

The “Other” curriculum: Constructing success and failure in a game-based learning environment

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Abstract: We examined after-school classroom practices to understand how a game based curriculum based on American standards is taken up in Singapore schools. The Singapore educational system privileges a certain model of success and failure, which led students and teachers to adopt roles and practices which ran counter to the intended outcomes of the curriculum. Despite this, emergent student-oriented activities presented opportunities for successful implementations of the curriculum.

Introduction

Video games are immersive environments that engage learners in experiences that have personal, epistemological, cultural connections and potentially transformative. (Shaffer, Squire, Halverson & Gee, 2005) Unsurprisingly, schools have forayed into video games in order to promote learning among students. While game-based curriculum has its advantages, the impact of a multi-disciplinary curriculum within a classroom framework and what it means to learn in an informal school environment is less apparent. In the water quality unit in Quest Atlantis (QA), a learning environment, students adopt the role of a field investigator to explore why fishes were dying in Taiga national park (Barab, Sadler, Heiselt, Hickey & Zuiker, 2006). We examine how the unit normalized by both students and teachers in order to ensure its relevance to school. Additionally, we focus on how the models of success and failure can be re-constituted through student oriented activities.

Theoretical Framework

The classroom is a site of competing discourses; certain actions legitimize dominant discourse while silencing other forms (Delpit, 1988). It is a site where the techniques of surveillance and self-discipline occurs and where power is not acted upon the individual but is exercised through relationships and actions of free individuals who can either accept or resist (Foucault, 1982). Luke (1995) argued that classrooms are sites in which teachers and students construct what success and failure means, thereby producing “‘versions’ of successful and failing students” (p.12). Based on the notion that power is central to an analysis of competing discourses in the classroom, we identified identity and world building situations (Gee & Green, 1998) that helped us analyze how students and teachers constructed the various models of success and failure.

Context and environment

The Singapore educational system consists of primary, secondary, college, polytechnic and tertiary level education. Secondary education is targeted for 13 to 16 year olds and students are placed in three academic tracks, Special, Normal and Express. Students placed in the Special and Express track complete their secondary education in 4 years whereas the Normal track students complete theirs in 5. These students are placed in these academic tracks based on the Primary School Leaving Examination (PSLE), a major examination undertaken by all students to progress to secondary education. Due to the perceived differences in student abilities, Express track students are believed to be better students, both in terms of academics and behavior, thus shaping student and teacher attitudes.

Design and methodology

Students from two Express and Normal classes participated in an after-school program using QA for four weeks. Two teachers were in charge of each class and given guides which gave suggestions on how to structure classroom activities. Participation in the Express class was constant; at least 40 students were engaged in Taiga every week. In contrast, participation in the Normal class averaged 10 students or less per week.

Two pairs of same sex dyads from each class were selected and videotaped for the duration of each two-hour session. These pairs were present during most of the implementations, which meant that we could observe their participation and trajectory. Whole classroom and group discussions were also videotaped and teachers were interviewed after the implementation. Dyad, group and whole classroom interactions were then transcribed and through emergent coding, we initially identified episodes of acceptance or resistance, in which students and teachers would accept, challenge or impose assumptions on the game-based curriculum and other individuals. Building on these set of initial codes, we framed these episodes as identity and world building

episodes (Gee & Green, 1998). The former refers to situations in which students and teachers projected their identity to others while the latter included how they constructed success and failure in the classroom.

Findings

The Taiga curriculum was positioned as a Geography subject, although the unit included Science, Geography and English Language topics. As a result of this alignment, teachers in this implementation did not engage formal concepts unrelated to Geography, treating unfamiliar concepts such as eutrophication as an “Other”. The lack of take up was possibly due to time constraints and lack of expertise. For instance, when students in the Express class expressed confusion over concepts such as phosphate and nitrates, Wendy, the teacher, chose not to explicate further. In that same discussion, Wendy also summarized students’ impressions on the relevance and amount of learning gleaned by going through the Taiga curriculum. She concluded that “you (the students) have not learnt as much things as compared to class”. As a person of authority, she noted the lack of relevance of the curriculum therefore positioning it as a less useful learning environment for students.

Despite the lack of curricular connection, Wendy characterized Taiga as “serious work”. Since students were engaged in Taiga as an extra-curricular involvement, the curriculum needed *features* of schooling, such as outcomes that encourage analytical skills and criticality in assessing information. Being a good learner from the teacher’s perspective meant that students had to take notes in their log book, being able to “look through all the answers before you (the students) come to a conclusion” and knowing the “proper etiquette” of how to interact with others in the chat space. Teachers in both tracks adopted a surveillance stance, walking around to make sure students were on task and not “playing”. Students had to ensure that they were successful in features of Taiga that featured testing and assessment, such as taking a non-player character’s test to gain power cells. Nic, an Express student, voiced concern over the possibility of failing the test and panicked when he thought he had missed an opportunity to get a power cell. Tanya and Joy, from the Normal track, on the other hand, ensured that they were prepared mentally and in terms of copious note-taking before attempting a different test. To students, passing tests was representative being successful in class.

The two teachers from the Normal track mainly ensured that students remained on task (procedural and behavior) and/or understood the vocabulary in the curriculum. However, the Normal track students resisted the notion of unsuccessful learners and were able to articulate and synthesize information gathered from interviewing characters just as well as their Express peers. In a student produced video, one of the students, Pingying, adopted the role of a teacher and facilitated the interview process with her peers. She pushed other students to critically assess information that was presented to them, rather than reading from their notes. This student's negotiation of her role as a knowledgeable person however, remained unnoticed by teachers. Activities that reflected the abilities of the Normal students were mostly invisible; while the curriculum encouraged students to take up legitimate roles that empower them; their public identities remain that of mediocre learners.

Discussion and implications

Since the Taiga curriculum content was not taken up by the teachers, students were unable to see the relevance of their activities. As the curriculum was implemented as an after school activity, the informal setting was immediately framed by discourses surrounding what success and failure meant in schools. Thus, both students and teachers were engaged in performing what they thought the classroom should look like, instead of enlisting the opportunities that the Taiga curriculum offered. However, student oriented activities such as making group videos, provide opportunities for students to reconstitute a narrative of their own, based on the experiences afforded by the game based curriculum and through peer interactions. Teachers expressed the need for units aligned to Singapore's standards so that the content can be better leveraged. However, this does not address the invisibility of certain students, although in other implementations, activity structures have demonstrated that it is possible to empower such students.

References

- Barab, S. A., Sadler, T., Heiselt, C., Hickey, D., & Zuiker, S. (2007). Relating narrative, inquiry, and inscriptions: A framework for socio-scientific inquiry. *Journal of Science Education and Technology*, 16(1), 59-82.
- Delpit, L. (2001). The silenced dialogue: Power and pedagogy in educating other people's children. *Landmark Essays on Basic Writing*, 83-101.
- Foucault, M. (1982). The subject and power. *Critical inquiry* 8(4), 777-795.
- Gee, J., & Green, J. (1998). Discourse analysis, learning, and social practice: A methodological study. *Review of research in education*, 23(1), 119-163.
- Luke, A. (1995). Text and discourse in education: An introduction to critical discourse analysis. *Review of research in education*, 21, 3-48.
- Shaffer, D., Squire, K., Halverson, R., & Gee, J. (2005). Video games and the future of learning. *Phi Delta Kappan* 87(2), 104-111.