

Using Digital Tools in the Graphic Design Classroom

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ABSTRACT

Although advances in computer technology and related digital design have created remarkable new ways to present works of art and the high cost of creation can be decreased, not only directly affects for students' development but also students' creative and thinking skill. However this paper will presents an impact experience of using digital design tools in the graphic design course. These materials have become a necessity for a classroom instruction. However, it can be found that although the graphic design classroom needs effective digital design tools that are easier to use for design working, these tools should be used based on appropriateness. The teacher should have enough knowledge and skill in the digital design tools because the teacher must be able to advise the appropriate digital tools for students that can help the students to work well in this area.

Keywords—digital content, graphic design, digital design tools, skill, imagination

1. INTRODUCTION

Modern learning process in a classroom has been strongly geared towards students with several tools that are called "new media". In general, new media refers to new forms of human and media communication that have been transformed by the creative use of technology to fulfill the same basic social need to interact and transact. The examples of new media tools are digital tools, computer, related electronic resources, the Internet, and computer software/program. Therefore, at present, these have become to play a central role in education and the use of computer technology resources in classroom instruction is gaining immense popularity today. Teachers/instructors can benefit from these resources, while most of students will have considerable experience with them as well. Finally, they have become a necessity for a classroom instruction. Hence teachers can benefit from these resources because computers have become a necessity for classroom instruction. In addition, most of students will have considerable experience with them as well.

According to Time magazine (March 2, 1998), it was reported that American schools have been spending more than \$5 billion on high tech. Moreover, Bazar (1999) and Morrison (1999) studied the digital revolution's importance in the part of education. Some universities go as far as to require students to own a laptop or desktop computer upon beginning their studies (Bazar, 1999). Meanwhile, Morrison's research (1999) presented that if we want to help students achieve a high level of competency and competitiveness, we have no choice but to make technology an integrated tool in the learning process. Because of this, the use of computers in classroom instruction and the learning process is gaining immense popularity today.

Graphic design courses are also affected by digital technology. This is because computer technology and related software have offered teachers and students a source of authentic materials, tools for communication and collaboration, and tools for improving their design skills. Furthermore, these technologies have been seen as useful tools for graphic design. Advances in digital design tools have created remarkable new ways to present works of art and the high cost of creation can be decreased. Thus, the use of digital design tools in the graphic design classroom can help the students to be active participants in class. On the whole, the computer technology and related software also increases numerous of works of art.

Therefore, the aim of this paper is to present an experience of using computers and related electronic resources in the classroom instruction of graphic design, especially in the area of creativity idea. In general, there are several digital design tools that can be used for this class e.g. digital camera, illustrator program, Photoshop program, etc. However, given the infancy of this trend, my students do not hesitate to proceed but they are not sure which tools work well and which are likely to fail. Occasionally, it is possible that using convenient tools without sufficient knowledge could lead to poor work. Thus, using the digital design tools in the graphic design classroom, the teacher should have enough experience of those digital resources. This is because although the graphic design classroom needs effective digital design tools that are easier to use for design working, those

should be used based on the experience of the teacher. If the teacher is able to advise the appropriate digital tools for students, it also helps the students to make good work. Significantly, students' imagination and ability are not limited by any digital resource.

This paper is organized as follows. In Section 2, we present the problem in the graphic design classroom. Afterwards, the problems solving and a positive influence on the learning process success by using appropriate digital design tools are given in Section 3. Finally, a conclusion is drawn in Section 4.

2. THE PROBLEM IN THE GRAPHIC DESIGN CLASSROOM

Based on our experience in the graphic design classroom with eighty undergraduate students, I am able to understand the use of the digital design tools that are used for creating graphical representation. These technologies have been seen as useful tools for the graphic design classroom because they can enable the learners to be active participants in this class. Significantly, the digital design tools also increase the number of the works of arts.

In general, any area of design such as graphic design requires creativity and imagination. To learn how to build believable graphics we look back upon the rich history of traditional graphic design. When looking at a graphic brought to life by a great creativity ideas we know exactly what that graphic is thinking and feeling at every instant (Thomas & Johnson 1981).

A previous study, using the digital design materials in the graphic design class has been made by Dyson (1994). He indicated that most of the students in a design class always require the digital design tools to create their work more than using tradition tools such as pencil and paper. This is because the use of digital design tools in the design process can help to reduce time of working and cost of buying design materials. In addition, the digital design tools also decrease difficulties of using design skills such as the use of color, drawing, painting, and so on because the use of digital design tools is easier to correct mistakes in graphic design. In contrast, with traditional materials it is difficult to correct mistake points (Plimmer & Grundy 2005).

However, in my classroom, it can be found that the use of digital design tools can provide a positive influence on the learning success of the graphic design course. In this case, my students do not hesitate to proceed but they are not sure which tools work well and which are likely to fail. Occasionally, it is possible that using convenient tools without sufficient knowledge could lead to poor work. Finally, this problem leads my students to be limited in their skill, creative ideas, and imagination.

In my first case, it can be seen as a disadvantage of using technology in design learning when my students present their photos in a photo contest that is organized by our department. A lot of students did not hesitate to take photos by using digital camera. Of course, when they took their photos, they were not careful about elements such as lighting, composition, and reflex shadow. Many photos were taken without creative idea and imagination. This is because these students did not worry about the cost of photography and they could adjust their photos by using the Photoshop or Illustrators programs. In addition, these students cannot adapt the photography theories to work well by using digital camera.

Meanwhile, the second case is found in the graphic design classroom. When I provide an assignment for my students, they must sketch their ideas on the paper-sketch for three ideas of graphic design. Afterwards, they must choose a sketch and transform it to a graphic that is built by a computer program. Then, all the digital tools are guided in only the first assignment and my students will choose a tool for working by themselves. Of course, the students lack enough knowledge of each digital tool. Therefore, about 74 percent of students firstly choose a sketch that has uncomplicated detail for working in the next step because it is easy to create by using a digital tool. This is because they are not sure which tools work well. The examples are shown in Figure 1 and Figure 2.

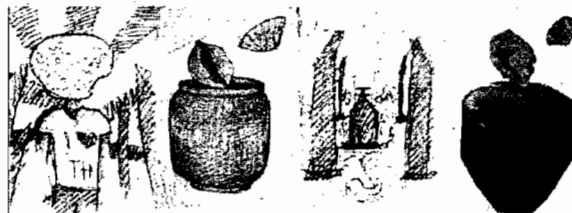


Figure 1. An example of student's work

As three sketch designs in Figure 1, the students chose the second sketch to work with a computer program because it has no complicated detail. It is easy to create this graphic, even if the student lacks enough knowledge of the chosen digital tool. That means my students have no confidence to use any digital design tool. The same problem is also shown in Figure 2.



Figure 2. An example of student's work

3. THE PROBLEM SOLVING AND A POSITIVE ACHIEVE LEARNING PROCESS

As above, my teaching process has improved. I realized that using digital design tools without sufficient knowledge can provide a negative influence on learning success. Thus, before using any digital tool, I advise my students that they should feedback their graphic sketches in the format of the traditional design materials. Afterwards, my students will create their works with the digital design tools in the next step. Then, I will provide and guide a digital tool for my students in each time. In addition, after each assignment finishes, my students and I always discuss and comment the students' works together. A lot of students can improve their skills and they can suggest ideas to their friends. That means this teaching and learning process can help my students work better. This is because, after changing the activities in the graphic design classroom, about 65 percent of students choose a sketch that is complicated detail for working with the digital design tool. An example of complicated graphic design is shown in Figure 3, while Figure 4 shows the final work based on a digital tool.



Figure 3. The complicated graphics design on paper-sketch



Figure 4: A final graphic design based on a digital tool

As this, I can provide the several activities in the class of graphic design that can help to improve the processes of

teaching and learning. These processes consist of six stages of learning as follows:

1.Theories Teaching. It is teaching about theories that are related to the area of graphic design.

2.Given Assignments. Students should have the assignments regarding content of work that can help them to learn and get ideas, imagination, and skill.

3.No digital design tool. This stage is to work based on paper and pencil to practice their skill, idea, and imagination. Using the traditional materials can help them to improve their skill, idea, creativity, and imagination. Significantly, they have independence in creativity and imagination.

4.Specific digital design tool using. Each digital design tool is provided for my students for several works. This is because the students should recognize which tool can help their works success and how to use that tool. Of course, if they can choose an appropriate tool for their work, it can help them to achieve work success.

5.Non-specific digital design tool using. After the students have enough idea, creativity, imagination, skill, including knowledge in the digital design tools. They can choose a material to work with by themselves.

6.Discussion. We have a discussion time to comment and compare their works. Then, we will discuss the works that are built by digital tools and the works that are created by using the traditional material. During this time, the students can ask the instructors questions or seek help. Then, many students sometimes help their friends with suggestions.

As above, the learning process of the students in the class of graphic design is presented in Figure 5.

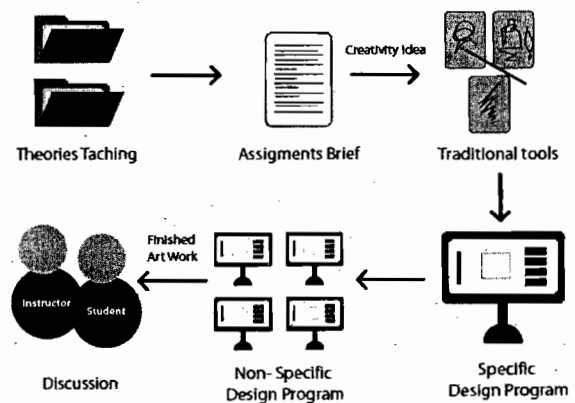


Figure 5. A learning process in the Graphic Design Classroom

After developing the new activities in the graphic design classroom, the students can create and achieve better works. At the same time, the digital design tools have become important tools that can help my students work well based on their idea, creativity, imagination, and skill.

4. CONCLUSION

This paper presents an experience of using digital design tools in the graphic design classroom. The digital tools have come to play a central role in education. Teachers can benefit from these resources because computers have become a necessity for a classroom instruction. Meanwhile, most students will have considerable experience with them as well. However, in my graphic design classroom, in early assignment. I provided that my students must submit their works based on the traditional design materials and digital design tools, respectively. Then, all of digital tools are guided in the first time and I let my students choose a tool for working by themselves. In that time, although my students do not hesitate to proceed but they are not sure which tools work well and which are likely to fail, it is possible that using convenient tools without sufficient knowledge could lead to poor work. Thus, providing new activities in the graphic design class is necessary. My students still submit their graphic sketches in the format of the traditional design materials before using any digital tool. Afterwards, I will provide and guide a digital tool for my students in each time. Moreover, we always discuss and comment the works together. A lot of students can improve their skills and they can make suggestions to their friends. That means this teaching and learning process can help my students work better. Based on new activities in my class, my students can create and achieve better works. Finally, the use of digital design tools can provide a positive influence on the learning success of the graphic design course.

5. REFERENCES

- Bazar, E. (1999) College Requirements: Books, Fees -- and PCs. *Sacramento Bee*, May 19, 1999).
- Dyson, M (1994) Exploring the interaction between design and software, in TEP'94: Proceedings of Teaching Electronic Publishing, Darmstadt, 12-13 April 1994. pp 55-70.
- Fish, J & Scrivener, S (1990) Amplifying the minds cognition Leonardo, 23(1), pp 117-126
- Goldschmidt, G (1991) The dialectics of sketching, *Creativity Research Journal*, 4 (2), pp 122-143.
- Goodman, N (1969) Languages of art: an approach to a theory of symbols, Oxford University Press, Oxford, UK.
- Laseau, P (1989) Graphic thinking for architects and designers, Van Nostrand Reinhold, New York, USA
- Morrison, J. (1999) Information Technology Tools and the Future of Teaching and Learning: An Interview with Gary Staunch. Vision Available online: <http://horizon.unc.edu/TS/vision/1999-05.asp>
- Plimmer, B, E & Grundy, J (005) Beautifying sketch-based design tool content: issues and experiences, In the Proceedings of Siggraph'91, ACM, pp 39-337.
- Stones, C. & Cassidy, T. (2007) Comparing synthesis strategies of novice graphic designers using digital and traditional design tools, *Design Study*, 28(1), pp 59-72.
- Schenk, P (1991) The role of drawing in the graphic design process, *Design Studies*, 12 (3), pp 168-181
- Schenk, P (2005) Before and after the computer: the role of drawing in graphic design, *Visual: Design: Scholarship*, 1(2), pp 11-20.
- Thomas, F & Johnson, O (1981) The Illusion of Life, Disney Animation, Hyperion, New York.