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DESIGNING FOR STUDENT ENGAGEMENT IN AN ONLINE DOCTORAL RESEARCH METHODS COURSE

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This paper is a report on preliminary findings of a scholarship of teaching and learning inquiry into a redesign of an online doctoral research course to include purposefully designed cycles of less formal auditory synchronous discussions with more formal text-based asynchronous discussions. The research design includes thematic analyses of archived auditory and text-based student engagements with learning resources, and with peers and the instructor, as well as student feedback via focus groups and individual interviews. The research design, data collection and data analysis procedures are explained and preliminary findings discussed. Recommendations for practice are shared.

Keywords: online learning; graduate education; student engagement

This paper reports preliminary results of a scholarship of teaching inquiry into a collaborative redesign of an online graduate course in educational research methodologies. As part of a team-based and ongoing analysis of doctoral program coherence with graduate competencies, in consultation with faculty who taught the course and those supervising doctoral students who take the course, several recommendations emerged. It was determined that placing the course in the second term of the first year of enrolment was too early in the program to expect students to

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prepare a detailed research proposal. Further, the review team decided that the course needed to engage students in a developing a broader understanding of educational research and to better support students in positioning themselves within educational research discourse to inform their conceptualizations of their research questions, methodologies, and methods. The redesign of the course shifted the emphasis from students' preparations of draft research proposals to students' development of researcher identities. This shift changed the readings list and importantly changed how students were assessed. Rather than having a series of readings and assessment tasks leading toward an early draft of research proposal, the redesign focused on readings and assessment tasks that led toward developing a reflexive paper on becoming an educational researcher. This paper includes critical reflections on a continuum of research paradigms, reflexive examinations of personal ontological, epistemological, and axiological positioning, and explicit alignments within brief descriptions of initial research designs that clearly delineated between methodologies and methods. Importantly, the redesign emphasized relationships between researchers and research participants within a study, along with associated ethical considerations.

Prior to the revised course design, the majority of student-to-student and student-to-instructor interactions took place via asynchronous communications facilitated through weekly text-based online discussions and group projects. Synchronous discussions only took place during a series of three to four, two-hour Adobe Connect sessions. Both asynchronous and synchronous discussions had traditionally been instructor designed and only sometimes student-led. Based on previous instructors' and students' feedback, the redesign team decided to introduce weekly, open, online office hours into the course in order to provide cohorts of students with less structured, less formal opportunities to discuss emergent questions with their instructors and to co-develop working knowledge on becoming an educational researcher with both their instructors and their

peers. The redesign team anticipated that both content and interaction changes could increase student engagement; however, further evidence was required to evaluate the revised design.

LITERATURE REVIEW

Student engagement can be enriched by active educational practices involving collaborative tasks and problem based forms of learning (Boyer 1998; Reid 2012; Nomme & Birol, 2014; NSSE, 2015). Reid (2012) contends that the National Survey of Student Engagement (NSSE) is designed to estimate the amount of time and effort undergraduate students put into educational endeavours. NSSE reports have indicated correlations between student engagement practices and active and collaborative learning (Kuh 2009). Canadian institutions of higher education use NSSE results to better understand student engagement (NSSE, 2015). However, Reid (2012) cautions that NSSE methods are limited, as they cumulatively report students' experiences over a whole year, rather than within a course. Where asynchronous, text-based communications have, for more than a decade, been the primary *modus operandi* online learning environments in higher education (Bell, 2015; Garrison, 2011), Sgouropoulou et al. (2000) argued that when learners are practitioners developing research expertise "in real-world working contexts, this kind of [text-based] technology [alone] proves to be insufficient" (p. 111). In response, Jones, Aseno, and Goodyear (2011) identified three priority areas for online learning research and practice: (1) the use of asynchronous communications technologies to support collaborative learning among geographically and /or temporally distributed groups of students; (2) the use of synchronous video communications to allow remote access to live lectures and demonstrations; and (3) approaches which mix the use of Web resources with asynchronous or synchronous interpersonal communication (p. 24). Our study examines student engagement and learning within an individual course. As students in our doctoral programs are becoming practitioner-scholars,

linking research to professional practice is a key component of their learning. Therefore, their development of working knowledge—coming to see the role of research in understanding and eventually improving “the actual working practices of experienced practitioners in their field” (Sgouropoulou, Koutoumano, Goodyear, & Skordalakis, 2000, p. 111) is a central goal.

THE STUDY

This inquiry is designed as a two-year project. This paper presents preliminary data from the first year of the study. Our overarching research question is: How can purposefully designed cycles of formal and less formal, Adobe Connect synchronous, auditory discussions, and more formal, D2L asynchronous, text-based discussions support enhanced student engagement in learning? We also explore: (1) What are the ways in which less formal, synchronous, auditory communications support collaborative student development of working research knowledge? (2) What are the ways in which more formal, asynchronous, text-based communications support individual student’s development of personal research knowledge?

RESEARCH DESIGN

An ethnographic approach was chosen for our study because we are concerned with the study of practices, “with behaviours, with what people do, what they value, and what meanings they ascribe either singly or in groups” (Saunders, 2011, p. 2). Practices are social phenomena with interconnected discernable characteristics, including intellectual activities, materials and their uses, and procedural know-how (Reckwitz, 2002). Traditional ethnographic researchers enter participants’ natural settings, their communities, where they become socially and physically close to participants as they observe their daily lives, activities they perform, and ask questions and listen. The phenomenon of interest is situated in an online environment; thus, we focus on virtual

ethnographic methods. Hines (2004) provides a rationale for virtual ethnography, noting that as the Internet is now a part of everyday life and if the people we study conduct aspects of their lives on the Internet then researchers must do the same.

Data Collection and Analysis

There were thirteen students enrolled in the course section we examined in Year 1 of the study. Four of the thirteen students agreed to participate in our study. Each participant has been assigned a pseudonym. Data was collected through synchronous visual and auditory format; asynchronous text based online constructs as well as focus group and interview conversations. Our study instruments collect archived auditory and text-based online course data, focus group, and individual interview data. Data analysis was undertaken in four phases: compiling, disassembling, reassembling, and corroborating information across data sources. The research team used *NVivo* software for analysis. We undertook a two-step coding cycle: (1) *in vivo* coding, and (2) thematic coding. We reassembled our data to align identified patterns and themes with agreed upon indicative evidence via *NVivo* queries. The process continued until the research team has reached a saturation point and could no longer identify new indicators of student engagement or learning. Finally, by way of *NVivo* matrix analysis, we identified variant themes of learning across multiple modes of communication.

PRELIMINARY FINDINGS

During Week One of the course, students reviewed a voiced-over online MS PowerPoint presentation, read two foundational readings on comparative educational research methodologies, participated two synchronous online discussions, and provided reflections on these learning experiences in an asynchronous text-based forum. As we are just beginning to analyze data from

the Fall 2015 course, our preliminary results are based upon Weeks One and Two archived D2L text-based data, but participants commented on all three learning experiences in their reflections.

Emergent Evidence of Collaborative Learning across Modes of Communication

Participants' asynchronous text-based reflections on listening to the voiced-over online MS PowerPoint presentation, participating in synchronous discussions, reflecting on course readings, and engaging in interactions with their peers and the instructor provide preliminary evidence of what they learned, where they learned, as well as via which modes of communication. Table 1 (see Appendix) provides an overview of early evidence from an *NVivo* matrix query that cross-references identified themes from first-round *in vivo* and second-round thematic codes. Participants frequently commented on the extent to which they were collaboratively developing working research knowledge across modes of communication. For example, in an asynchronous D2L conversation between Stella and Mary, both referenced a previous Adobe Connect synchronous discussion. Stella prefaced her reflection with, "I enjoyed the last night's [Adobe Connect] session," then went on to say that she felt most "engaged" with the information in the voice-over "MS PowerPoint" distributed via the asynchronous D2L learning management system and within the synchronous Adobe Connect "small group discussion" in developing her "perspective and place in regard to research." Mary noted she had enjoyed "the Adobe Connect session and particularly the breakout room" and recommended an additional reading as a potential resource for an issue Stella had mentioned in her post. Similarly in an asynchronous discussion initially between Mary and Zack, Mary posed the question to Zack:

Do we not, as researchers, have to become aware of, what I will package as, "biases" and then remove those biases, ourselves, our "distinction", and any others that do not ensure the research findings can stand on their own; and gather those that do?

Zack responded with a question of his own:

Yes, and no. Yes, because it is our "duty" to adhere with the "standards" of rigor, which include trying to isolate and account for our biases. No, because, as we have seen in the Denzin and Lincoln text, there is a second type of rigor, our "interpretive" rigor (p. 120), which is an internalized and immeasurable form of rigor. After all, reproducibility of results is only one of many ways of testing/ensuring rigor. What about reflexivity, after all?

Amy responded to this threaded conversation to let Mary know question that her "questions [were] good, questions that [she would] have to give some thought to."

Throughout these interactions, participants shared personal knowledge, questioned each other, and supported each other's iterative development of collaborative working research knowledge.

Emergent Evidence of Individual Learning across Modes of Communication

In the asynchronous text-based entries in the D2L forums, participants frequently reflected on their own learning pathways across modes of communication. For example, Amy reflected on understandings she gained from *a course reading*:

Recognizing that experiences and perspectives can vary depending on one's "standpoint," I connect with Conole's (2010) article on interdisciplinary research and the idea that "different theoretical perspectives would explain this networked learning situation differently, and how each can contribute to our understanding of this field" (Conole, 2010, p. 11).

Mary noted that she:

Learned from the Commensurability in Research Design *slide file* the importance in your research of using the same language, avoiding semantics, and using the same units of measurement, all of which will permit researchers to directly compare theories.

In one of Amy's D2L posts, she acknowledged Mary's ideas, questions, and concerns expressed in *a thread in a D2L forum*, and commented on the her personal learning: "I have been reading

your responses to others.” Amy noted that following this D2L thread had given her “a lot to mull over when it comes to methodological pluralism and methodological incommensurability.” Within the asynchronous D2L discussions, participants’ referenced multiple communication modes in their development of personal research knowledge.

DISCUSSION

In our preliminary findings of participants’ interactions, expressed values and ascribed meanings (Saunders, 2011), we have found emergent evidence of online learning practices that include discernable characteristics (Reckwitz, 2002), including student engagement activities across synchronous, voice-based discussions and asynchronous, text-based discussions. Participants in our study have engaged in active, individual and collaborative learning, and demonstrated engagement across modes of communication. Through their interactions participants have negotiated, reflected, and questioned each other’s perspectives on educational research. It is plausible that the inclusion of multiple formal and less formal opportunities for participants to engage in synchronous audio discussions within our course redesign—based on our reflections on previous teaching practices and Sgouropoulou et al.’s (2000) and Bell’s (2015) recommendations that text-based technologies alone may be insufficient—may have contributed to sustained student engagement in asynchronous text-based discussions.

IMPLICATIONS FOR RESEARCH AND PRACTICE

While our findings are preliminary, we have found emergent evidence that purposefully designed online courses that include both synchronous audio discussions and asynchronous text-based discussions may positively impact student engagement. To date, our findings do not fully affirm Jones, Aseno, and Goodyear’s (2011) delineations of synchronous and asynchronous

Simmons, Parchoma, Jacobsen, Nelson, & Bhola

communication modes as serving specific learning needs. Rather we have found evidence that students reflect upon and make connections among conversations across different modes of communication. Implications for research suggest revisiting categorizations of specific modes of communications for specific learning tasks within learning designs. Implications for practice include emergent evidence supporting the need for online learners to have multiple modes of communication to individually and collaboratively develop working knowledge.

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Appendix

Participants' reports of learning over 2 of 13 weeks of the redesigned course	Via modes of Communication		
	More formal, D2L discussions	Less formal, Adobe Connect synchronous auditory discussions	Making connections among less formal synchronous auditory discussions, more formal asynchronous, text-based discussions, and personal engagement with readings and the instructor
Collaborative student development of working research knowledge	32	2	12
Individual student's development of personal research knowledge	45	2	10

Table 1: NVivo matrix of cross-referenced themes

Note. Consenting participants from the redesigned course (n = 4) are presented through NVivo matrix of cross-referenced themes for weeks 1 & 2.