

Tuning Creativity Through eCartooning: A Successful Blended Learning Process

Poonsri Vate-U-Lan, Ed.D.

Assistant Program Director of Ph.D. in eLearning Methodology
College of Internet Distance Education, Assumption University of Thailand
(poonsri.vate@gmail.com)

ABSTRACT

This paper considers the issues of how to augment student creativity in the blended learning environment of Internet-based digital cartooning or eCartooning and, secondly, the eCartooning characteristics required in implementing such a learning project. The phrase, “Internet-based digital cartooning or eCartooning” refers to online applications which provide the scope for creating, developing, editing, sharing and distributing cartoon stories on the Internet. “ToonDoo” was selected as a pilot web application for this quasi experimental research because of its flexibility and potentiality. The population was all graduate students studying at a selected university in Bangkok, Thailand. The data collecting instruments were 1) an online creativity self-assessment 2) tutorials of eCartooning and 3) a survey of opinions about using eCartooning. The data were analyzed using means, percentiles and paired-samples t-tests. The findings were described both in qualitative and quantitative format. On comparing pre- and post-test scores of creativity, it was found that the creativity scores increased after using eCartooning for two months. The features of web 2.0 technology which were integrated with ToonDoo have significantly generated this form of blended learning.

Keywords

Best practice, Blended learning, cartoon, creativity, ebook, eCartooning, Internet-

based digital cartooning, graduate students, ToonDoo, storytelling, web 2.0 technology

1) INTRODUCTION

Creativity is at the top level of thinking skills in the cognitive domain of Bloom's Revised Taxonomy of Educational Objectives (Chapman, 2009). It is crucial in teaching students for them to be able to create and innovate from existing knowledge. Blended learning is the most successful instruction method before educational institutions can provide the complete e-Learning package to be wholly delivered on the Internet. Blended learning is one of the best options for instruction which combines the advantages of Internet technology or e-Learning and the value of human interaction as in the traditional classroom (Brown, 2010).

Cartoons are a common medium for communication. Not only do children prefer reading cartoons but also many adults prefer reading cartoons because they are easy to understand and normally include a great measure of humor. Cartoons can be an effective tool for university students to understand knowledge content, at least in some cultures. The definition of a cartoon in this research is limited to visual art, illustration or fine art but animated. In Korea, the strategy to increase the number of reading hours of people is to produce knowledge in the form that motivates them to read more. The cartoon is one of the successful tools to encourage people to digest more information (Vate-U-Lan, 2010). Cartooning is a higher option for practicing storytelling rather than verbally or through

text narration. However, the difficulty for individuals to produce cartoons is the restraint of actual drawing skills and the accompanying thinking skill to transform ideas into visual art.

The “e” of eCartooning stands for ‘electronic’ which is to follow the theme and trend of the 21st century like email, eCommerce and e-Learning in particular. “e” also refers to the potential of the Internet, especially the cloud computing concept in web 2.0 technology which contains not only a readable and writable web site but also social networking (Wheeler, 2010). Internet-based digital cartooning or eCartooning in short is a browser-based application that provides functions to draw, create and paint cartoons through the Internet. There are many eCartooning applications available. “ToonDoo” by Jambav with the support of the Zoho Corporation has been purposively selected as the research instrument from a range of others. The superior features of ToonDoo are its flexibility, usability, capability to create a cartoon story and, above all, a business model that does not limit the creativity of users.

With the tremendous potential of eCartooning in terms of to transfer knowledge via a new form using a storytelling strategy that should motivate university students’ creativity, the blended learning technique has been designed to be used in this research. The main objective of this research is to examine two main questions: 1) How to augment the creativity of students in the blended learning environment through eCartooning? And 2) what are the characteristics of eCartooning required in the implementation of this blended learning form?

2) LITERATURE REVIEW

The literature review is organized based around the two research questions. The

first part focuses on the blended learning method to tune or increase student’s creative thinking skill. The second part describes the characteristics of eCartooning which support blended learning.

2.1) Creative Thinking Skill

“I believe in intuition and inspiration. *Imagination is more important than knowledge.* For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution. It is, strictly speaking, a real factor in scientific research.”

(Einstein, 1931)

Imagination and creativity are at the core of divergent thinking skills which are very important for education (Robinson, 2010). The definition of creativity refers to the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating, and entertaining (Hardy (2010) as cited in Franken, 1994 p. 396). The verb “to create” means assemble, construct, create, design, develop, formulate, write, plan, produce, invent, devise, and make for example (Churches, 2008; Overbaugh & Schultz, 2010). Creativity can be measured by how many things or ideas that people can produce (Young, 2007). The process of learning, storytelling, and creating are similar in action to those are understand, memorize, originate and emotionally describe the information (Young, 2008). Thus, storytelling is a pathway to practice creativity.

Participants in this current research were presented with the new knowledge in a book written by Allen (2007) - *Designing Successful E-Learning, Forget what you know about instructional design and do something interesting.* Students were assigned to create new cartoon stories to deliver the contents of two chapters and

one article along with conducting the presentations. Storytelling caused students to have a deeper and better understanding of the assigned contents. Therefore, the new story is the combination of acts of accidentally or deliberately thinking.

The creativity self-assessment tool is an online questionnaire in English constructed and designed by Creax (2010); it is a browser-based application. It opens freely to access through the Internet. The form contains 40 questions which take about 10-15 minutes to complete. The form contains both a demographic information section and the creativity assessment section. The creativity self-assessment section includes different types of questions: 25 ten-scale matrix questions, five multiple option questions, three open-ended questions and one multiple choice item. The creativity level is measured across eight different indices: abstraction, connection, perspective, curiosity, boldness, paradox, complexity and persistence. Each personal score can be compared with the global average score of creativity level. For the Thai participants, all items were interpreted into Thai by the researcher. The Thai instructions were in parallel checked by an expert with fluency in both Thai and English. An example of a creativity self-assessment result is as follows:

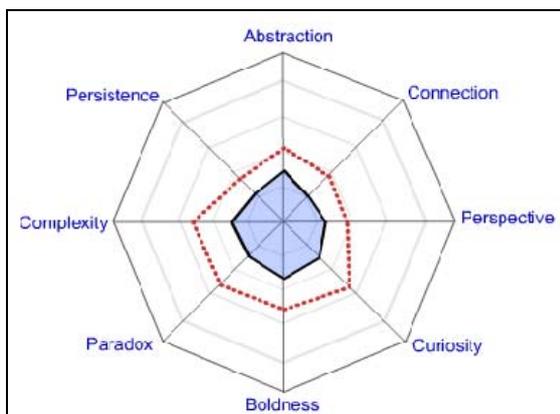


Figure 1: Example of creativity assessment

2.2) eCartooning

eCartooning is not a totally new term but it

is a creative idea which merges the databases of cartoons, graphics, images, backgrounds, text and computer application, especially web 2.0 technology. eCartooning by ToonDoo is a special shortcut to create a cartoon story without needing the skill of cartoon drawing. The steps of working at ToonDoo are simple as working on browser-based applications or a simple computer. ToonDoo provides five services for free account: 1) *ToonDoo Maker* to create comics, 2) *Book Maker* to make a toonbook, 3) *TraitR* to make a character, 4) *ImagineR* to upload and edit images and 5) *DoodleR* to draw as a free hand. Figure 1 illustrates the services of ToonDoo which uses graphics to describe.



Figure 2: ToonDoo free services

The full screen spacing of ToonDoo is very helpful when compared with other eCartooning applications since it presents most of the functions needed such as a graphics database in tab form, editing tools and a main menu. The great ranges of options of ToonDoo are not only easy to use but also generous or uncountable props which are always being updated. The important feature of ToonDoo for high-level eCartooning is the flexibility of its international language. This is very crucial since most eCartooning does not offer this and it is a big barrier for users who need to

deliver story in other languages rather than English. A cartoon story created from ToonDoo can be presented in different modes such as an online flip book, a comic strip, an image, embedded code of shock wave flash (swf) on the web page, tweet on tweeter and post on facebook, for instant. A product from ToonDoo includes social networking and social media functions such as users sharing with their friends, voting and making comments.

The participants were trained to create a cartoon story via ToonDoo in all aspects of its services. The researcher also created a cartoon story to deliver the contents of the subject as an example. All the materials produced by the researcher (see in Figure 3) of this particular subject were posted for sharing at the class web site. The social networking as web 2.0 technology strategy has been encouraged students to participate throughout the class for two months.



Figure 3: Example of cartoon story

3) RESEARCH METHODOLOGY

The research instruments employed for gathering data were 1) an online creativity self-assessment of Creax (2010) 2) tutorials of eCartooning and 3) a survey of opinions about using eCartooning. The population consisted of graduate students at a selected university in Bangkok, Thailand studying for their doctoral degree in Educational and Communications Technology. It consisted of two female students and two male students with an average age of about 35. All participants were working as educators or healthcare practitioners.

The participants were asked: 1) to complete a pre-test of creativity level, 2) to study ToonDoo for eCartooning 3) to present their eCartoon story 4) to participate when their colleagues made their presentations 5) to create cartoon stories by ToonDoo for final examination 6) to complete a post test of creativity level and 7) to answer the survey of opinions regarding eCartooning. The data were analyzed using means, percentiles and paired-samples t-tests.

Regarding eCartooning, participants indicated **strong agreement** (4.5 out of 5 with a S.D. of 0.578) which suggests eCartooning by ToonDoo was an effective tool to construct a cartoon story. The average pre-test creativity level (59.04 out of the typical 62.44) was lower than the post test creativity level (66.29). A paired-samples correlation of pre-test and post test were positive at 0.831 which means that the pre-test and post test score correlated at the high level and correlated at the same direction. A paired-samples t-test was conducted to compare the average score of creativity in pre-test and post test conditions. There was not a significant difference in the scores for pre-test (M=59.04, SD=12.26) and post test (M=66.29, SD=7.78) conditions; $t(3) = -2.004$, $p = .139$, mainly because of the

limited of time for conducting research only two months. These results tentatively indicate creativity level increasing after practicing eCartooning.

From the observations, the participants expressed their views that the cartoon ensures the story is delivered smoothly in a presentable and memorable learning environment. Figure 4 shows examples of students' cartoons created by ToonDoo. The students' work demonstrated divergent thinking skills after practicing eCartooning, for example, they simulate an environment using cartoon characters which support the story and some students characterized themselves as a cartoon figure.

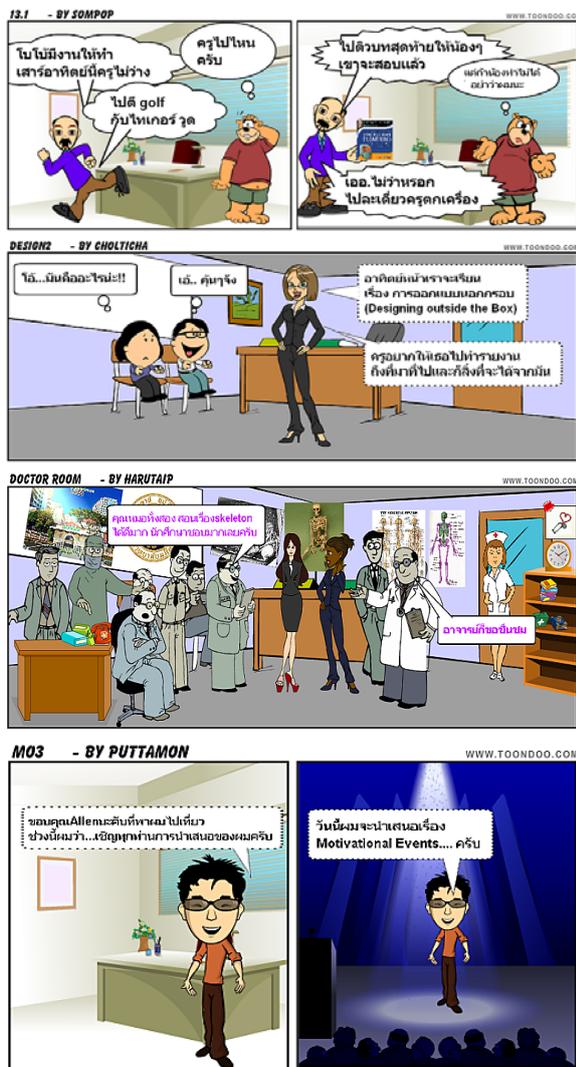


Figure 4: Students' cartoons by ToonDoo

4) DISCUSSION AND CONCLUSION

Participants' creative thinking level seems to have been tuned after practicing storytelling via eCartooning for two months. Students were very satisfied with the Internet technology as the form of blended learning with great assistance from ToonDoo. Thinking as a skill, as this current research shows, is a complex process as participants needed to transform their creative knowledge both through Internet literacy and academic knowledge, then to integrate it with state-of-art techniques for imaginative storytelling, together with much divergent thinking and deployment of humor to form a new cartoon story. The researcher believes the duration spend on actual practicing was the main driver towards the higher creative thinking level. The longer the duration of practice, the more creative thinking level increases.

The finding supports the research objective since participants were satisfied with blended learning using eCartooning and with the growth in their creative thinking skill. Assignments using eCartooning to create a new story for education purposes is recommended for further research given the small number of students for this exploratory study. There are many subjects that should benefit from this blended learning method especially linguistics, arts and design. This eCartooning blended learning method could be very useful for dialogues in learning foreign languages such as English, Chinese and Japanese for example, since figures of cartoon can simulate an environment clearer for students. The only concern for future research using eCartooning or other Internet-based applications is appropriate contents, graphics and images for young students.

REFERENCES

- Allen, M. (2007). *Designing Successful E-Learning*. San Francisco USA: John Wiley & Son.
- Brown, R. (2010). Blended learning: rich experiences from a rich picture Retrieved Dec 12, 2010, from <http://bigcoolblue.com/downloads/bcbRWBBlendLearning.pdf>
- Chapman, A. (2009). Bloom's taxonomy - learning domains Retrieved Dec 12, 2010, from <http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm>
- Churches, A. (2008, April 1). Bloom's Taxonomy Blooms Digitally Retrieved Dec 12, 2010, from <http://techlearning.com/article/8670>
- Creax (2010). Creativity Self-Assessment. leper, Belgium: Creax at <http://www.creax.com/csa/>.
- Einstein, A. (1931). Cosmic Religion: With Other Opinions and Aphorisms. from wikiquote: http://en.wikiquote.org/wiki/Albert_Einstein
- Hardy, D. (2010). What is creativity? Retrieved Dec 12, 2010, from <http://www.csun.edu/~vcpsy00h/creativity/define.htm>
- Overbaugh, R. C., & Schultz, L. (2010). Bloom's Taxonomy Retrieved Dec 12, 2010, from http://www.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm
- Robinson, K. (Producer). (2010) RSA Animate – Changing Education Paradigms. Podcast retrieved from <http://sirkenrobinson.com/skr/rsa-animate-changing-education-paradigms>.
- Vate-U-Lan, P. (2010). The Great Message Design Increase Children's Reading Hour (Thai). [Academic]. *Educational and Communication Technology*, 17(1), 65-81.
- Wheeler, S. (2010). *eXtending the Web - New and Emerging Learning Technologies*. Paper presented at the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE 2010). from <http://www.slideshare.net/timbuckteeth/extending-the-web-new-and-emerging-learning-technologies>
- Young, S. (2007, November 27). How to Boost Your Creative Output Retrieved Dec 12, 2010, from <http://www.lifehack.org/articles/lifehack/how-to-boost-your-creative-output.html>
- Young, S. (2008, January 3). What Storytellers Can Teach You About How to Learn Faster Retrieved Dec 12, 2010, from <http://www.lifehack.org/articles/lifehack/what-storytellers-can-teach-you-about-how-to-learn-faster.html>