

EDUC 994: Advanced Internship in Education Proposal

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I have the opportunity to work with the Joanna Jauchen, the instructor for Math 271 Math for Elementary School Teachers, as a participant observer. The course is designed to develop content knowledge in undergraduate education majors. As a participant observer I will be able to conduct an ethnographic study of this population to gather information on their learning experiences that will contribute to the development of a proposal for an education design research project. I would like to propose this activity as an Internship in Education for EDUC 994 credit.

Learning Objectives

By being present throughout the mathematics course, I will be able to conduct an ethnographic study for an extended period of time. I will be able to refine my skills as an ethnographer and develop and deploy the methodologies used for this type of study as I explore the experiences of both the instructor and the students in this environment. Conducting this ethnographic study will add to my skills as an educational researcher. Exploring the literature will deepen my knowledge and understanding of the methodology.

The purpose of the ethnography is to gather data in order to develop a technology based intervention to support mathematical procedural understanding of this population. In addition learning more about the research method, I will use the insights gained to develop a proposal for an education design research project. As a result of this internship I will gain insight into how undergraduate mathematics students learn, and in what ways that insight can be leveraged to support future students.

Duties and Responsibilities

I will use the ethnographic research methods of *experiencing*, *inquiring*, and *examining* as the organizing framework for data collection. *Experiencing* will be accomplished by being present in the classroom to observe the day-to-day activities of the students. I will generate field notes of interactions between members of the class and record details that I see and hear. As a participant observer, my intent is to take an essentially passive role, though this role may shift over the semester with the natural changes in relationships with the students and the instructor that will take place. *Inquiring* will take place through casual conversation, semi-structured and unstructured interviews, and questioning to clarify student understanding when opportunities arise. In addition to the observations gathered through experiencing, I will use field notes to record interactions with students and their comments and responses to clarifying questions. Responses to interviews will provide additional data. *Examining* will consist of an examination of the work generated by the students during the course, including student homework, student tests, and other student generated items.

Throughout the semester, as data is gathered and my understanding of the environment grows, I will develop an ongoing ethnography. Central to this reflective recursive process will be the focus on what is working to build student understanding and what needs remain.

Role of On-site Supervisor

Throughout the semester Dr. Suh will monitor my day-to-day activities and advise on types and methods for data gathering and analysis. She will support the growth of my learning about qualitative research and will advise on the development of the final ethnography. In addition she will support the ongoing development of the proposal for the education design research project. She will guide my exploration of the literature on the intersection of ethnographic research, preservice teacher training and design research.

Reports and Other Products to be developed

Two reports will be developed from the data and the experience of this internship. The first is the ethnography: a culminating paper that will include a description of what I have observed and the insights that I have gained and how it relates to the problem of procedural understanding in this population. The data gained will contribute to the development of a proposal for an educational design research project to develop educational software. I will submit a project report on the development of the proposal.

On-Site Working Schedule

The on-site working schedule will begin the week of January 22, 2018 and end the week of May 10, 2018. Ten hours per week of observation and advising will take place during the 16-week semester.

Evaluation Procedures

Evaluation of my work will be conducted by Dr Suh through feedback on the ethnography as it develops, and through feedback on the resulting software development project report.