

# Chapter 86

## Games for and by Teachers and Learners

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### ABSTRACT

*With the advent of social media, it is widely accepted that teachers and learners are not only consumers but also may have an active role in contributing and co-creating lesson materials and content. Paradoxically, one strand of technology-enhanced learning (i.e. game-based learning) aligns only slightly to this development. Games, while there to experience, explore, and collaborate, are almost exclusively designed by professionals. Despite, or maybe because, games are the exclusive domain of professional developers, the general impression is that games require complex technologies and that games are difficult to organise and to embed in a curriculum. This chapter makes a case that games are not necessarily the exclusive domain of game professionals. Rather than enforcing teachers to get acquainted with and use complex, technically demanding games, the authors discuss approaches that teachers themselves can use to build games, make use of existing games, and even one step beyond use tools or games that can be used by learners to create their own designs (e.g. games or virtual worlds).*

### INTRODUCTION

With the advent of social media it is widely accepted that teachers and learners are not only consumers but also may have an active role in sharing and co-creating content, debate and share opinions (Silius et al., 2010). Social media such

as social networks, online videos and wikis are not merely used to connect or entertain but also support informal learning (Sloep et al., 2011) by enabling learners to ask questions, to debate and to share opinions and materials with other learners. Online videos with a variety of learning content are widely shared and used by individuals

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and in the classroom. Wikis, essentially no more than a website with facilities for creating, editing, linking and navigating web pages, fit very well into the Web 2.0 paradigm of user involvement and user created content. They are, because of their ease of use and because they allow users to be actively involved, widely used in education for a variety of applications (see e.g. Ayers & Ortega, 2010; Riehle & Bruckman, 2009) such as notes sharing, collaborative writing, exchange of ideas, e-portfolios, shared learning tasks, getting used to ICT, and writing multi-media essays and project reports. Paradoxically, one strand of technology enhanced learning, i.e. game-based learning, aligns slightly with this development. Games, while there to experience, explore and collaborate, are almost exclusively designed by professionals, despite the fact that one of the first game-like learning environments, i.e. Turtle Logo (Fischer & Kling, 1974), was created to have learners explore their creativity by building their own mini-programmes. In most cases, games offer closed worlds or scenarios and teacher and learners can only act within the options given. Despite, or maybe because, games are the exclusive domain of professional developers, the general impression is that games require complex technologies and that games are difficult to organise and to embed in education curriculum. The latter is of importance since the use of ICT and games, in particular, only tends to be successful if it closely fits with the existing teaching practice (Vier in Balans Monitor, 2012, pp 45).

Although the domestic market of video entertainment games has been a fast-moving field over a number of years with annual growth rates well above 10% (PWC, 2010; National Gaming Survey, 2009), the use of games for educational purposes has remained quite limited (Ten Brummelhuis & Van Amerongen, 2010; Klopfer, Osterweil, & Salen, 2009). Barriers identified in the literature include teachers' lack of expertise, aspects of the school system, financial barriers and technical barriers (NFER, 2009). Only few data are available

describing teachers' opinions on using games in their classrooms. In a survey (NFER, 2009) among 1632 UK primary and secondary school teachers, the majority of teachers (85%) were predominantly positive about what could be learnt or developed as a result of playing computer games. The overall impression, however, is that many teachers are interested in game-based learning but experience severe barriers for using these in their classrooms (Van Rosmalen & Westera, 2012; Razak, Connolly & Hainey, 2011):

- **Expertise Barriers:** Williamson (2009) reports an urgent need for the training of teachers who wish to gain a better understanding of how to use games in their classrooms as well as understanding the implications of games as cultural forms of young people's lives.
- **Systemic Barriers:** Klopfer, Osterweil and Salen (2009) blame the school system for their reluctance of giving up text books or purchasing educational technologies that are not clearly linked to existing curriculum standards and the formal assessment standards. They notice that teachers find it difficult to integrate the play of a game within the fixed time structure of their schools. Furthermore, within the school system teachers lack the time, incentives and support for this work. Role models that could demonstrate new modes of teaching are avoided. Finally, hardly any tools are available for teachers for adjusting existing game contents, for arranging subscriptions for their students, for setting up different game runs, for allocating different roles to different students, for monitoring the performances of their students, or guidelines how to provide guidance and support.
- **Financial Barriers:** The high price and lack of licensing agreements for games prohibit many schools from using these resources (Williamson, 2009). For teach-

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