

## Chapter 8

# A Game-Based Approach to Teaching Social Problem-Solving Skills

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### **ABSTRACT**

*This chapter describes a game-based approach to teaching social problem solving skills. This chapter presents the background, literature review, development and evaluation of a social problem-solving game, Socialdrome, for use with primary school going children in Singapore. The game sought to intentionally teach children to identify and manage feelings, exercise self-control, solve social problems and negotiate conflict situations. This chapter has two objectives. First, we describe the design of Socialdrome, which is in alignment with instructional design and game design principles. In Study 1, we reported a formative evaluation of the game. This led to further refinements of the game. Second, we presented Study 2, an investigation of the learning outcomes and user acceptance arising from using Socialdrome. Here, a summative evaluation of the game in a formal classroom setting was reported. We concluded with directions for future work.*

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## **INTRODUCTION**

Many researchers and practitioners have examined the role of games in education and have emphasized that children can understand concepts and skills through the integration of games into the instruction process (Egenfeldt-Nielsen, 2007; Virvou, Katsionis, & Manos, 2005). Games present students with a learner-centered model of instruction where active participation is adopted rather than mere passive listening (Garris, Ahlers, & Driskell, 2002). Games are intrinsically motivating to children, and there is evidence to show that students made significantly more learning gains by participating in a game-based learning context compared to those in the traditional school context (Tüzün, Yilmaz-Soylu, Karakus, Inal, & Kizilkaya, 2009).

Education encompasses more than just academic leaning. There is growing awareness among educators that social and emotional competencies play a critical role in enhancing not just academic but also behavioral and emotional outcomes for children and adolescents. Social and emotional competencies such as greater self and social awareness, greater problem-solving and management skills go a long way in determining how well a child meets the demands of the classroom and how well a child regulates his/her emotions and maintains positive relationships with others. A mastery of social problem-solving skills enable socially competent children to skillfully coordinate the multiple processes and resources available to them to meet social demands within a specific context, for example, home or school (Iarocci, Yager, & Elfers, 2007). Therefore, it is not surprising that competence in a set of social problem-solving skills is a powerful predictor of school adjustment, success in school and later success in life (Meadan & Monda-Amaya, 2008).

Traditionally, social problem-solving skills training programs are delivered in a face-to-face manner with children (Hennessey, 2007). With emerging technology, a game-based approach can be brought to the learners and this can ease teachers' task in infusing social problem-solving skills instruction into their curriculum (Hobbs & Yan, 2008). A game-based approach has the advantage of providing children with multiple opportunities to learn and practice social skills, to practice before testing it out in real life settings (Parsons, Leonard & Mitchell, 2006), and to augment the efforts of the instructors, rendering it possible to conduct the skills training with larger numbers of students in the classroom. The shift to game-based technology certainly calls for a critical need to conduct research on game-based social skills training for classroom integration. The pervasiveness of computer games has challenged our basic assumptions of learning environments as games can enhance student engagement and promote a learner-centered learning environment (Watson, Mong & Harris, 2011).

Therefore, the purpose of this chapter is to present the development and evaluation of a social problem-solving game, *Socialdrome*. The game was developed with the aim of offering an engaging and pedagogically sound learning environment for enhancing social problem-solving skills of primary school-going children in Singapore. The game sought to intentionally teach children to identify and manage feelings, exercise self-control, solve social problems and negotiate conflict situations. This chapter has two objectives. We first present sufficient background and literature review on this topic area which then leads us to our first objective. Our first objective is to describe the design of *Socialdrome*, which is in alignment with instructional design and game design principles. In Study 1, we report how we formatively evaluated the game using a participatory evaluation methodology, gathering ideas and concepts from the participants. This led to further refinements of the game. Our second objective for this chapter was to present Study 2, an investigation of the learning outcomes and user acceptance arising from using *Socialdrome*. Here, a summative evaluation of the game in a formal classroom setting was conducted.

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