

## Chapter 2

# Narratizing Disciplines and Disciplinizing Narratives: Games as 21<sup>st</sup> Century Curriculum

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### **ABSTRACT**

*Education is about revealing possibility and exciting passions, empowering learners with the disciplinary expertise to meaningfully act on problematic contexts in which applying disciplinary knowledge is important. Toward this end, we have been using gaming methodologies and technologies to design curricular dramas that position students as active change agents who use knowledge to inquire into particular circumstances and, through their actions, transform the problematic situation into a known. Unlike more traditional textbooks designed to transmit facts or micro-stories, our focus is on building interactive experiences in which understanding core concepts, such as erosion or the idea of metaphor, and seeing oneself as a person who uses these to address personally meaningful and socially significant problems is valued. It is the explicit goal of this manuscript to communicate this power of educational videogames, as well as the design steps that we have been using to make this happen.*

## INTRODUCTION

In many American classrooms, students have opportunities to remember and record decontextualized disciplinary information in ways that all too often contribute to inert understandings. Such positioning of disciplinary content often undermines student appreciation of the potential value of academic content for solving personally meaningful and situationally significant problems. Theoretically, we are arguing for the need to reconnect disciplinary understandings with contexts in which such understandings are useful, specifically by *narratizing disciplines* and, at the same time, to empower youth to *disciplinize narratives*. In realizing this vision, a central goal in our design is to develop play spaces in which the learner has a goal or intention and makes choices in a dynamic environment/storyline that change in relation to these choices. From a design focus, our interest is in (1) legitimizing the key disciplinary content to be learned; (2) positioning the person as an individual with an intention to transform the content; and (3) designing the learning environment as a context in which actions are consequential. The challenge underlying our work is how to use videogames to connect disciplinary content with those situations in which it has personal and functional value.

Toward this end, and as part of our design of a multiuser virtual environment called Quest Atlantis (see <http://QuestAtlantis.Org>), we have developed a theory around the power of *transformational play*. Playing transformationally involves taking on the role of a protagonist who must employ conceptual understandings to understand and, ultimately, make choices that have the potential to transform a problematic context. For example, in one of our extensively researched designed worlds, a student becomes a scientist, examining the water quality of the green, murky water in a virtual river (Barab, Sadler, Heiselt, Hickey, & Zuiker, 2007; Barab, Zuiker, et al., 2007). In another context, a student becomes a statistician using measures of center to analyze

various choices and help a mayor make the best choices (Gresafli, Barab, Siyahhan, & Christensen, 2009). In still another context, the player becomes an investigative reporter, assembling evidence by talking to game characters to build a persuasive argument for the town newspaper (Barab et al., 2009).

Elsewhere, we have discussed the role of transformational play in supporting learning and, in particular, how our designs support transformational play (Barab, Gresalfi, & Ingram-Goble, 2009; Barab, Gresalfi, & Arici, in press). Here, we focus more specifically on how educational games can be disciplinary worlds, and game play can become a way of *disciplinizing* the world (cf. Roth, 1994; Hoyles, Noss, & Pozzi, 1999)—using disciplinary content as a tool to understand and take actions on problems in the world. The goal of this manuscript is to elaborate on this theoretical stance and to share design strategies that have usefully guided the worlds we have created and have been used in hundreds of 4<sup>th</sup>-8<sup>th</sup> grade classrooms worldwide.

## THEORETICAL FRAMING

### Games as Disciplinary Worlds (Narratizing Disciplines)

Our work entails the use of videogame technologies to establish prototypical situations as exemplars, which serve as the referent that, for the learner, makes visible and valuable the to-be-learned concept. Such work has resonance with simulations and other work designed to *situate* academic concepts (Cognition and Technology Group at Vanderbilt, 1991), but extends further in that we are concerned with situating contexts such that they are responsive to learner actions. In other words, while some have argued for the importance of the framing context in co-determining the meaning of particular content, games allows us to additionally situate the person as the central

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