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STUDENT LEARNING IN SYNCHRONOUS ONLINE CLASSES: RESEARCH PROJECT BRIEF

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January 19, 2017

Acknowledgements

We are grateful to the Office of Teaching and Learning, Werklund School of Education, University of Calgary, who awarded funding for this project under the Scholarship of Teaching and Learning Grant, 2016-2017.

Ethics

Conjoint Faculties Research Ethics Board (CFREB): Study ID: REB16-1547

Researchers declare no conflict of interest for this study.

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Citation (APA, 6th edition):

Eaton, S. E., Brown, B., & Schroeder, M. (2017). Student learning in synchronous online classes: Research Project Brief. Calgary: University of Calgary.

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Abstract

Researchers will examine how online synchronous sessions used in distance delivery courses support student learning in professional graduate programs. Data will be gathered on the type of learning activities used by instructors. Following each synchronous session, students will be surveyed on their perceptions of the effectiveness of the activities in supporting their learning. Instructors, program administrations and students will be invited to follow-up interviews at the end of term. This study has the potential to contribute to our understanding of how different learning activities are received by students as well as how learning activities are connected to curriculum.

Project Overview

This project investigates how instructors in the Werklund School of Education (WSE) use synchronous sessions (delivered via Adobe Connect) to support student learning in two professional graduate programs: Master of Education (MEd) and Doctor of Education (EdD). In particular, we will focus on research design courses that aim to help students conceptualize their individual research projects. In these programs students are working professionals and bounded by a common purpose in their course work, that is, students engage in research relevant to their professional practice.

With the increased offering of online coursework, a body of research has emerged examining the effectiveness of online instruction in a number of domains. One domain is the community of inquiry framework that looks at student engagement (Akyol & Garrison, 2008; Garrison, 2007; Garrison, Anderson & Archer, 2000). As we have elaborated elsewhere, to date most research on online learning has focused on asynchronous courses with a paucity of research examining synchronous sessions (Brown, Schroeder & Eaton, 2016).

In this study, the researchers will survey students enrolled in two distance education programs to evaluate the teaching strategies used by instructors. Students will complete a short questionnaire after each synchronous session during the semester that asks questions about the strategies implemented and perceptions about their effectiveness to support learning. Additional data will be gathered by course instructors who will record their online sessions and the learning activities will be documented.

Recommendations will be provided as part of the final report.

Innovation

In this study, the researchers explore how to strengthen innovative practice with attention to student-student and student-instructor interactions during online synchronous sessions; the findings will inform future designs of the research-design courses well as other online courses that incorporate synchronous sessions to foster a community of inquiry as part of distance delivery. The findings from this study will serve to inform instructors designing and teaching online undergraduate or graduate level courses and future research agendas in this area.

One innovative approach to our work is that we examine these questions using the Community of Inquiry framework (Akyol & Garrison, 2008; Garrison, 2007; Garrison, Anderson & Archer, 2000), while also considering the notion of signature pedagogies (Olson, 2005; Parker, Patton & O'Sullivan, 2015; Shulman, 2005).

Researchers will explore the impact of synchronous sessions on student learning and how synchronous sessions can support a community of inquiry, defined by Garrison, Anderson and Archer (2000) as teaching, cognitive and social presence. In addition, researchers will identify the signature pedagogies used during synchronous sessions that are perceived as having an impact on student learning by the students, instructors and course administrators. One objective of this study is to identify signature pedagogies for online synchronous courses in professional graduate education.

Research Questions

The primary research question guiding this inquiry is:

1. How do online synchronous sessions support student learning in professional graduate programs engaging in research active opportunities for scholarship of the profession?

Secondary research questions include:

2. To what extent do online synchronous sessions impact student learning in researching authentic problems of practice through distance delivery courses?
3. How do the online synchronous sessions align with the learning outcomes for research design courses?
4. What signature pedagogies make for successful learning during online synchronous sessions?

Methodology

Using a mixed methods action-research approach, researchers will survey and conduct interviews and focus groups with instructors, students and program administrators; document designs of the recorded synchronous sessions; and review instructor reflections following the sessions.

Participants

As this study is taking place in the Werklund School of Education, University of Calgary, all participants will be affiliated with the School in some capacity. Participants in this study include:

1. Students enrolled in online courses
2. Course instructors
3. Administrators

Data sources

Sources for data include:

1. **Interviews** for administrators, instructors and students
2. **Surveys** for students and instructors;
3. **Recordings of learning activities used in the Synchronous Sessions** offered as part of the online courses.

Significance

The purpose of the project is to gather student, instructor and administrative perspectives about the quality of synchronous online sessions, the signature pedagogies used and perceptions of impact on student learning. Currently, synchronous sessions are used as part of the distance delivery model for graduate courses, including the research design courses. However, the impact of these sessions on student learning remains unknown, at least in the Werklund School of Education, University of Calgary. The institution-wide Universal Student Ratings of Instruction (USRI) reports provide data about overall instruction for the distance delivery courses but do not specify student perceptions about the quality of synchronous online sessions or the impact these sessions have on student learning. In these courses, students are also challenged to engage in an online scholarly community of inquiry during synchronous sessions. This study will fill a gap in current data about what is currently known about the impact of synchronous sessions on student learning.

The researchers will gauge the success of this project by determining how signature pedagogies are used during online synchronous sessions and the resulting impact on student learning in a community of inquiry. The researchers will also review how the findings serve to inform future designs of synchronous online sessions for professional graduate programs and specifically how to optimize innovative practice in these types of sessions for courses that focus on supporting working professionals with designing research projects during their graduate programs.

Knowledge Mobilization Plan

The researchers will disseminate the results locally with institutional leaders (e.g. Deans, Werklund School of Education) to inform distance delivery models and instructional design at the University of Calgary and will share results more broadly with the community through conference presentations (e.g. IDEAS 2017, CSSE 2017). The researchers plan to continue supporting this project beyond the grant period and will prepare conference proceedings and journal publications. The scope of this research may also be expanded in future to include other online courses and faculties at the University of Calgary.

We will submit a final report (poster format) submitted to the WSE Office of Teaching and Learning, within two months of the project completion.

Research Assistant Roles

This project will include one Graduate Research Assistant, who is hired in accordance with University policies and procedures. Duties may include, but are not limited to:

- Attend and actively participate in research team meetings.
- Assist with participant recruitment, obtaining informed consent and keep accurate records for the project.
- Collaborate with the Principal Investigator and other research team members to implement protocols for secure storage of data.
- Maintain detailed and organized project documentation, including reports, data, etc.
- Assist with literature reviews, documentation and report preparation.
- Assist with clerical work as needed.
- Assist with collaborative knowledge dissemination activities.
- Other duties as assigned.

Intellectual Property Statement for Research Assistants

The purpose of this statement is to ensure clarity and transparency among all members of the research team. According to the University of Calgary Intellectual Property Policy:

“Persons paid to perform specific assigned tasks unrelated to their academic program are employed and, in the absence of another agreement, their work belongs to their employer” (p. 13).

The intellectual property rights for this project technically rest with the Principal Investigator (PI) and Co-Researchers. Research Assistants may not claim outputs or results from this work as their own without the explicit permission of both the PI and Co-Researchers. Research Assistants (RAs) are hired to perform specific duties and tasks in relation to the project, but this does not entitle RAs to intellectual property rights.

RAs may not copy, publish or publicly share results or any other work relating to this project without the explicit written permission of both the PI and Co-investigators.

Under certain circumstances RAs may be invited to contribute to collaborative dissemination of research results (e.g. conference presentations or publications). The PI would extend an invitation to collaborate based on the depth and substance of intellectual contributions made by RA to the research project.

Research assistants are encouraged to have open and frank conversations with the PI about what constitutes a substantive intellectual contribution to a research project.

Works Consulted

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Research Team Biographies



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