Narrative and Conceptual Expertise in Massively Multiplayer Online Role Playing Games

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ABSTRACT

This article aims at investigating the differences among three groups having distinct levels of experience in massively multiplayer online role-playing games (MMORPG), when solving a character design task in the videogame World of Warcraft (WoW), and when planning how to use the character during gameplay. These groups consisted of inexperienced players, general experts in MMORPGs and specialized WoW domain experts. The evaluation showed that MMORPG experience developed character design abilities that could be applied to other videogames (e.g., general expertise skills). Such skills were related to the ability to identify deep features related to particular types of characters (e.g., Rogue). The results also showed that there are domain expertise specific abilities, which only experts in WoW have. Such abilities were related to building game descriptions that could be considered narrative in the cognitive sense of the term, because they include time, intention and interaction, and also to identifying WoW-specific variables.

KEYWORDS

Conceptual Expertise, Expertise, MMORPGs, Narrative, Videogames

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Videogames are emergent narratives (Salen & Zimmerman, 2004). The story emerges from the concatenation of events created by several characters/players. Each time the game is played, a different story unfolds depending on decisions made at the micro level by different participants. In this context, the skill to understand change in time and to predict and act according to other players’ intentions, plans and actions represents a valuable asset. In this article, we show that while beginners describe the way they will use a character within the game through a static description, experts produce descriptions that are temporally located and related to other players’ goals and actions. Narrative becomes then a suitable mean to understand the game and legitimate space for the study of expertise.

Multiple game scholars propose that games have, to some extent, a narrative nature (Juul, 2011; Murray, 1997). From a design point of view, this fact implies that videogames, although they emerge from a set of formal rules, produce interactive narratives that emerge from game mechanics and players’ decisions. On the other hand, psychological and educational research on expertise has focused on differences on conceptual elements, such as categories and knowledge structures that underlie reasoning (Chi & VanLehn, 2012; Day, Arthur & Gettman, 2001). From this point of view, expertise
depends on the organization of information in a non-narrative format in which goals, intentions, and
time-dependent interactions are not included. Several domains, such as videogames and history, are
narrative-driven (Ostenson, 2013; White, 1987), although they include also conceptual and formal
elements (Juul, 2011; Steinkuehler & Duncan, 2008). This study explores the characteristics of
expertise in videogames aiming at showing that, besides superior conceptual structures, experts in
this area also acquire a better understanding of narrative elements.

Narrative has different meanings. In the context of videogame studies, the term has been associated
with the presence of fictional elements and storytelling, and opposed to definitions of games as
formal rule systems with quantifiable outcomes (Juul, 2011). In cognitive psychology and education,
the use of the word has been related to text structures and event accounts that are time-dependent
and focus on agents’ goals and actions (Bruner, 1991; Graesser, Murray & Trabasso, 1994). In this
context, narrative texts, such as short stories, produce clearly different cognitive representation than
argumentative or conceptual texts, such as essays. We do not imply that videogames are equivalent
to written texts and we acknowledge the fact that videogames include complex rule systems, beyond
the storytelling elements in which they are embedded. As a result, we expect expert gamers to display
superior comprehension of both conceptual elements, related to game rules, and narrative elements,
related to temporal change and players’ goals, actions and intentions. This point of view is consistent
with literature in game studies that recognizes both the role of fiction and story and the specific
characteristic of games that make them different from other narrative genres (Wibroe, Nygaard,
& Andersen, 2001). However, we do not make claims on the definition of videogames as cultural
objects or on their nature as a creative genre. We focus on the cognitive structures derived from the
interaction with massively multiplayer online role-playing games (MMORPGs) and therefore the
results of this study need to be located within the realm of cognitive psychology.

**MMORPGs AND LEARNING**

From an educational point of view, the interest in MMORPGs comes from the fact that MMORPGs
produce high levels of social interaction, in turn, encouraging the development of cognitive and
social abilities (Corredor & Gaydos, 2014; Corredor, Gaydos & Squire, 2014; Steinkuehler, 2006).
MMORPGs have social organization systems called guilds that interact through virtual channels to
perform collaborative reasoning and learning so as to improve the group’s videogame performance
(Steinkuehler, 2007). Social interaction, in turn, produces deep changes in reasoning and problem
solving both in game and non-game tasks (Clark et al, 2009; Honey & Hilton, 2011; Leinhardt, 2014;
Steinkuehler, 2008).

For this reason, MMORPGs such as World of Warcraft (WoW) have been studied extensively
by contemporary educational psychology. Given its popularity and educational characteristics, WoW
has become a suitable means (and medium) for studying the development of cognitive abilities
(Steinkuehler, 2010). It has been shown that participating in this videogame develops abilities regarding
scientific thinking and epistemological understanding, which are not developed in formal schooling
(Steinkuehler & Chmiel, 2006). In this particular fashion, it has been found that experience with
educational videogames modifies the cognitive structures of frequent gamers (Shaffer et al, 2009),
and that gamers display complex reasoning patterns in MMORPGs (Steinkuehler & Duncan, 2008).

However, little is known about how cognitive structures change with game experience allowing
players to perform suitably within the game. Given the huge amounts of deliberate practice and
the scaffolding provided by the social structure of gaming, it is possible that frequent MMORPG
gamers develop deep knowledge structures. In this sense, MMORPGs can be used for studying the
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