Chapter 2.6
Drawing Circles in the Sand:
Integrating Content into Serious Games

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ABSTRACT

One of the most important differentiators between Commercial Games and Serious Games is content; delivered in a way that is successfully integrated with engaging game play and achieves the desired learning outcomes by delivering skills and knowledge effectively to the end-user. This ability to integrate content effectively is the key to producing "killer" Serious Games that deliver demonstrable learning outcomes, business benefits and overall value. However, achieving this nirvana is not a trivial task. Utilising lessons learned and case studies, this chapter provides an overview of why this process can be so challenging, including the differing experiences from the perspective of three stakeholders (game designer, instructional designer/learning psychologist and subject matter expert), how to manage preconceptions and balance their priorities. The case studies will also show how different methodologies, techniques and technology have been applied to help solve this fundamental challenge of delivering a successful serious game. Advice is provided on how to facilitate this process, capture the correct requirements and create a design that meets and exceeds the expectations of all the stakeholders involved, including the client/customer and the end user.

INTRODUCTION

Much interactive material and training has, in the past, consisted of 'click to turn the page'

applications, where the technology was merely used as a delivery tool for the content. Recently we are seeing more focus on other more interactive applications for the technology, moving from a delivery platform to products with actual educational significance. The technology can be used to engage learners and provide experiential opportunities which learners may not have had before. As Kurt Squire explains... "For educators designing games, this shifts the question from one of delivering content to one of designing experience" (Squire, 2006, p20). Serious games are considered to be the new interpretation of what e-learning can offer, but with the benefits of engaging story lines, player rewards and goals, and true interaction.

Serious games also offer instruction beyond traditional means of skill and drill, multiple choice questionnaires and text with fancy graphics; however, the skill sets required to develop them are often out of reach of many instructional designers and subject matter experts. Therefore a partnership is required, forged by the passion of creating something exciting: a learning program that people actually want to complete and come back to again and again in order to practice and improve.

Unfortunately it is not as easy as finding a games designer, subject matter expert and an instructional designer and locking them in a room together, expecting a game design within the week. Communicating with someone that speaks a different language can be very difficult and shouting or speaking slowly is not the answer! The serious games industry is no different. Game designers and instructional designers often speak very different languages and have very different requirements.

Now drawing circles in the sand is a slight exaggeration, but communication between each of the parties involved in serious games design is one of the major challenges faced by the industry going forward; however, it is one that can be solved. Using real examples in the form of case

studies, this chapter aims to translate practical experience into lessons learned for the industry when designing and developing serious games with diverse subject content.

So why is it so hard? There is also a misconception by many new to the industry that serious games will be successful because they use games technology (Gee, 2005). Simply by forcing content into games technology will not produce an effective learning environment. Commercial off the shelf (COTS) games may act as the motivational wrapper, but there is a lot more to achieving real, tangible learning outcomes than that.

Many claims have been made in the past two decades that link real life behaviours to the influence of video games, and often in a negative light. A popular culture reference to the impact video games can have, came from the movie 'Snakes on a Plane' which depicted a character able to pilot and land a plane safely due to his skills learned from Microsoft's Flight Simulator game. This is the ideal, but rather unrealistic goal of serious games.

It could be asked, why a training course could not just be taken to create a simulation or a game that uses all the learning outcomes? The answer is that most learning is seen in black and white and is extremely linear. This is the course, this is the content, and this is what you will learn. Most training material is created focusing on the 'What' and not the 'How' and this is one of the contributing factors to high drop-out and low retention rates of traditional training and e-learning. In most cases, learning outcomes are only achieved through facilitation and one to one interaction with a skilled teacher or trainer; however, this is often an inefficient, costly and lengthy process, particularly for large numbers of learners. Serious games are more flexible in the way you can interact with them. You can choose whether to follow the story line or explore the environment, sometimes you are able to choose which missions you tackle and you can experiment with how you choose to play. The learner takes a far more ac-

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