

# Chapter 15

## Play Yourself Fit: Exercise + Videogames = Exergames

**Hannah R. Marston**

*German Sport University, Germany*

**Philip A. McClenaghan**

*Augsburg University, Germany*

### ABSTRACT

*Exergames and Exergaming have become a new phenomenon in recent years due to the release of the Nintendo Wii console and more recently the Microsoft Kinect. Videogames are categorized into genres based upon the actions that gamers are expected to execute to achieve goals and overcome challenges. However, with the development of new technology, and this notion of exergaming, is it actually activity or gameplay that defines the notion of exergames as a genre into current categories? This chapter reviews several genre/taxonomy theories to gain a greater understanding of exergames within the serious games arena, with several facets proposed by the authors to provide a more succinct progress within this sector.*

### INTRODUCTION

Defining videogame genres has been helpful over recent years in attempting to provide a comprehensive understanding for researchers and users alike (Botte, Matera, & Sponsiello, 2009; Kickmeier-Rust, 2009; Mueller, Gibbs, & Vetere, 2008; Bogost 2007, 2005; Jantke, 2006).

During its short lifespan, the games industry has witnessed many peaks and troughs, which has resulted in a variety of hardware and software developments. The 1990's saw the advent of games becoming more realistic, for example *Unreal* (1998), part of the first person shooter (FPS) genre. This development occurred with the release of the Sony PlayStation® (1995) console,

DOI: 10.4018/978-1-4666-3673-6.ch015

which enabled developers to create games in high contrast, providing a more superior collection of graphics than previous consoles on the market. From the mid-1990 to the release of the Nintendo Wii™ (2006) console there were several hardware developments and consoles released by Nintendo, Sony and Microsoft. These developments produced higher specifications and delivered greater memory and additional features, such as CD-ROM, storage for music and Downloadable Content (DLC).

Traditionally, the nature of interaction on these consoles was via a game pad, held in the hands of the gamer and a series of multiple buttons were pressed to execute one move. This changed with the release of the Nintendo Wii™ (2006) which enabled gamers to hold a remote in one hand and, via a motion swing, execute a move in a more natural form with a single button press.

This approach is not necessarily new as a similar piece of hardware was available from Sony – the Eyetoy® (1999), which utilized natural gesture movement via a webcam situated on top of the television. Consequently, this interactive approach has led to some researchers to recognize the opportunities that game technology has in benefiting a wider audience such as older adults and for additional implementation within the field of health, primarily focusing on rehabilitation.

In recent years the term exergaming was coined by Sawyer (2003) ‘Serious Games: Improving Public Policy through Game-based Learning and Simulation,’ and can be found within the field of serious games. However, the notion of integrating games for a particular purpose originated from the book *Serious Games* by Clark C. Abt (1975), who defines this concept by stating: ‘We are concerned with serious games in the sense that these games have an explicit and carefully thought out educational purpose and are not intended to be played primarily for amusement’ (Abt, 1975, p. 9).

Equally, additional terms have been conceived, for example: “A serious game is a game in which education (in its various forms) is the primary goal, rather than entertainment” (Michael, &

Chen, 2006, p. 17). “Serious games have more than just story, art and software, however. [...] They involve pedagogy: activities that educate or instruct, thereby imparting knowledge or skill. This addition makes games serious” (Zyda, 2005, p. 26).

In contrast Sawyer (2007) presented, ‘The “Serious Games” Landscape’ in which the topic related to understanding what ‘serious games’ are, the purpose of such games, what one can do with games and the different sectors in which these games can be utilized. The notion of serious games derives from solutions to problems (Sawyer, 2007). Several examples of serious games were provided and are listed as follows:

- Any meaningful use of computerized game/game industry resources whose chief mission is not entertainment;
- Serious games are simply solutions to problems that utilize assets developed by the modern day computer and videogame industry;
- The serious in serious games refers to the purpose and nothing else; and
- Many serious game projects do not result in the creation of a game.

Although there have been several studies focusing upon the use and implementation of game technologies for health aimed at an ageing society, there remains little understanding about the software employed. In particular, the configuration of game genres/taxonomies and where the exergame genre corresponds with preconceived models. The term ‘exergaming’ was first coined by the media, the “combination of exercise and videogames” (Lawrence, 2005).

The aims of this chapter are: to provide an overview of literature focusing upon the utilization of game technology within the field of health rehabilitation, to discuss the existing literature of game genre theory in order to provide a clearer understanding of the exergame genre and thus to build upon this information and to propose series of recommendations relating to future exergames.

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