

Exploring Coherence in Student Game-Based Learning Narratives

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As game-based learning (GBL) activities grow in popularity, research must address not only the content and mechanics of game play, but also the classroom experiences that contextualize GBL activities. A better understanding of how students relate to GBL is paramount; toward that end, this paper proposes an analytical framework for interpreting student narratives about classroom gameplay. Narrative inquiry using Linde's (1993) coherence model of storytelling offers a way to introduce student voices to the GBL literature and improve implementation for educators interested in GBL.

Game-Based Learning: Missing Stories

Can we use games in education? With the advent of digital games and the avid gaming cultures they engendered, this question has captivated educators' and researchers' attention. In the resultant scholarly literature, games now figure both as models of the learning process and tools for enhancing learning in the classroom and beyond (Gee, 2003; Shaffer, 2005; Squire, 2005; Prensky, 2001). For many, game-based learning (GBL) promises to bridge achievement gaps while nurturing students' motivation and sense of self-efficacy (Barab, 2009; Ip, 2011). Realizing this promise is not a simple matter, however. As Pivec et. al. (2003) point out, GBL activities constitute "radically new ways of learning" (p. 216). This poses a challenge to educators: is it possible to weave academically atypical experiences into a classroom setting?

Game design research offers many approaches to this question (Charsky, 2010). Studies emphasize the importance of situated meaning, consequential context, intrinsic integration of content and mechanics, and rich narrative structure for successful game construction (Barab, 2010; Gee, 2003; Habgood, 2005; Ip, 2011). Valuable as such insights are, the stories design studies tell position the game itself as the hero, charged with saving students from a dreaded "bad outcome" (e.g. a poor grade, a drop in self-reported interest). Coupled with a tendency towards quantitative aggregate assessments of game effect, this emphasis on game-as-unit of study permits dialog between GBL research and dominant modes of educational evaluation. However, it also leaves many voices—particularly student voices—unheard.

Much remains to be said about what happens "when games enter the classroom" (Squire, 2005, p. 1), and how students make sense of game play in this setting. The current study proposes an analytical framework—narrative coherence (Linde, 1993)—for investigating how students situate GBL activities within stories they tell about their own learning. Foregrounding student voices, narrative inquiry allows students to express their experience and understanding of GBL as it relates to an educational context. Linde's (1993) framework enables researchers to ask: how do students create coherence in their learning stories when these stories include the experience of classroom game play?

Creating Coherence: Toward an Analytical Framework for GBL Studies

Linde (1993) describes coherence as a property of a text: it "derives from the relations that the parts of a text bear to one another and to the whole text, as well as from the relation that the text bears to other texts of its type" (p. 12). Coherent relations establish reasonable causal connections between activities and personal development, in a socially sharable form. Describing the sorts of logical work speakers undertake to create coherence in their oral narratives, Linde develops an initial typology of coherence management strategies. These include tying action to character traits, providing multiple angles of explanation to bolster an otherwise weak narrative link, and relying on temporal sequence to illustrate causality. When these strategies fail, Linde notes that speakers experience "personal and social discomfort" (p. 4): coherence is not simply a property of texts, but one for which speakers actively strive.

In Linde's study, the "texts" are choice-of-profession stories spoken by her informants; in GBL research, the texts of interest would be students' learning stories. These stories would reflect on all the experiences that lead to learning a particular topic (e.g. basic French grammar, the scientific method, the history of WW2). The "parts" of the text here are narratives about individual learning experiences (attending a lecture, reading a textbook, playing a game). If games indeed "constitute

radically new ways of learning,” game play may not easily cohere with other academic activities. It can therefore be hypothesized that in attempting to reflectively integrate game play into an educational context, students will need to employ many of Linde’s coherence management strategies (Table 1).

Within this frame, several central questions emerge: How do students relate game play to other forms of study? Do they experience games as coherent with more common academic activities? If so, why? If not, how do they manage this coherence threat? Is a learning story that includes a GBL narrative commensurable with more traditional learning stories? If so, how? If not, how is this managed narratively by the speaker? Collecting and examining student narratives for answers to these questions offer at least two key insights. First and most practically, learning how students experience classroom game play enables educators to better scaffold GBL activities. Second, and perhaps more fundamentally, including student voices in the growing GBL literature more fully enacts the educational shift GBL represents. Many proponents of GBL argue that learning takes place when information is situated in a meaningful narrative context (Barab, 2010; Ip, 2011). What is true in the classroom is true in research as well: if you want to teach a student, tell her a story; if you want to learn how to teach a student, listen to hers.

| Strategy | Characteristic Logic |
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| Meta-Continuity | “Logically the most complex” (p. 157) of coherence strategies, this is the driving force behind the GBL paradigm. Meta-continuity affirms “multiplicity [and] change” (p. 157), holding that something “radically new” can be more coherent with educational aims than something traditional. Here, a game’s academically atypical nature becomes an asset, aligning game play with learning styles that education-as-usual tends to suppress. |
| Character | This strategy relies on personal character traits to explain decision-making. “Life stories express our sense of self: who we are and how we got that way” (Linde 1993 p. 3); likewise, student learning stories express their sense of themselves as students and how this identity impacts cognitive and affective aspects of learning. |
| Temporal Linkage | Illustrating extended temporal duration or highlighting the temporal sequence of events establishes causality in narratives. Aligning scholastic experience with objectives set out in course syllabi or elsewhere is predicted to be a key coherence strategy for students. |
| Multiple Non-contradictory Accounts | An accumulation of diverse, mutually supporting explanations for a given event serves as strong justification for an agent’s narrative progression. For students making sense of diverse learning experiences (e.g. lectures, lab, reading, online research), this is likely an important strategy. |
| Discontinuity Without Account (Complaint) | Linde (1993) construed this strategy as a “less than ideal way of presenting a life story” (p. 159); she treated it largely as a case of last resort. However, the strategy of complaint seems key in the academic environment; it is a way for students to “restory” (Linde, 2008) their experiences and exert evaluative agency in a context that determines much of their narrative progression for them. |

Table 1: Coherence Strategies as they Apply to GBL Studies

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