Personal Reflection: “Joy Ride” with SoTL Practice: The Investigation of the Effectiveness of Assistive Technology Course Contents on Student Learning

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Keywords
Assistive technology, Scholarship of teaching and learning, Professional development, Teacher education program

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Abstract
This reflection is based on my project that investigated the impact of new course content on student learning of basic knowledge and attitudes toward various assistive technology (AT) devices and services using multiple measures in an introductory-level course in a special education program at Indiana University-Purdue University Fort Wayne. Through this project, I experienced an unexpected paradigm shift, realized a strong connection between teaching and research, and launched my journey to practice the Scholarship of Teaching and Learning (SoTL). Practicing SoTL allowed me to constantly reflect on my own teaching and model effective teaching practices I preach to current and future teachers of students with disabilities.

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Introduction
At Indiana University-Purdue University Fort Wayne (IPFW), all tenure-track faculty members need to indicate their area of excellence, either in teaching or research, for evaluation purposes for promotion and tenure. From the beginning, I was determined that I would apply for promotion and tenure with excellence in research. During the first semester, with great ambition, I submitted a research proposal for funding available on campus that would allow me to have undisrupted research time during the following summer. However, it turned out to be an unsuccessful attempt. In desperation, yet with undefeated spirit, I was on a mission to identify other funding and won the Summer Instructional Development Grant from the Center for Enhancement of Learning and Teaching (CELT) at IPFW. This funding caused an unexpected paradigm shift in me, showed me a different world of teaching and research, and initiated my engagement in the Scholarship of Teaching and Learning (SoTL).

My SoTL Project
During my search for funding, the director of our special education program called for a meeting to identify an existing special education class in which it would be appropriate to incorporate assistive technology (AT) contents. The director asked me if I would be willing to introduce AT to our students who are current and future teachers for students with disabilities. The proposal I was working on was, in fact, exactly about the innovation of the existing course with new AT content, the evaluation of the effectiveness of this innovation on student learning, and professional development needed for this innovation. It was an interesting moment; a rendezvous of my interest and the interest of the program.
The innovation was necessary because teachers are required to demonstrate basic knowledge of AT services and devices (CEC, 2011) and include AT in individualized education plans (IEP) for students with disabilities (Wright & Wright, 2005). However, AT devices are not effectively used for students with disabilities in classrooms due to a lack of knowledge, understanding, and experience with AT devices and related federal laws among teachers (Dungan, Campbell, & Wilcox, 2006; Edyburn, 2003; Wahl, 2004). Teacher education programs often do not provide adequate AT training for teacher candidates (Voltz & Elliott, 1997). It would be partially due to the fact that many teacher education programs do not have appropriate resources to train students on AT. In addition, faculty members need constant professional development on this dramatically changing field of AT. AT devices can be “low-tech,” such as special paper, “mid-tech,” such as talking calculators, or “high-tech,” such as computer synthesized speech devices.

In Spring 2010, I was granted the instructional development funding from CELT at my present university. Multiple measures were used to investigate the impact of new AT course content on student learning: observations, exams, resource portfolios, training participation reports, and pre-post surveys. The results revealed that students gained fundamental knowledge and understanding of AT devices, services, and related federal laws requiring AT for students with disabilities. The summer funding allowed me to receive professional development on AT with the assistance of a federally-funded AT project in Indiana. The funding benefited me as an instructor and researcher and made an impact on our special education program, the IPFW campus, and our university students. Our program has started purchasing AT devices to start our own resource library. My knowledge and experiences with AT and my effort on identifying available AT on campus contributed to improving the awareness of the importance of AT for students with disabilities attending IPFW.

Since Fall, 2010, I have continued the data collection in the same course to investigate student knowledge, comfort level, and experience with AT devices and solicited their suggestions for better training for current and future teachers on AT. Using this data, I have constantly reflected on my teaching practice and have decided to conduct follow-up research with students in my class during their student teaching to measure the level of retention of the AT information they learned in my class and also changes in their willingness and attitudes toward AT for students with disabilities. Through this evolving, dynamic, and systematic process, I anticipate emerging as a stronger SoTL researcher and becoming a better teacher educator and role model for current and future teachers of students with disabilities.

Paradigm Shift, Assurance, and Curiosity

The summer grant changed my perception toward teaching and teaching research and led me to actively seek for more information about SoTL. Preparing and carrying out activities for the grant was a mere starting point for me to make a connection between teaching and research. Up until that point, I perceived teaching and research as two independent scholarly activities. Through the summer grant and the research activities in teaching conducted in my own class, I was finally able to recognize a surprising, eye-opening fact that teaching and research can be strongly inter-correlated and can be fulfilled at the same time. Recognizing the connection between teaching and research was certainly an unexpected paradigm shift for me. However, I know that this recognition was just a beginning stage of practicing SoTL in teaching. SoTL is an on-going process (Hutchings,
2010). I am still learning to gain a better understanding of the concept and process of SoTL. In this learning process with a researcher mind set in teaching, I am much better prepared and organized in all teaching activities in my class.

I have a strong aspiration to practice what I preach to current and future teachers. In my special education courses, I emphasize that teachers need to regularly document student growth and modify the goals and objectives accordingly to respond to student needs. Evaluation of the effects of the teaching on student learning is also an integral part in SoTL research to monitor progress and ensure learning outcomes (Wehlburg, 2011). Multiple measures should be used when gathering data on student performance (Spinelli, 2011). Along with reports and exams, a simple checklist, rating scale, and anecdotal note can be used to report on how the student makes progress in terms of skill development (e.g., no skill, emerging, mastery). Each semester I share my data analysis progress and results with my students, as I work on a manuscript using the data I collected in the class. Students seem to be impressed and amused with all the intentions behind each activity and assignment they do in the class. They are also surprised that they are not the only ones writing a research paper.

My colleagues at IPFW assured me that I successfully implemented the fundamental principles of SoTL, because they knew that I conducted IRB approved research in my class, shared my research progress and final report with IPFW faculty members on multiple occasions (e.g., faculty showcase, guest speaker at a grant winner workshop), and was a panelist sharing my experiences with the classroom research at a university-level teaching conference. But still I was left in doubt of my own SoTL practice. As I conduct classroom research, I continually attend many professional development workshops and training to know where I am in terms of SoTL practice. Recently, at an international teaching conference, I attended a plenary talk given by two internationally renowned SoTL researchers. During the talk, the doubt regarding my own SoTL practice was finally eased. Their guidelines, checklists, and insights made me realize that I am on the right track. They further confirmed how SoTL can be collaboratively implemented in a higher education setting. It was an opportunity for me to gauge the status of my SoTL practice and reassure a clear future direction that I can collaboratively pursue with my colleagues.

I, however, was still curious if I was correctly and effectively practicing all aspects of SoTL with my classroom research. One concern I constantly have is that I may unintentionally contaminate the data (reports, exams, pre-, post-surveys). My students focused on AT related topics too much at the expense of other course objectives, even though AT was one of the course objectives. It was because students knew that I received funding and I was conducting teaching research on AT in the class with their voluntary participation. For example, we had an unintended extensive discussion about AT devices before a pre-survey because several students wanted to make sure they identified "correct" answers in their response on the pre-survey. At the same time, I am not sure if influencing student learning outcomes and being influenced by student learning outcomes are really a critical issue in teaching research. After all, that is what teaching and learning is about.

I feel ever more confident to say that I am a beginning SoTL researcher who believes in the value of continuous professional development using various avenues and constant interactions with other researchers nationally and internationally. Such confidence can be achieved not by merely talking and thinking about SoTL, but by actively pursuing all aspects of it in multiple ways and on multiple levels. Practicing "habits of mind" with stronger confidence in my SoTL activities is such a meaningful experience in my higher education career.
References


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