

Chapter XLVII

Play Styles and Learning

Carrie Heeter

Michigan State University, USA

ABSTRACT

This chapter reviews player types found in commercial MMOs and educational games and a palette of play styles and learning is proposed from which game designers and educators can more easily imagine (or perhaps “paint”) their target audience. Two studies show how the palette might be applied. Study 1 examines the impact of different in-game reward schemas on player types. Study 2 compares classroom play with one child per computer versus paired play of the same educational game. Educational game design and the way a teacher structures in-class educational game play both influence emergent play and learning. Player archetypes (more commonly called player types) help game designers imagine the needs and interests of potential players. Considering learner types would be similarly useful. Learning styles relevant to educational game design and classroom use are described, including intrinsic and extrinsic achievement orientation, motivation, individual traits, and competition and other social factors.

INTRODUCTION

Different players play in different ways. Players are often characterized as either achievers or explorers (Bartle, 1990, 2006; Heeter & Winn, 2008; Klug & Schell, 2006; Salen & Zimmerman, 2004). Multi-player games introduce a social dimension, enabling pro-social and anti-social play styles. If their preferred play style is not available in a game, players must adopt a less preferred, available play style.

Different learners learn in different ways. Learners are often characterized by whether they learn better through visual, auditory, or kinesthetic channels (Dunn, Dunn, & Price, 1984). Kolb’s (1984) experiential learning styles are based on two axes, a preference for learning from concrete examples versus abstract concepts and from reflection versus action. If their preferred learning style is not available in a lesson, learners must adopt a less preferred, available learning style. Many factors encourage or inhibit learning, such

as achievement orientation, self theories about learning, individual abilities, and the pleasures and complications of competition and other social dynamics of the circumstance of play and learning context.

Interface design guru Alan Cooper (1999) decries the vague goal of designing software for “the user.” The word “user” is generic. It encompasses novice and expert users, children and the elderly, computer phobics and computer geeks. User is such an elastic concept it can “bend and stretch and adapt” (p. 127) to justify almost any design decision. Cooper’s solution is to design for personas. Personas are tangible, carefully constructed archetypal users with particular needs and expertise, so specific they are even given a name and photograph. Design teams plan how their software will meet the needs of one or more specific personas. Instead of asking, “how would I use this software,” personas help a design team ask “how would Mary [the primary persona] use this software” (Spool, 2007). Personas provide a common vocabulary for discussing, understanding, and designing for a tangible, less elastic target user.

Designing a game for “the player” is just as vague as designing software for “the user.” The word player is amorphous, elastic, and each designer tends to imagine her or his own self as the player. Some entertainment game design teams have begun to work with player archetypes (more commonly called player types) to focus the design process and to ensure that the game includes enough elements to appeal to each important player type (Klug & Schell, 2006). Entertainment player types are useful but not sufficient for educational game design. Because educational games have learning as well as entertainment goals, learning game player types need to incorporate player-learner characteristics such as learning styles, abilities, and achievement orientation.

In this chapter I review research on player types and learning to generate a palette of play styles and learning. The palette serves as a reminder of

the many different types of players and learners who might play an educational game. Designers can use the palette to focus in on the subset of player types and learning styles they want to consider, accommodate, and encourage in their game. Following the philosophy of persona analysis, it makes sense for a game to aim to please certain player types and learning styles very well rather than pleasing every type a little. Like an oil painter’s palette, the play styles and learning palette can be used to “paint” a vivid picture of specific target players.

The palette can help educators as they plan to use a game in their classroom. Reviewing the palette can be a reminder of player types and learning styles for whom the game is not optimal and who may need special attention. The circumstance of play can include pre-game activities, plans for playing in pairs or individually, and follow-up activities to address needs and interests of different kinds of learners.

The palette helps to focus my own research agenda and may be useful to other educational game scholars. I close the chapter by describing results from two studies that show how game design features including in-game rewards and circumstance of play can adapt to and even influence player types and learning styles.

BACKGROUND

Play Style and Player Types

Psychologists describe child play behavior based on laboratory observations of toy selection, rough-and-tumble play (or lack thereof), and activity level (for example, Alexander & Hines, 1994; Maccoby & Jacklin, 1987). Play style can be characterized as masculine or feminine. A feminine play style includes choosing feminine toys, an absence of rough and tumble play, and limited physical activity (Maccoby & Jacklin, 1987). But play style can be fluid. A child may

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