Editorial

Maiga Chang

Athabasca University,
1200, 10011-109 Street,
Edmonton, AB T5J-3S8, Canada
E-mail: maiga.chang@gmail.com

Games and toys are our most natural and most familiar learning and life exploring form. With modern information communication technology's help, computers, mobile devices, and even robots can be programmed and used to create interactive and fund game worlds, to allow we learning while playing.

In this issue of the *International Journal of Arts and Technology* (*IJART*), we encourage researchers and practitioners to participate in our discussions and exchange ideas. This issue will see broader discussions of game and toy enhanced learning and society related issues within the international community. In the near future, we will be able to see that learning is not only happened in the classroom but also after school and in daily life while playing games and toys. This special issue collects the latest research in game and toy enhanced learning; there are five papers in this issue. These five papers amazingly cover the educational game design, web-based Flash game, mobile game, 3D PC game, and robotic toy completely.

First of all, Kim et al. develop a 3D immersive game for learning Earth science and geography, named Voyage to the Age of Dinosaurs (VAD). During their development, they have found that many dinosaur-related 'educational' games in the market, but those games are not capable of meeting school needs as such factual information about dinosaurs are not part of many school curriculum. Moreover, the game play itself often includes meaningless shooting or fighting of dinosaurs without much intellectual pursuit. They argue that there is a gap between 'educational' game design and learning. In this paper, they talk how involving learners in the design process, known as the informant design approach, is able to close this gap in Singapore, with their informant design workshops and five phases of informant design process.

Werneck and Chang at the second article talk a web-based educational game within a real corporate environment. It is amazing to find that what a real world company looks for is such a small and simple game. The game is used to provide to phone and face-to-face sales who have no minimum necessary knowledge of selling watercrafts insurance and have interest in using game-based learning mode instead of traditional PowerPoint presentation mode. Bad news is the participants who chose to use game to learn, have higher variation in their perceptions toward the game. Good news is, although the employees did not like the game itself, they are still willing to try the game, instead of the presentation, if offered. One thing is remarkable in this research, that is, almost all participants in the game mode group are females, only one male participant in this group, which reflect the recent studies of the gender differences on the attitudes toward educational games.

Ramos et al. at the third article develop a mobile educational game that embodies the concept of a local strategy game, *dama*, in Philippines. *Dama* combined with mathematics by adding computational values and operators on its chips and board. Education authorities in Philippines have promoted *dama* to students as part of a collaborative endeavour to increase awareness of learning mathematics, however, the game equipment and requirement are not easy to be accessed and reached by the most of students. Elementary students aged 7–8 years old tested the mobile educational game, DaMath. The results show that students enjoyed playing with the AI opponent than with a human opponent at very beginning, at the end, they were collaboratively learning how to play the electronic game.

Shih et al. at the fourth article argue that psychotherapy relies on the relationship between the patient and therapist but many adolescents may have difficulties with traditional face-to-face psychotherapy, because of the differences in language skills between patient and therapist, different temperamental factors, and anxieties are some of the factors that might influence the counselling effectiveness. As many researchers have found that the repeatability of video games is useful in delivering manual-based interventions such as those involved in cognitive-behavioural therapy; in group therapy for youth in distress; and, to facilitate change in the moral developmental stage of adolescents, Shih et al. use a 3D game engine, The Elder Scrolls Construction Set of The Elder Scrolls IV: Oblivion, to develop a 3D digital game, rational emotive path, as a supplementary tool for counselling. They use qualitative research approach to analyse three in-depth case studies about students' emotional path, rational emotive tests, and counselling records.

Reitenbach et al. at the fifth article introduces the development of an innovative pilot StoryBOX educational toys for children's Dutch learning education. StoryBOX tangible objects are used for language learning within the context of the Dutch educational system. The target group consists of pupils aged 6/7. StoryBOX offers a playful environment for practicing common phonemic awareness skills, benefiting the letter-sound awareness, and enhancing the learning experience via physical play. The expert group (i.e., teachers, researchers of language education and special needs teachers) were enthusiastic about the StoryBOX, and saw the added value especially for special needs children. Children reacted very positive, usually, when the researchers arrived at the school children already started fighting about who could be the first to play with StoryBOX. Furthermore, when the researchers left, the children asked them to come back soon to play with StoryBOX.