

2014-05

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Preciado Babb, Paulino

University of Calgary

Preciado Babb, P. "Learning About Research by Research Design: Students' Perceptions of a Master's Online Course in Education". 2014. In P. Preciado Babb (Ed.). Proceedings of the IDEAS: Rising to Challenge Conference, pp. 189-197. Calgary, Canada: Werklund School of Education, University of Calgary.

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LEARNING ABOUT RESEARCH BY RESEARCH DESIGN: STUDENTS' PERCEPTIONS OF A MASTER'S ONLINE COURSE IN EDUCATION

Armando Paulino, Preciado Babb

Werklund School of Education, University of Calgary

Informed by signature pedagogies, the course EDER 603 Research Methodologies in Education requires students to write their "Research Commitments" as a major assignment. This assignment is very similar to a research proposal and participants in the course had to identify a research topic, problem, and purpose, as well as create research questions and identify an appropriate methodology. The course involved feedback cycles from both peers and the instructor. In this paper I reflect on the technological tools used for the online course, including challenges and students' perceptions of the course design.

INTRODUCTION

In Fall 2013 I had my first experience with online teaching. The course was *EDER 603 Research Methodologies in Education*, which I had taught on-campus twice before, and for which I had received excellent comments from my former students. In this paper I elaborate on how signature pedagogies and formative assessment informed the design of the course, describe the online tools I used for team discussion and class conversation, and offer a reflection about the contrasting experiences from the two sections of the course. Through reflection on my first experience, I want to elaborate on, and add to, instructional strategies for online courses in general, and discuss particular issues related to this course

in research methodologies. Instructors, program designers, and students might be informed by my story in this paper.

SIGNATURE PEDAGOGIES AND FORMATIVE ASSESSMENT

The term *signature pedagogies*, introduced by Schulman (2005), refers to "the types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions" (p. 52). While instructors at the university level commonly include information and ways of doing characteristic of the professions that the courses are preparing students for, signature pedagogies stress the importance of engaging students in the authentic activities and ways of creating knowledge.

Both formative assessment (Vaughan, Cleveland-Innes, & Garrison, 2013) and the creation of virtual communities (Garrison, Anderson, & Archer, 2001) have been identified as key components in online courses. Dibbs, Glassmeyer, and Jensen (2011) in a phenomenological study of graduate students enrolled in an online master's program concluded that formative assessment tasks involving virtual communities can help to promote student learning and satisfaction. They provided specific advice for teachers: "Online instructors should structure formative assessment tasks to allow interaction, collaboration, and trust between students" (p. 32).

Formative assessment is usually integrated in my courses through discussion forums. Students are required to post drafts of their assignments and provide feedback to their peers. I also provide feedback in the same discussion forums, which serves as a model for effective feedback. In my experience, I have seen that this process is beneficial for both students receiving and students providing feedback.

DESCRIPTION OF THE COURSE

The course *EDER 603 – Research Methodology in Education* provided a general introduction to research methodologies and challenged students' epistemological assumptions about knowledge and research. The main goal was to examine diverse issues, methods, and techniques in educational

research. Participants were expected to approach primary research, as opposed to research reviews, with a critical eye. Informed by Creswell (2012), the course included the following components related to research: critical and efficient literature review; selection of research purpose, problem and question; selection of an appropriate methodology; academic writing style; and skills for problem solving, including solving puzzles.

Three major assignments were required for this course: 1) Research commitment, similar to a research proposal; 2) Critical review of an academic journal; and 3) Presentation of a research methodology by teams. Additionally, I required participation through weekly activities including: a) discussion of the content of the course, based on Creswell (2012); b) peer feedback for the major assignments; c) general class conversations; and d) puzzle solving. It was mainly in the fourth requirement where formative assessment was integrated into the course. Commonly, in face-to-face versions of the course many of these weekly activities took place during class allowing me to provide instant feedback based on the comments during class, and helping me to plan the next session accordingly.

From face-to-face to online

It was easy to export and adapt the three major assignments from my previous courses into the Blackboard shell for this online course. Finding an alternative to the rich in-class conversations taking place in the on-campus course was more challenging. I decided to use the Discussion Forum in Blackboard for feedback rounds and general class conversations and VoiceThread for team conversation. In this fashion, students would have the opportunity for personal interaction and debate, and I would be able to provide feedback and interventions on a weekly basis. The course workload for students should be similar to the amount of time and effort invested in the on-campus version.

VoiceThread is an online platform that allows asynchronous conversations around images or video. The left image in Figure 1 shows an example of a thread, or conversation, in VoiceThread. Images are

presented in the centre of the screen and participants can comment using voice, text, or even video. Every participant has an icon that can be replaced with a photograph, or any other image. Additionally, it is possible to doodle lines on top of the central image while making a comment.

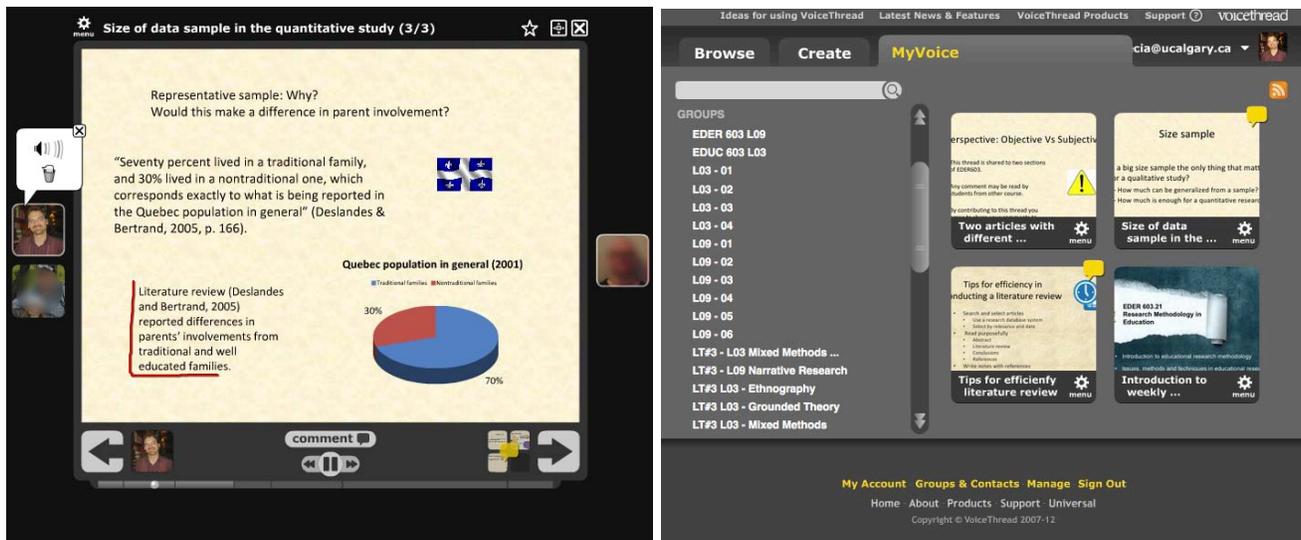


Figure 1. Conversation thread (left) and course organization (right) in VoiceThread.

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Although basic features of VoiceThread are offered for free, the license for teachers provides convenient features for course management for the reasonable fee of \$100 per year, with no extra cost for students. An example of the instructor's view in VoiceThread is presented in the right image in Figure 1. In the left part of the image there is a list of all the groups.

Students were expected to participate actively in both class discussions and team conversations during the first weeks of the course. Weekly participation in Blackboard included an initial comment and responding to three posts—approximately 250 words for each post. Similarly, students were expected to participate in VoiceThread three times per week: 1) a comment on the question or activity of the week; 2) a response to peers' contributions; and 3) a one-minute-maximum personal reflection and summary of the conversation. The total amount of time students needed to participate in VoiceThread was 5 to 10 minutes per week.

Formative Assessment

Every major assignment undertook both peers and instructor's feedback. Particularly, for the Research Commitments learning task three cycles of feedback were planned. The first one was conducted during the second week when students were asked to identify a problem that justified research, post it, and provide feedback to other classmates. The second cycle took place during week four when students had to submit a four-page-maximum advance overview of the task including the topic, the problem, a tentative research question, an indication of the methodology, and references to relevant literature.

The last round of feedback was conducted two weeks before final submission, by the end of the course. I used a rubric for assessing this learning task, which helped to set expectations and facilitate the formative assessment for the last round. The 'excellent' category reflected high quality work and the highest description, 'outstanding,' compared the quality of students' work with actual published research papers.

Another form of formative assessment was conducted through my participation in the team discussions in VoiceThread. By participating in these conversations I was able to add further comments, ask questions to trigger deeper conversations, and clarify doubts about the readings.

ISSUES

In a reflection on the experience of teaching this online course, I identified two major issues representing opportunities to improve both my practice and the graduate programs at the Werklund School of Education.

Perception on Workload

There were two sections of this course, each one corresponding to a different cohort. In one cohort students were advanced in the program and this was one of the last courses, whereas in the other cohort students were starting the program.

During the first week some students wrote emails with concerns about the workload and the expectations for the course. I met with the Associate Dean of the graduate programs to revisit the course outline and student workload. While we agreed that students' workload seemed to be reasonable, we decided to make a few adjustments in response to students' concerns, as summarized in Table 1.

4 posts in Blackboard per week	2 post in Blackboard per week
250 words approx. per post in Blackboard	250 words max. per post in Blackboard
3 comments in VoiceThread	2 comments in VoiceThread
5 to 10 min in VoiceThread per week	3 to 5 min in VoiceThread per week

Table 1. Changes to course requirements

Once the changes were announced, students from the cohort who were at the beginning of the program wrote emails indicating that they did not have trouble with the previous expectations of the course and that the discussions in both Blackboard and VoiceThread were actually very useful for understanding the weekly readings.

Even though modification were made, some students from the advanced cohort kept indicating that the course workload was excessive compared with previous courses they had taken in the program, which included only three learning tasks. I conferred with colleagues about an expected amount of time per week for students in a master's online course in the program, concluding that a range between seven to eight hours would be reasonable. With this range in mind, I asked students to report how they were spending their time for the weekly activities in the course.

After exchanging emails with a couple of students, there were two major issues: 1) engagement of up to six hours in Blackboard and VoiceThread per week, and 2) the need to read more than 300 pages for the submission of the four-page advance of the Research commitments. I explained thereafter that two hours per week should be enough for weekly posts and comments and that they did not need to read all

of the subsequent chapter from the text to write the advance of the Research Commitments: The draft was to be written based on the readings covered at that point.

At the end of the course I received positive comments from both groups. I also receive an email from a student who was initially reluctant to engage in the puzzles. This student understood the purpose and importance of puzzles in the course and apologized for the previous harsh comments.

The issue with the advanced cohort seemed to be a problem of communication and a mismatch of expectations, particularly for the amount of hours per week spent in weekly discussions and the number of tasks students were required to undertake for this course. From the comparisons with other courses and the fact that the concerns were raised from the advanced cohort, it is reasonable to conclude that students' experiences with previous courses in the program represented a factor for this issue.

Perspective on research

The second issue I reflect on in this paper is also related to students' background; more precisely, with their perceptions of research. Although students read the first chapters of Creswell (2012) and the class discussed research methodologies in education, identifying an academic journal that publishes empirical research was a common challenge.

As the critical review of an academic journal was one of the major tasks in the course, students were asked to: 1) post in Blackboard a description, with the corresponding web-link, of the journal they wanted to review; and 2) provide feedback to their peers. From the discussion forum I identified several people choosing journals such as the *Educational Research Review*, which only publishes reviews—as opposed to papers based on empirical data. Although studies in these reviews may also be considered research, the course focused on issues in primary research, such as ethical concerns involving human beings.

Identifying the type of research published in an academic journal was not an easy task in some cases. I asked students to look at the description of the journals, the aims and scopes, and the instructions for authors. Sometimes, it was necessary to actually look at some papers to have an idea of the type of articles published in a journal. To my surprise, it was hard for several students to identify a research report using empirical data.

Some students commented that they used best-evidence syntheses as a research methodology for papers in previous courses. Additionally, some students wanted to describe meta-analytic reviews for the Presentation of a Research Methodology task of the course. I explained that such strategies would be interesting and useful, but that they fall beyond the scope and focus of this course. Besides, they should be able to critically evaluate empirical studies in order to conduct a research review. So, I asked them to choose a methodology for primary research—research based on empirical data.

In summary, students' previous experiences with, and perspectives of, research framed their choice for an academic journal. As one of the goals for this course was to critique empirical-based research, not being able to distinguish primary research from research reviews became a major problem.

CONCLUSION

Through reflecting on this first online experience as an instructor, I have three specific actions suggestion for the instruction of this online course on research methodologies in education: 1) make explicit the expected time per week students should allocate for the course; 2) allot more time for the selection and analysis of academic journals; and 3) consider VoiceThread for weekly team conversation.

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