Courses in Educational Technology Self Reflection on Pedagogy Instruction and Design

WeiHsuan Lo

Erin Wachter

Bryan Westman

Dr. Larkins

University of Northern Colorado

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**Introduction**

The purpose of this portraiture case study is to reflect upon and develop a pre-service educator technology class at a teaching university. Through self-contemplation and shared observations three doctoral students will assess their strength in an attempt to understand the educational process. At this stage in the research, the portraiture is defined as a way to capture, interpret experiences and perspectives of these individuals as they study themselves and each other while documenting their vision and voices as well as hopes, (Lawrence-Lightfoot, & Davis, 1997). Through this progression of contemplation an enhancement of techniques and self-consideration will direct the growth of the curriculum to which they impart.

In the endeavor of self-improvement and developing a course to meet the needs of pre-service educators, school districts and an educational university, it is important for the instructors of an education technology course to reflect upon their own understanding of the course. “Teachers find themselves faced with the pedagogical implications associated with moving to a new teaching and learning paradigm for which they may not feel fully prepared” (Moore-Hayes, 2011, p. 3). By using the process of portraiture to observe our success and each other’s, we hope to understand our very teaching methods and develop new instructional methods for future use. An educational technology class for future educators is one that demand constant improvement and redesign. “Effective technology integration enhances current instructional practices and enables new processes, so teachers can facilitate lessons that develop 21st-century skills in students” (Tyner, 2018, p. 6). Improvement is a cornerstone of the educational and technology environments. Throughout our reflection we hope to view our own development as a way to meet the needs of our professional growth.

We will observe each other while reflecting on our own teaching practice. Through the use of journaling at the conclusion of each class we will discuss our thoughts on our successes, in an attempt to provide a snapshot of our teaching experience. Within the course of the observations each member will witness the others instruction in our educational technology programs. In an attempt to provide other views of each of our accomplishments of communicating knowledge to pre-service teachers. Each member will provide consent and share in the information needed to understand our development. All of our journal, artifacts and observations will be added to each other’s work in an attempt to recognize our educational process.

**Literature Review**

Today, educators are increasingly integrating technology across curricula (Voithofer & Nelson, 2020). However, the capacity of technology to improve student achievement depends significantly on how teachers incorporate the technology into their practice (Tamim et al., 2011). Hager (2020) points out that on top of delivering the lesson and managing students’ behavior as a novice teacher, there are numerous technological challenges for new teachers that can be difficult to manage. Teacher education programs must provide pre-service teachers with the knowledge and skills for effective use of technology in classrooms, (Dong & Mertala, 2019).

Recent findings show that teacher education programs need to develop more robust curricula addressing concerns (Alelaimat et al., 2020). Hager (2020) predicts that it is likely that technology used in teacher preparation programs will keep changing because technology is evolving at a rapid pace. Therefore, as major educational technology changes happen in teaching, future instructors need support, time to process, and apply their skills to new situations (Ferdig et al., 2020). Through the reflective process the reteach hopes to find strengths in the program and further develop a successful instructional course that produces technology literate pre-service teachers.

**Research Questions**

The questions to be researched in this study are as follows:

1. What content should be covered in educational technology courses for pre-service teachers?
2. How can we improve the pedagogy of our instruction to facilitate pre-service teachers learning?

**Method**

**Participants**

This portraiture will focus on the three individuals who are the instructors of an educational technology course and are also the investigators. By observing each other’s work and assessing the strengths of the instruction each member will be a subject and investigator. All of the participants are doctoral students at the University of Northern Colorado and are instructors for undergraduate education technology courses for pre service teachers. Due to different class times and schedule and to add to the trustworthiness of the observations, each member will record their instruction through the aid of video conferencing programs such as Zoom. Once a class has been recorder the video will be shared with the group for evaluation.

**Research Design**

This research is a portraiture study based on case study research using qualitative design.

**Procedures**

According to Stringer (2007), educators need to improve their practice by conducting practical action research based on the Action Research Interacting Spiral: (1) look, (2) think, and (3) Act. In order to improve the quality of educational technology curriculum and course implementation, practical research is used to identify areas of focus, collect data, develop an action plan and then analyze and interpret the findings (Creswell & Guetterman, 2019). In order to address the research questions, the researchers will conduct the research with the following steps : (1) evaluating course syllabus, Canvas learning modules and instructional pedagogies. (2) revising the existing educational technology courses curriculum prior to the Fall 2021 semester, (3) Recording class instruction so as to allow each member of the group to observe each other’s method of teaching. (4) Evaluate teaching strengths and methodology as a way of improving the overall courses success in conveying needed comprehension onto pre-service teachers. (5) Assessing overall programs success of instruction.

**Data Analysis**

As a group, we will record our time instructing pre-service teachers through the use of online conferencing programs like Zoom. Through this process we will also have transcriptions of the class time that can be used to enhance the trustworthiness of the documentation. Each member of the research team will review the others instructional time and provide a breakdown of the positive nature of their time with their students. To aid in the process each member will code the findings looking for themes that appear in the course of each class. By means of coding, patterns, themes and similarities in instruction will be looked for and documented.

**Trustworthiness**

Each member will digitally record their teaching so as to allow for the other members of the group to observe their work. Transcripts will be for each shared presentation. Through this process each researcher will review and check the other to address the trustworthiness.

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**Appendix A: Consent Form**



# **CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH**

**Project Title:** A case study of educational technology instructor's perspective of educational technology course for preservice teachers

**Researchers:**

          WeiHsuan Lo, Technology, Innovation and Pedagogy

 Phone Number: (508) 863-6328  E-mail: lo1984@bears.unco.edu

        Erin Wachter, Technology, Innovation and Pedagogy

 Phone Number: (720) 939-5128 E-mail: wach0044@bears.unco.edu

          Bryan Westman, Technology, Innovation and Pedagogy

Phone Number: (720) 244-1719    E-mail: west7333@bears.unco.edu

**Research Advisor:**

 Randy Larkins, Applied Statistic and Research Methods

 Phone:(970) 351-1676     Email: randy.larkins@unco.edu

This portraiture case study aims to reflect upon and develop a preservice educator technology class at a teaching university. We ask you to provide two hours/one unit of zoom class recording, course syllabus, Canvas shell, and six reflective journals. The researchers will observe all artifacts to recognize the educational process and conclude the instructor's thoughts on successful teaching practices to provide a snapshot of the teaching experience. Informal interviews lasting no more than thirty minutes each may occur if a researcher would like some more information regarding observations and / or artifacts. The results of this study will help educators improve the effectiveness of teaching educational technology courses for preservice teachers.

Information you provide for this research will only be shared with the investigative team members and re-storied into a research paper. All student names will be given a pseudonym, so no identifying information regarding students will ever be released, even if this research is published. By participating in this research however, you acknowledge that your name will be used. Although confidentiality can never be guaranteed, the research team will utilize every effort to maximize your confidentiality. Research data will be kept in a password-protected cloud drive that only the researchers will access. All files will be destroyed in three years.

There are no anticipated risks to you outside of what naturally in a discussion about instruction in your classroom. The direct benefits to you may include gaining practice in participating in research and self-reflecting your own practice. Participation is voluntary. You may decide not to participate in this study, and if you begin participation, you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in the loss of benefits to which you are otherwise entitled.

Initial: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Page 1 of 2**

Having read the above and have had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, IRB Administrator, Office of Sponsored Programs, University of Northern Colorado, Greeley, CO 80639; 970-351-1910.

Participant’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Researcher’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **Page 2 o**

## **Appendix B: Interview Questions**

Interview Questions will arise directly from observation and investigations of artifacts. Therefore, no specific interview questions are given here. However, all questions will relate specifically to the research question.