Perceptions of Educational Games: A Study of a Blog Post

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Abstract: Video games have become the new “hot” topic among teachers, researchers, parents and others interested in technology and education. This phenomenological study attempts to understand the lived experience of those who use educational games. A recent post from the *O’Reilly Radar*, Corcoran (2010, October 27) brought attention to a blog post by McLeod (2009, July 23). With the provocative title of “Do Most Educational Games Suck?” McLeod’s blog post received 78 comments. Comments from this blog were analyzed qualitatively in order to grasp the commentators lived experiences. It showed there was a dichotomy in their perceptions of video games as schooling (formal learning) versus learning (informal learning). Although the data is specific to this blog, it gives researchers, educators and designers insight into the perception of some game users and offers information for the future design, development, and use of games in education.

Introduction

Commercial video games increasingly engage players in learning experiences. Students are often actively involved in remembering facts and applying them in problem solving situations (Sanford & Williamson, 2005; Gee 2003). Are educational games doing the same? A recent post in the *O’Reilly Radar*, Corcoran (2010, October 27) created a stir by focusing on Scott McLeod’s blog post, “Do Most Educational Games Suck?” (2009, July 23). The blog’s provocative title drew 78 comments, some spanning several paragraphs. This blog post was chosen for its online open access to everyday voices regardless of differences in class, gender, or education and for the variety of opinions expressed. The purpose of this phenomenological study is to understand the phenomenon of educational games in the experience of commentators to this blog. Current literature on game environments is briefly presented to provide background on the field.

Literature Review

Educational games such as University of Indiana's Quest Atlantis (Barab et. al, 2005) and Harvard University's River City (Galas & Ketelhut, 2006) have developed a following among those who seek to provide a link between games and learning. Both provide a virtual context for children to gather information, make decisions and experience the results of their actions. Virtual games, also known as Multi-User Virtual Environments (MUVE), provide learning opportunities congruent with John Dewey's educational philosophy where knowledge is applied and has real consequences. Students, in game, amass knowledge and bring it to situations where their problem solving abilities have real game consequences (Barab et. al, 2009). Gee (2005) agrees, it is the "game" that students play with "rules" that help them learn and retain facts from applying and producing. The game helps students to remember facts through doing. However, current institutions of schooling may need to change before the potential of such gaming technologies in education are incorporated (Squire, 2005). Prior to determining the possible directions of this institutional change, it is important to understand the perceptions of educational video games among parents (Bourgonjon, Valcke, Soetaert, de Wever, & Schellens, 2011), educators, game developers, and members of the general public.

Methods

Morse and Richards (2002) state that phenomenology is the appropriate method for questions about the core or essence of phenomena or experiences and that a person's description is a perception. Higginbottom (2004) adds that phenomenology is a qualitative methodology that seeks to uncover the meaning and essence of a given phenomena. Husserl (1963) and Giorgi (1997) believe that in order to grasp individual perspectives and understand the underlying shared lived experience, it is important to explore it authentically through "bracketing." In bracketing, researchers recognize and reflect upon external world assumptions and opinions through observing, reading, writing, and rewriting. They believe that it is only through this observation and reflection, that they can truly understand the essence of any phenomenon (van Manen, 1994). Husserl (1963) called this suspension of judgment about knowledge, *epoché*. It is particularly useful to this study where forcing the phenomenon of educational video games into a preexisting theoretical frameworks might hinder the recognition of important perspectives regarding a field that is of growing interest.

The data for this study is revealed though the commentators posts in the blog. No IRB approval was sought since the comments are considered public information (behavior). The University of Hawaii's International Review Board's policy states that IRB is not necessary for "research involving the use of educational tests (cognitive diagnostic,

aptitude, achievement) survey procedures, interview procedures or observation of public behavior" ("Research activities", para. 3). All posts were anonymously made through the use of various monikers. Although some commentators' posts were linked to personal web pages, it was not relevant to this study.

The blog reflected a sample population of 58 people and was chosen for the commentators' rich and diverse experiences on the studied phenomenon (Morse & Richards, 2002; Sandelowski, 1996). Some identifying demographics were revealed through individual written responses that identified them as game creators, parents of game users, school administrators, teachers, and observers/participants of educational games in the home and school. Commentators were counted once regardless of the number of responses made. Comments from the blog author were not analyzed because his perspective, expressed in replies to numerous comments, would have diminished the phenomenal variation and diversity of the comments (Sandelowski, 1996).

Both Higginbottom (2004) and Morse and Richards (2002) state that the limited sample size reveals its in-depth nature. Indeed, the purpose here is not to test the hypotheses on a representative sample, but to explore a phenomenon where subjects have a profound and diverse experience of it (Sandelowski, 1996). Thus it provides an opportunity to understand the intersubjective experience through transcending the individual perspective of the studied subjects (Kelping, 1992).

The data was collected over a period of time on an online blog from all commentators, exclusive of the blogger. The variation in time and space reflected the nature of online blogging (Higginbottom, 2004).

Coding

The codebook, based upon an abstraction of themes, was developed by the researchers as an application of qualitative research. Morse & Richards (2002) recommends a system of coding and recoding. The coding procedures followed were similar to that recommended by Morse and Richards and other studies. Järvenoja and Järvelä (2005) repeatedly recoded data, as well as negotiated codes of a random sampling and discussed contradictory findings until a consensus was reached. The researchers followed a similar procedure.

The researchers read through the entire comment section of the blog prior to coding in an effort to understand the entire context and flow of the comments. The coding process was completed in three rounds, followed by the abstraction of emerging themes as recommended by Morse & Richards (2002). This process also followed Thomas (2006)

who also recommended coding and recoding because it provided inter-rater reliability and greater validity in the resulting abstraction.

For each round of coding, each researcher took one third of the commentators and their comments. Of the 78 comments, 58 commentators were identified, in addition to the blog author. During the first round of coding, each researcher completed a section using an individual codebook. Then the researchers met and discussed codes they had in common. The result was a group codebook. A second round of coding was then completed using the group codebook. In the third round of coding, the researchers further refined the group codebook and consolidated codes. As a group, the researchers randomly coded 25% of the data together. The items for group coding were selected through a random number generator website (http://www.random.org). In this round, each researcher coded the assigned 25% individually, shared the code, and discussed discrepancies until all researchers agreed. A final group codebook was produced.

From the final round of coding, several themes were abstracted and discussed in the data analysis section. Themes were repeatedly revisited and analyzed as the authors' reflected on the intersubjective discussion of the commentators as recommended by van Manen (1994). Theme identification followed an inductive approach following the phenomenological perspective as recommended by Crouch & McKenzie (2006) and Thomas (2006).

Data Analysis

Nine codes were established from the data. The list of codes as well as their definitions is shown below.

Table 1. Group codebook and code frequency

Code	Definition	Code Frequency
Game Examples	Comments giving game examples and uses of different kinds of games; references to other sites	30
Apples/Oranges	Comments that discuss the comparability of educational games vs. commercial games	18
Schooling Vs. Learning	Comments on the experience of divergence between school activities and learning activities	15
Educational Games: Positive	Comments presenting a positive perspective on educational games for learning	15
Graphics	Comments on how the visual design is full of diverse information (color, design, texture, awareness devices, etc.)	13
Suck	Comments on the use of the word "suck"	10
Game Use	Comments (testimony) on game use	7
Commercial Games: Positive	Comments presenting a positive perspective on commercial games for learning	7
Preference	Comments on what different players like	3

Three of the codes appeared with the most frequency. While the code "game examples" was used most often, it was not relevant to the analysis as these posts were strictly limited to recommendations of educational games. The other popular codes were "apples/oranges" and "schooling vs. learning". Both of these codes were "in vivo" codes utilizing words found in the comments. These codes attracted the researchers' attention as idiomatic expressions (Thomas, 2006). Idioms are particularly relevant sources of reflection in phenomenology as they are considered concrete examples of shared experiences (Morse & Richards, 2002). "Apples/oranges" and "schooling vs. learning" were the final themes abstracted in the last round of coding.

The analysis revealed that some commentators did not consider educational games to be as positive learning experience like commercial games, but rather a "schooling" application. Thus, comparing educational games and commercial games was like comparing "apples and oranges." The term "schooling vs. learning" was used to convey the experience shared by some that "schooling" tends to be rigidly focused on the traditional means to an end. Those commentators perceived that the original goal of "learning" was lost when students and teachers were involved in activities to fulfill administrative targets.

One commentator who used the "schooling vs. learning" expression stated:

> If you believe that practice creates understanding, or that drilling and quizzes are an integral part of learning, then no, these [educational games] don't suck. They get that job done. However, I think they are more about "schooling" than "learning". There's a big difference.

When games are actually experienced as such, and not like masked "schooling" activities, they are perceived as powerful learning environments. Another commentator's testimony noted:

> "It [the game Mario's Time Machine] taught me more about European history between 1400 and 1800 than probably anything else, and I had fun doing it."

And again, from a third subject:

> Plenty of learning can happen while playing the big commercial titles; problem-solving, spatial awareness, strategic thinking, collaboration etc. The trick is helping students to be aware of the learning and apply it to the real world.

Video games were experienced as engaging learning tools, whether they were identified as "educational" or "commercial;" all games were perceived as appropriate for effective learning. In some responses, educational games were experienced as just "schooling" activities and not as games. In those cases, games appeared to lose their potential appeal for youth and learning. In other cases, educational games were engaging regardless of design elements.

Conclusion

The usefulness of this result is limited to the data taken from this particular group of adults and is difficult to generalize to the larger population. The comments from the blog post, "Do most educational games suck?" are fueled by diverging experiences with educational games. Some saw educational games as a schooling application with a game-

like interface. Others defended educational games as effective, although a product of less money and resources. However, both sides seemed to agree that educational games were engaging learning tools, whether identified as "educational" or "commercial." All games were ultimately perceived as effective learning tools.

McCaslin and Scott (2003) state that a topic can reveal itself differently from different perspectives. This phenomenological study reveals the perceptions of a small group of online bloggers to one blog site. Studies of other perspectives would yield additional insight. Data from educational student game users (in the school setting) may yield different perceptions.

More research needs to be done. Undoubtedly, user perceptions of video games as educational tools is one element that will shape game development and design. It will reflect how learning and education are viewed and determine the fate of video games in formal education in the future.

References

Barab, S. A., Thomas, M., Dodge, T., Carteaux, R., & Tuzun, H. (2005). Making learning fun: Quest Atlantis, a game without guns. *Educational Technology Research and Development, 53*(1), 86-107

Barab, S., Scott, B., Siyahhan, S. Goldstone, R. L., Ingram-Goble, A., Zuiker, S., & Warren, S. (2009). Transformational play as a curricular scaffold: Using videogames to support science education. *Journal of Science Education and Technology*, 18, 305-320.

Bourgonjon, J., Valcke, M., Soetaert, R., de Wever, B., Schellens, T. (2011). Parental acceptance of digital game-based learning. *Computers & Education*, 57(1), 1434-1444.

Cohen, D., & Crabtree, B. (July 2006). Qualitative research guidelines project. Retrieved December 15, 2010, from http://www.qualres.org/HomeConv-3802.html

Corcoran, E. (2010, October 27). Gaming education: Classic ed-tech games and build-your-own methods are now joined by the "gamification" movement. *O'Reilly Radar*, from http://radar.oreilly.com/2010/10/gaming-education.html

Crouch M., McKenzie, H. (2006). The logic of small samples in interview-based qualitative research, *Social Science Information, 45*(4), pp. 483–499

Galas, C., & Ketelhut, D. J. (2006). River City, the MUVE. *Learning and Leading with Technology, 33*(7), 31–32.

Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. New York: Palgrave Macmillan.

Gee, J. P. (2005). Good video games and good learning. *Phi Kappa Phi Forum, 85*(2), 33-37. Retrieved from http://www.phikappaphi.org/web/Publications/PKP_Forum.html

Giorgi, A. (1997). The theory, practice, and evaluation of the phenomenological method as a qualitative research. *Journal of Phenomenological Psychology, 28*(2), 235.

Higginbottom, G. M. A. (2004). Sampling issues in qualitative research. *Nurse Researcher*, 12(1), 7-19.

Husserl, E. (1963). *Ideas: A generalizable introduction to pure phenomenology* (R. Boyce, Trans.). New York: Collier Books.

Järvenoja, H., & Järvelä, S. (2005). How students describe the sources of their emotional and motivational experiences during the learning process: A qualitative approach. *Learning and Instruction, 15*(5), 465-480. doi: 10.1016/j.learninstruc.2005.07.012

Kelping, V. (1992). Birthing pain. In J. M. Morse (Ed.), *Qualitative health research* (pp. 93-103). Newbury Park, CA: Sage.

McCaslin, M. L., & Scott, K. W. (2003). The five-question method for framing a qualitative research study. *The Qualitative Report*, *8*(3), 447–461.

McLeod, S. (2009, July 23). Do most educational games suck? [Web log post]. Retrieved from http://dangerouslyirrelevant.org/2009/07/do-most-educational-games-suck.html

Morse, J. M., & Richards, L. (2002). *Readme first for a user's guide to qualitative methods*. Thousand Oaks, Calif: Sage.

Sandelowski, M. (1996). One is the liveliest number: The case orientation of qualitative research. *Research in Nursing & Health, 19*(6), 525-529. doi: 10.1002/(sici)1098-240x(199612)19:6<525::aid-nur8>3.0.co;2-q

Sandford, R. & Williamson, B. (2005). Games and learning: A handbook from Futurelab 2005. Retrieved from http://www.futurelab.org.uk/projects/games-and-learning

Squire, K. (2005). Changing the game: What happens when video games enter the classroom?. *Innovate: Journal of Online Education, 1*(6). Retrieved from http://www.innovateonline.info/index.php?view=article&id=82

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246. doi: 10.1177/1098214005283748

van Manen, M. (1994). *Researching lived experience: Human science for an action sensitive pedagogy*. London, Ont: Althouse Press.