Writing Interactive Digital Stories as Projects

Associate Professor Yeo Gee Kin
Department of Information Systems

The major objective of the module CS1105 "Computing and Society" is to expose students to broad societal issues surrounding the use of information and communication technology (ICT) in everyday life. The topics discussed include digital piracy, security and privacy, social networking and freedom of expression.

The module is currently worth three modular credits (3-MC), and while compulsory for School of Computing (SOC) students, it is also open to students of other faculties. The current implementation involves conducting lectures online with 100% continual assessments (CA). An important component of the assessments is the course project. Previous projects were almost always in the form of a team study report covering topics such as "Youth Addiction in Computer Games" or "Software Piracy in Asia". During the Special Term last year, I initiated Wiki as the platform for the course project. In the second semester of Academic Year 2007/2008, I proposed that the class write interactive digital stories as an alternative format for the team project.

Every story is about an ethical dilemma in ICT. Examples of some scenarios were given, as shown below:

> "I provide IT support in a school. One day, I was asked to upgrade all the computers for the school. While working on one of the dean's computer, I noticed that his computer contained thousands of pornographic pictures."

> "I am an IT professional hired by a big hospital and put in charge of its patient database. My aunt, who works for a health insurance company, approaches me one day to help her get the medical histories and other personal particulars of patients of the hospital who had died of a certain illness, so that her company can formulate a new insurance scheme for such patients."

Students were encouraged to create their own stories, but each must reflect a problem or controversy discussed in the course. As the story unfolds, the viewer responds to the scenario at different stages and branches into another scenario depending on his response. The recommended software for developing the digital stories was Adobe Captivate™. It accepts slides from Microsoft Powerpoint which most of the students are already familiar with. The students were also told to make full use of the interactive elements and multimedia features in Captivate™ to develop the story. In presenting the dilemma, and prompting actions and answers, some background knowledge of ICT relevant to the storyline and context should be present in some form. How much the story engages the viewers' interest and leaves them with the feeling that they learnt something at the end is important in ensuring the effectiveness of the story.
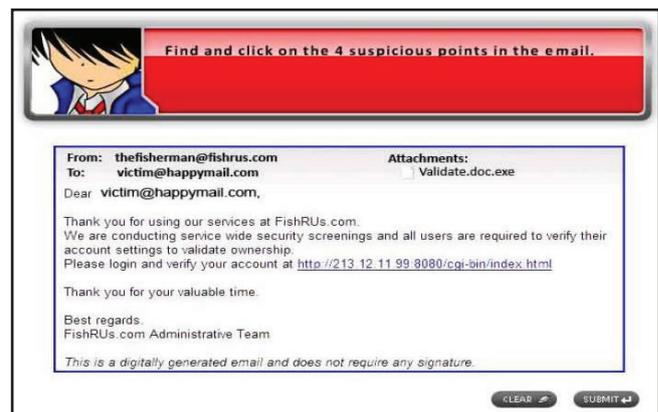
Figure 1. Example of a story for "ICT Crime", which relates a lesson on tele-fraud

Figure 2. Example of a story for "Dilemma in in a University Lab", where students play characters in their story.

There are three progressive reviews and marks of 5%, 15% and 30% were allocated to each stage. The first review was to check on the outline students prepared to approve its suitability of further development. In the second review, about half of the story was expected to have been developed and feedback was given to students to improve their stories.

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Creating an interactive story is, in many ways, more similar to writing a play than writing a short story. In a play, the bulk of the playwright's effort goes into creating the plot, theme and composing the dialogue and interaction between the characters. Scene descriptions are expressed simply as pictures, without the need for elegant prose. The library that comes with Captivate™ helps provide some of these background resources. To some students, the creative mechanism of interactive stories, which contain visual and sound aspects, was better suited to their capabilities.

In the end, twelve teams submitted branching stories with topics such as "ICT Crime" and "ICT Dilemma in the Workplace", with scenarios on privacy intrusion, discovering pornographic material, losing one's password over social networks, and intelligent robots replacing human workers. Most teams were able to incorporate their lesson materials with quizzes and games. Some teams went further, and included animations and videos. Figures 1 and 2 showcase examples of the students' creativity in crafting these stories.

It was time-consuming to grade the projects. While some criteria such as ease of navigation, learning values, and interactive features, were developed to facilitate marking the story, each

Figure 3. Example of the branches in a story

graded component requires me to play-test every submission. The result was that each story required many hours to grade. To uncover all the subtleties of the story, each branch of the story (See Figure 3) has to be explored. Nonetheless, it provides students with an invaluable method of understanding how ICT issues affect daily life.

Six of the stories can be found in the SOC website at:

- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/1C/
- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/1D/
- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/2C/
- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/5A/
- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/6C/
- http://www.comp.nus.edu.sg/~cs1105/BranchingStories/6D█

Encouraging Class Participation: A Personal Experience

coerced [coercing] when…marks are awarded for participation, I believe it encourages students to ask questions and contribute to some extent which is…a means to help inculcate this active learning environment."

"Mutual learning amongst the student encourage[s] the students [to] learn more. Students would not take initiative to contribute without CA (class assessment) marks for class participation. Students will always [try] to find different answers for a question in order to earn the CA marks. So, I strongly believe that CA marks will improve the quality of the class participation. I think your method of awarding the CA marks to class participation is quite reasonable. The weightage for the class participation is good also."

"Yes, I think class participation is good! Everything in life that happens adds to

our experience, hence also to our memory. This is especially important in a short-time study period of 3 months in an educational institution like NUS. All that [we] accumulated will prove its worth when the time comes."

References

Robinson, Mary K. (2008). Koosh! Enhancing class participation. *The Mathematical Association of America*. Retrieved 14 November 2008, from http://www.maa.org/t_and_l/exchange/ite9/koosh.html.

Scantron Corporation (January 23, 2008). New, innovative Engage Response System encourages class participation, boosts achievement. Press release. Retrieved 14 November 2008, from http://datamanagement.scantron.com/news/08-01-23.htm.

Endnote

This method is equally applicable to modules from all faculties. The author would be glad to help NUS colleagues to implement this system of recording and grading class participation using IVLE. He can be contacted at mpesks@nus.edu.sg. █