expressed from series one to eight, and what will pop up when they clicked the links between each section. Moreover, the participants can easily complete the survey, after they knew how to do it by using mouse. Overall, the evaluation process took 160 minutes for eight participants to complete. The result has matched the objective of the project.

Summary of the Field Test

Each participant spent 20 minutes to complete the activity. All of the participants can easily to complete the survey without any difficulty of the readability, and all of the participants enjoy joining this activity.
CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusions were described in the following statement.

1. The evaluation result was obviously approached the objective of the project design. However, the outcome indicated there has one participant did not like drawing. This will challenge the initial setting of the project design, because the author has assumed this situation could happen when the website has been used from different students.

2. According to the evaluation result, most of the participants liked drawing. Even though they knew how to draw, but they still want to learn the drawing skills. Because the drawing can represent the understanding and feeling from the things which they have learned especially during this young age.

3. All of the participants felt excited when they experienced the computer manipulation. They were concentrated on the computer screen, and paid
attention to the content of the website. This is a strong encourage for multimedia designed course, because the design theory can be applied in the real class setting and lesion plan.

Recommendations

The recommendations were described in the following statement.

1. The content of the website were acceptable for the target audience. However more pictures should be issued instead of the text. This replacement may improve students feel more confinable with the website since they don’t have enough patient to read all of the content.

2. This project is designed for elementary art works, so after students equipped the basic drawing skills, the advance courses should be available for them to learn the higher level drawing skills. Besides, the different type of art works should also be created, therefore students will have more options to select their favorite type.

3. To reach the goal of “Easy to learn and fun to use,” the further project design must involved
more attractive characters in the whole web site. Moreover, the learning process should be designed as playing the game, so the students will have positive attitude toward the art works but not feel bored in the same subject.

Summary

In sum, the animated drawing guide is using the same idea as the cartoon that expresses and implies the information in the displayed action, so the students will be engaged in a willingly learning attitude toward the art education, and also develops the potential capacity of the art performance. By creating the new multimedia teaching styles, the instructional theories will be combined and rebuilt to shift any possible improvement for better progress in each subject, and also reinforce the fundamental understanding during the transforming of the knowledge. These further instructional trends not only enhance the teaching quality to higher level, but also engage the learning result to broader range. Indeed, the main feature of the multimedia course design will continue to approach the primary goal: "Fun to learn and easy to use," and keep maintaining the high performance in each specific area. As the instructional designers, we may not
forecast the future trend of the education, but the basic concept and theory will still stand for the foundation.
APPENDIX A

ANIMATED DRAWING GUIDE WEBSITE STRUCTURE
Animated Drawing Guide Website URL:
A.01 Index Page
APPENDIX B

ANIMATED DRAWING GUIDE LEARNING STYLE
Step 1. Draw a circle as a face
Step 2. Draw two circles as the ears

Step 3. Draw two circles as the eyes
Step 4. Draw a curve line as the mouse

FINISH!
APPENDIX C

SURVEY FORM FOR EVALUATIONS ON THE ANIMATED DRAWING GUIDE
**Question 1:** Do you like drawing?
- Yes
- No

**Question 2:** Do you know how to draw?
- Yes
- No

**Question 3:** Do you like to learn drawing?
- Yes
- No

**Question 4:** Do you like to watch animation?
- Yes
- No

**Question 5:** Do you like this web site?
- Yes
- No

**Question 6:** Have you learned some drawing skills from this web site?
- Yes
- No

**Question 7:** Does this web site help you to learn drawing skills?
- Yes
- No

**Question 8:** What line(s) would you like to draw?
- [List of options]
APPENDIX D

APPROVAL LETTER FROM INSTITUTIONAL REVIEW BOARD

OF CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
October 15, 2003

Mr. Guan-Jong Hwang
c/o: Prof. Eun-Ok Baek
Department of Science, Math, & Technology
California State University
5500 University Parkway
San Bernardino, California 92407

Dear Mr. Hwang:

Your application to use human subjects, titled, "Animated Drawing Guide for Basic Art Education" has been reviewed and approved by the Institutional Review Board (IRB). Your informed consent document is attached. This consent document has been stamped and signed by the IRB chairperson. All subsequent copies used must be this officially approved version. A change in your informed consent requires resubmission of your protocol as amended.

You are required to notify the IRB if any substantive changes are made in your research prospectus/protocol, if any unanticipated adverse events are experienced by subjects during your research, and when your project has ended. If your project lasts longer than one year, you (the investigator/researcher) are required to notify the IRB by email or correspondence of Notice of Project Ending or Request for Continuation at the end of each year. Failure to notify the IRB of the above may result in disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Secretary. Mr. Gillespie can be reached by phone at (909) 880-5027, by fax at (909) 880-7028, or by email at mgillesp@csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,

Joseph Lovett, Chair
Institutional Review Board

cc: Prof. Eun-Ok Baek, Department of Science, Math, & Technology
STUDY OF ANIMATED DRAWING GUIDE FOR
BASIC ART EDUCATION INFORMED CONSENT
FOR PARENT/GUARDIAN

The study in which your child is being asked to participate is designed to investigate the benefit of using a series of animated drawing guide which is an under section of my web site in the art classroom. The primary goal is to examine how many students learn the basic drawing skills after they using the animated drawing guide, and their improvement will be measured by two essential questions which involved in the survey. The questions are “Have you learn some drawing skills from this web site?” and “Does this web site help you to learn drawing skills?” This study is being conducted by Mr. GUAN-JONG HWANG under the supervision of Eun-Ok Baek, PhD, professor of the College of Education, Department of Science, Math, and Technology. This study has been approved by the Institutional Review Board, California State University, San Bernardino.

In this study your child will be asked to browse my web site and watch the animated drawing guide at school. The task will take about 20 minutes for each participant, and conducted by Mr. GUAN-JONG HWANG. Once this activity started, all of the participants’ responses will be held in the strictest of confidence by the researcher. The participant’s name will not be reported with the responses. All data will be reported in group form only. The participants may receive the group results of this study upon completion in the Fall Quarter of 2003.

Your child’s participation in this study is totally voluntary. Participants are free to withdraw at any time during this study without penalty and results will not be used. When participants complete the task, they will receive a debriefing statement describing the study in more detail. In order to ensure the validity of the study, we ask participants not to discuss this study with other students.

In order to clarify the ambiguous sections of this study, Mr. GUAN-JONG HWANG will demonstrate the whole process which included the content of the survey for students’ parents, and then ask them to browse the web site at school. There are no foreseeable risks involved in this study. Students will not be asked to do anything outside of the normal art curriculum and teaching practices. Moreover, students’ participation will not affect their grade of any school works. The intended benefit is improved the basic drawing skills.

If you have any questions or concerns about this study or would like to receive the results of the study, please feel free to contact Professor Eun-Ok Baek, PhD at (909) 880-5454.

By placing a check mark in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, and I freely give consent to my minor child to participate.

Place a check mark here □

Student Name: ___________________ Signature: ___________________

Parent/Guardian Name: ___________________ Signature: ___________________

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO
INSTITUTIONAL REVIEW BOARD COMMITTEE
APPROVED 11/5/02 VOl4 AFTER 11/5/02
IRB# 02139 CHAIR April 21, 2003
APPENDIX E

CD-ROM OF THE ANIMATED DRAWING GUIDE WEBSITE
REFERENCES


