Let Me Know When She Stops Talking: Using Games for Learning Without Colonizing Play

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Abstract

This paper describes the original designed lab structure for the Games+Learning+Society Casual Learning Lab, an afterschool program for teenage males who were struggling or chronically disengaged with school. In it, we detail the lab's intended design and how it proved to be entirely wrong-headed. The paper then goes on to describe in situ changes we made to the program, as well as lessons learned from the failure of its original design.

Original Intentions

The Games+Learning+Society Casual Learning Lab was an afterschool lab run at the University of Wisconsin–Madison. The idea behind the lab was to use *World of Warcraft (WoW)* as a gateway activity to revitalize young people's intellectual interest in intellectual or "smart" practices affiliated with K-12 education and college. Our hope was that we would create a means for developing *WoW*-related pro-academic practices and dispositions identified in prior research, such as digital and print literacy, problem solving, and model-based reasoning. From this view, the game was seen as a vehicle for doing intellectual practices and the lab an "incubator" of those practices. Not all participants were *World of Warcraft* players, but all were initially interested in playing games, so the idea of using a game as a way to reinvigorate the academic and general interests of participants seemed obvious given our previous studies demonstrating the game's merit as an intellectually rich space (Steinkuehler, 2006; Steinkuehler, Black, & Clinton, 2005).

As initially conceived, the lab was to use a quasi-structured format as a way to create a "bridging third place" (Steinkuehler & Williams, 2006) between school and home, with games as our bridging component. The formal research question for this lab was, "Can we create a bridging third place based on online games to incubate key norms & and practices?" We wanted this especially for boys. Why boys? Only 65 percent of boys graduate from high school compared to 72 percent of girls (Greene and Winters, 2006). Boys score lower on NAEP tests and other basic literacy assessments than girls (Lee at al., 2007). They also consistently underperform in and opt out of literacy related courses (Gilbert and Gilbert, 1998; Rowan et al., 2002). Boys have been statistically shown to do less well in school than girls—however, boys are also traditionally the main players of videogames and the majority of inhabitants of virtual

worlds like *World of Warcraft*. Thus, the idea of creating an environment that might reconnect boys, with school with their gameplay function as the bridge, was compelling.

The participants in the lab were males ages 13-18 from urban and rural areas near the university. The project was run over the course of two years: The pilot program was run in 2008 and had a total of 9 participants; the formal study was run in 2009 and had 22 participants. One principal investigator (PI), along with 8 doctoral students, and 6 undergraduate students, ran the lab and provided mentorship and resources for the participants. The original idea of this lab was to "seed" intellectual practices through activities that were related to or based on the content of the game (Steinkuehler & King, 2009). Specifically, in the first semester we planned to collectively design, write, and implement a guild website as a means for fostering digital and print literacy. The participants were to be mentored through the process of creating a guild website. This would position the participants to learn website development skills, like basic coding, and also graphic design skills that would be used in web layout and the aesthetics of the site. In the second semester, we arranged to write graphic novels based on *WoW* gameplay using in-game screenshots and with the helpful inspiration of a professional graphic novelist's mentoring. The graphic novelist would come in and work with the participants to teach them the art and design fundamentals of creating a graphic novel, as well as how to integrate key literary elements (especially overarching narrative and character development). With this plan in place, the formal year of the program began.



Figure 1. Participants at a Saturday session.

Failure and Redesign

Within the first month of our program, our plan showed itself to be a real failure. The moment the projects were first introduced into the Saturday face-to-face sessions, the teenage participating guys totally turned off and tuned us out. In fact, anything and everything that we did that looked or smelled like school to the guys in our lab was met with utter disengagement or

worse, muttered ridicule. Anytime we tried to implement a structured activity, we would run into what we have termed the "Let-me-know-when-she-stops-talking Problem". This problem entails the complete disengagement of participants until the staff stopped talking. This response was a complete surprise. As conceived, the planned activities did not appear to us as being school-like on any level. Instead, we viewed them as fun, un-school-like opportunities to expand skills. Our participants clearly disagreed. The level of disengagement was such that guys in the lab would pull their hoodies up over their heads, fold their arms, and stare at the table anytime the PI started to talk about an activity or introduce content.

One approach to this problem would have been to solider on, trying to reengage them with content that they viewed as resembling school (an institution that they already found thoroughly disengaging), and try to either change their minds about the scholastic nature of the task or convince them that school was fun. However, this threatened to be a strenuous uphill battle unlikely to yield any positive buy-in to the program from the participants. So instead of taking this path, which seemed unnecessarily difficult and almost adversarial, we revised our strategy completely.

The negative reception of our originally conceived program forced us to completely recreate the structure, function, and justification of the casual learning lab in order to evade complete loss of engagement, which we saw as an anathema of games and learning of any form. The new strategy focused on *following the interest of the boys*. This shifted the organization of the lab from a structured, activity-centered design to a design that focused on observation of the participants' interests and habits and the staff resourcing these participant-driven directions in whatever way possible. When two participants showed an emerging interest in fiction based on the "world" of *Warcraft*, staff scrambled to locate and then provide graphic and textual novels to make readily available to them to take home.



Figure 2. Saturday Structured Activity

The revised "structure" of the lab shifted from designed pedagogy to something much more akin to a typical Montessori classroom. Participants themselves decided what content they cared to dive in to and when. The lab met monthly in a face-to-face setting in an on-campus game lab, as well as meeting within the game to collaborate in gameplay whenever the participants were playing. The researchers set up a schedule of "lifeguarding" times, where they were online and playing with them, so if a participant needed anything they were available. Participants and researchers alike joined a guild so that they could participate in in-game activities together more easily. Many of the participants were higher-level players than the researchers, so mentoring happened in both directions—from researcher to participant, and participant to researcher. The lifeguarding sessions included the researchers recording the ingame chat for later analysis and taking screenshots of interesting moments. The participants also posted asynchronously on forums created on their guild website. Throughout all interactions, staff played alongside participants and functioned as resources for them only when they identified a need for such. We observed their needs and interests, resourced the environment to support their work, and stuck to the Montessori mantra of "Follow the needs of the child."



Figure 3. Participants in-game.

Revised Research Agenda

Overall, the lab collected 8 months of ethnographic data as well as data from 5 studies that focused on comparison between knowledge, skills and dispositions related to games versus school. These studies included reading, online reading comprehension, social reasoning, and epistemological beliefs. Our revised main objective was not to measure changes over time due to "intervention" as originally conceived but rather to resource and trace individual learning trajectories and interests throughout the duration of participation and later attempt to describe and analyze what happened and why. The data set consists of 454 photos, 66 forum posts, 100+ hours of video, and 2506 pages of in-game chatlogs. The data was collected in the qualitative data analysis software NVivo and coded with a broad content coding scheme based on previous

games literature that, we felt, would provide a broad enough net to catch most (although not all) emerging intellectual practices and skills. The analytic framework included 11 themes and 48 codes, shown in Figure 4. The entire corpus was coded by 8 analysts with a pairwise interrater agreement of 98%.

ARGUMENT

Claim. A statement about the (real or virtual) world that begins some form of oppositional conversation or debate. (Erduran, Simon, & Osborne, 2004)

Evidence. Reasons, data, or evidence to warrant one's claims. (Kuhn, 1992)

Counter Claim. A refutation or statement that contradicts the original claim initiating the given conversation topic. (Erduran, Simon, & Osborne, 2004)

Counter Evidence. Reasons, data, or evidence to warrant one's refutation of the initial claim. (Erduran, Simon, & Osborne, 2004)

Rebuttal. Refutation of a counter claim (imagined or stated) in support of the original claim. (Kuhn, 1992)

Other. A move in an argument not included in above codes, including: agree/disagree, concession/dismissal, compromise, qualification, request for clarification.

PROBLEM-SOLVING

Finding a solution to a problem where the solution is not given or looked up in a resource. (i.e., NOT Info. Seeking). (Halpern, 1992).

READING (Study 1)

Reference to reading something in the game (e.g. quest text, an in-game book) or outside the game (e.g., thotbot, fan fiction, guild site, book, graphic novel, etc). (Steinkuehler, Compton-Lilly, & King, 2010)

INFORMATION LITERACY (Study 2)

Seeking Info. To locate relevant information for the task at hand. (AASL, 1998 ACRL, 2000)

Evaluating Info. To evaluate the reliability and credibility of different information resources. (AASL, 1998 ACRL, 2000)

Interpreting Info. To identify significant information from less significant information, determine or infer its meaning, and draw appropriate and meaningful conclusions from it. (AASL, 1998 ACRL, 2000)

Synthesizing Info. To combine information from multiple resources into a coherent whole. (AASL, 1998 ACRL, 2000)

Disseminating Info. To seek out and use appropriate distribution channels for one's own info production. (AASL, 1998 ACRL, 2000)

DIGITAL MEDIA LITERACY

Visualization. The ability to create visual representations of information for problemsolving purposes (for teaching/communicative purposes, see "sociocultural theory/tool & artifact creation").

Remixing. The ability to meaningfully sample and remix media content.

Transmedia Navigation. The ability to follow the flow of stories and information across multiple modalities.

Multitasking. Engaging in other activities outside the game (while gaming) in ways that evidence the ability to scan one's environment and shift focus as needed to salient details.

Pop Culture Reference. Any reference within the game to pop culture outside the game (e.g. discussion of movies, cartoons, Paris Hilton, etc). This is a form of convergence, with multiple "narrative arcs" intersecting in one media context.

DESIGN THINKING (from consumption to production)

Appraise Design. Critical Consumption – Stating an opinion or stance toward a particular designed object or design choice (e.g., "X is a stupid design"). (Steinkuehler & Johnson, 2009)

Argument (for Appraisal). Reasoned Critical Consumption – A rationale for an opinion or stance toward some given design that functions to justify the critique in some way. (e.g. "X is a stupid design because..."). (Steinkuehler & Johnson, 2009)

Alt Design/Fix. Offering an alternative design or a fix to some existing designed object or design choice (e.g., "They should have done Y instead of X because..."). (Steinkuehler & Johnson, 2009)

Prediction (for Alt Design/Fix). Forward-Thinking Alternative Design – A justification of some alternative design or fix in the form of a prediction or thought experiment of what would happen if you designed it differently. (e.g., "If you did Y instead of X, you'd find …"). (Steinkuehler & Johnson, 2009)

Design. The development (even if only in the abstract) of an original design or an entirely new redesign that is justified on its own terms. (e.g., "We should make an X that..."_). (Steinkuehler & Johnson, 2009)

MODEL BASED REASONING

Working with a Model. Any interaction with a model – A principle-based mechanism with interacting components that represents the operation of system within the natural (virtual) world. A model may concretize phenomena that are not directly observable. (AAAS, 1993; Steinkuehler & Duncan, 2009)

Judging Model Based on Prediction. Judging the usefulness of a model by comparing its predictions to actual observations in the real world. (AAAS, 1993; Steinkuehler & Duncan, 2009)

ATTITUDES (Study 3)

Nature of Knowledge. Epistemology – Any overt comment about the nature of knowledge (e.g., knowledge is certain, subjective, or something in-between). (AAAS, 1993; Steinkuehler & Duncan, 2009)

Nature of Learning. Epistemology – Any overt comment about the nature of learning (e.g., learning is ability is innate or you can learn how to learn, success is hard work or "all or nothing").

Attitudes Toward School. Any overt comment conveying their attitudes, opinions, and/or positioning toward school, their teachers, etc. (e.g., why they like or do not like a particular class).

Attitudes Toward Games. Any overt comment conveying their attitudes, opinions, and/or positioning toward either this game or gaming in general (e.g., why they like gaming).

Attitudes Toward Program. Any overt comment conveying their attitudes, opinions, and/or positioning toward the (pop cosmo / global kids) program, the staff, etc. (e.g., why they like or do not like a particular activity, etc).

Attitudes Toward Civic Empowerment. Any overt comment conveying feelings about their ability to make a difference in their community or in the world.

SOCIOCULTURAL LEARNING (Study 4)

Collaborative Problem Solving. The ability to collaborate within a small, bounded group to develop solutions to a given problem employing the sources at hand while considering divergent points of view and negotiating mutual benefit. (Steinkuehler & Duncan, 2009)

Collective Problem-Solving. The capacity to work in large-scale knowledgeworking communities in which each member makes an incremental contribution to shared knowledge and understanding under development. (Steinkuehler & Duncan, 2009) **Tool & Artifact Creation.** Creation of tools or artifacts to pass knowledge or skills on to other individuals (to teach or support learning in some way).

Didactic Teaching. Explicit teaching in which the "teacher" presents information to the learner (e.g., lecturing, giving step-by-step procedures).

Apprenticeship. Teaching through engagement in joint activity between a mentor and learner. (Steinkuehler, 2004)

Modeling. Demonstration of how to do something as a form of teaching.

CROSS CULTURAL FLUENCY

Adopt Alternative Perspective. The ability to adopt alternative perspectives or opinions for the purpose of understanding another viewpoint, discovery, and improvisation. (Kuhn, 1992; Steinkuehler, 2006c)

Connect Global to Local. The ability to understand what's happening around the world globally and the ways it relates to one's local communities.

Politics & Current Affairs. Discussion of politics, current events, world affairs, etc. happening in the "real world".

Ethical Reasoning. Thinking about issues of social equity, rights & responsibilities, right & wrong behavior toward one another, or codes of interpersonal behavior. (Simkins & Steinkuehler, 2008)

Social Norms & Rules. Negotiation or discussion of social norms and/or rules such what is or is not acceptable behavior in the game or various chat channels (e.g., spamming, reporting to GM).

Conflict Resolution. Helping to resolve a dispute or disagreement.

WORKPLACE LITERACY

Goal Setting. Setting specific objectives or targets for oneself as a way to make and/or mark (track) progress.

Time Management. Monitoring and management of time in order to make the most out of it (e.g. explicit attention toward efficiency, time spent gaming versus other activities, etc).

IT Skills. Using or otherwise demonstrating understanding of technology (systems, applications operations, etc) beyond the gaming platform itself. (ISTE, 2007).

Financial Literacy. Students think about money management, economics (e.g. auction house), financial value of items, or how to make money in the game.

Job Knowledge. To have knowledge of post-graduation options and/or what a specific profession entails.

Public Speaking. Students are capable of and comfortable speaking in public (formally).

Figure 4. Analytic Framework

As shown in Figure 5, Information Literacy, Sociocultural Learning, and Workplace Literacy were the most prevalent of practices engaged in by the participants. However, the graph also demonstrates that the participants engaged in a whole host of other pro-academic practices like model-based reasoning and argumentation.



Figure 5. Themes with codes (subcodes denofunding agency's.

Generative Failure

What do these results tell us? Our dilemma (and design challenge) led to the creation of an entirely open structure of interest-driven learning that shifted from handing out agendas to catering to interests as they emerged. From the results given above, we can see that the proacademic practices that we were hoping to foster in our participants were practices that they were already prone toward naturally participating in. Because our initial design was met with resistance, we were forced to shift our model for learning from "games as means for accomplishing *our* educational goals" back to "education as a means for accomplishing *their* goals." We had to revise the way we think of the role and function of education from a traditional model of "instruction as norming" to a very different model much more akin to "education as community organizing." It is seductive to think of games as a means for doing what we already (try to) do in school. The lesson we learned stands in contrast but is surely onto a new one: "Education is a natural process carried out by the child and is not acquired by listening to words but by experiences in the environment." (Montessori, 1959, p. 3)

References

- Association of College and Research Libraries [ACRL] (2000). Information literacy competency standards for higher education. Chicago, IL: Association of College and Research Libraries.
- American Association for the Advancement of Science [AAAS]. (1993). *Benchmarks for science literacy*. New York: Oxford University Press.
- American Association of School Librarians [AASL] (1998). Information literacy standards for student learning: Standards and indicators. American Library Association.
- Erduran, S., Simon, S., & Osborne, J. (2004). TAPping into argumentation: Developments in the application of Toulmin's argument pattern for studying science discourse. *Science Education*, *88*, 915–933.
- Gilbert, R. & Gilbert, P. (1998). Masculinity goes to school. London: Routledge.
- Greene, J. P. & Winters, M. A. (2006). Leaving boys behind: Public high school graduation rates. *Civic Report,* 48(April).
- Halpern, D. (2002). *Thought and knowledge: An introduction to critical thinking*. Mahwah NJ: Erlbaum, Lawrence & Associates.
- International Society for Technology in Education [ISTE] (2007). National educational technology standards (NETS•S) and performance indicators for students. Retrieved August 19, 2009 from http://cnets.iste.org/
- Kuhn, D. (1992). Thinking as argument. Harvard Educational Review, 62(2), 155-179.
- Lee, J., Grigg, W. S. & Donahue, P. L. (2007). *The nation's report card: Reading 2007*. Publication No. NCES 20007496. Washington, DC: National Center for Education Statistics.
- Montessori, M. (1959). Education for a new world. Adyar, India: Kalakshetra Publications.
- Rowan, L. Knobel, M., Bigum, C. & Lankshear, C. (2002). *Boys, literacies and schooling*. Buckingham: Open Court Press.
- Simkins, D. & Steinkuehler, C. (2008). Critical ethical reasoning & role play. Games & Culture, 3, 333-355.
- Squire, K. D. & Steinkuehler, C. A. (2006). Generating CyberCulture/s: The case of Star Wars Galaxies. In D. Gibbs & K. L. Krause (Eds.), *Cyberlines 2.0: Language and cultures of the Internet* (pp. 177-198). Albert Park, Australia: James Nicholas Publishers.
- Steinkuehler, C. A. (2004). Learning in massively multiplayer online games. In Y. B. Kafai, W. A. Sandoval, N. Enyedy, A. S. Nixon, & F. Herrera (Eds.), Proceedings of the Sixth International Conference of the Learning Sciences (pp.521-528). Mahwah, NJ: Erlbaum.
- Steinkuehler, C. (2006a). The mangle of play. Games & Culture, 1(3), 1-14.
- Steinkuehler, C. A. (2006b). Massively multiplayer online videogaming as participation in a Discourse. *Mind, Culture, & Activity, 13*(1), 38-52.
- Steinkuehler, C. (2006c, November 17). Virtual worlds, learning, & the new pop cosmopolitanism. *Teachers College Record*, 12843. Retrieved from: http://www.tcrecord.org/Content.asp?ContentID=12843
- Steinkuehler, C. (2007). Massively multiplayer online gaming as a constellation of literacy practices. *eLearning*, 4(3), 297-318.
- Steinkuehler, C. A., Black, R. W., & Clinton, K. A. (2005). Researching literacy as tool, place, and way of being. *Reading Research Quarterly*, 40(1), 7-12.
- Steinkuehler, C., Compton-Lilly, C., & King, E. (2010). Reading in the context of online games. In K. Gomez, L. Lyons, J. Radinsky (Eds.) Learning in the disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) Volume 1, Full Papers (pp. 222-230). Chicago, IL: International Society of the Learning Sciences.
- Steinkuehler, C. & Duncan, S. (2009). Informal scientific reasoning in online virtual worlds. *Journal of Science Education & Technology*. DOI: 10.1007/s10956-008-9120-8.
- Steinkuehler, C. & Johnson, B. Z. (2009). Computational literacy in online games: The social life of a mod. *The International Journal of Gaming and Computer Mediated Simulations, 1*(1), 53-65.
- Steinkuehler, C. & King, E. (2009). Digital literacies for the disengaged: creating after school contexts to support boys' game-based literacy skills. *On the Horizon, 17*(1), 47-59.
- Steinkuehler, C., & Williams, D. (2006). Where everybody knows your (screen) name: Online games as "third places." *Journal of Computer-Mediated Communication*, *11*(4), 885-909. doi:10.1111/j.1083-6101.2006.00300.x

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