

## **Scholarship of Teaching and Learning Trades**

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### **Abstract**

SoTL's existence rests on individual and collective desire, and subsequent engagement, of faculty to improve student learning and the contexts in which teaching and learning occur. This includes systematically assessing and evaluating the impact of our own teaching on students' learning. The former and the latter form the crux of the collective consciousness that is SoTL. A part of this engagement is becoming more reflexive; awareness of one's responsibility toward others is part of this reflexivity. This essay peruses the works of SoTL colleagues across the globe and relates how these works individually and collectively reflect the nature and characteristics of SoTL. These works exemplify educators, in diverse parts of the world, engaging in introspection and program evaluation, as they inquire into the best ways to help students learn in general and specific content areas; how to help students develop habits of the mind, lifelong learning skills, professional dispositions, and the like. While paths to SoTL inquiries may diverge, the focus is always on improving student learning.

Like the trade winds with their warm, persistent flow, inclined toward the equator, so is the Scholarship Teaching and Learning (SoTL) inclined towards improved student learning. Anchored in inquiry and engagement, the scholarship of teaching and learning reconceptualizes teaching as an ongoing and scholarly process with an emphasis on bringing about improved student learning (Huber & Morreale, 2002). While paths to SoTL inquiries may diverge, the current always moves in the direction of improved student learning. SoTL convenes inquiries into learning and carries its momentum across the globe much like the trade winds traverse air and sea and move the breath of the Sahara across the world. SoTL scholars share their 'trade winds' (accounts of inquiry into student learning), in SoTL outlets, which enables others to access their work. What enables SoTL to be grassroots yet global? Why does SoTL make sense in individual contexts as well as collective contexts? What is this collective consciousness that is SoTL? Further, what are characteristics of SoTL and what is its nature? Last, on what basis is SoTL work judged?

SoTL provides a practical and complementary undergirding for inquiry into learning regardless of the theoretical positions from which inquirers come. Notwithstanding the inquirer's worldview, the purpose of research and theory is to explain and inform practice with an agenda to improve practice. Ultimately, SoTL involves informing practice with theory and generating theoretical insights from practice. SoTL's existence rests on individual and collective desire, and subsequent engagement, of faculty to improve student learning and the contexts in which teaching and learning occur. Often this means systematically assessing and evaluating the impact of our own teaching on students' learning. The former and the latter form the crux of the

collective consciousness that is SoTL. As past president of the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL), Lee Shulman notes one has “the obligation to inquire into the consequences of one’s work with students” (2002, p.vii). In this way, the reciprocal relationship between research, teaching and learning is established and continuously reinforced.

This examination of the consequences of our work occurs on academic and social levels. For an ethic of reflexivity, responsibility and obligation to the constituents and contexts of teaching and learning and related inquiry, resonate in SoTL (Gilpin, 2009). SoTL scholars embed this ethic of reflexivity in promoting SoTL as context responsive with moral and pedagogical imperatives (Huber and Hutchings, 2005; Hutchings, 2002; Huber and Morreale, 2002; Shulman (2002). Shulman refers to SoTL as not only supporting a particular type of research, but as a “concept of moral action aimed at cultural change” (p. vii). Other scholars highlight the urgency of the need for SoTL to work toward social transformation with “moral and civic purposes” (Kreber, 2006, p. 88) and transformation “toward our ideals of equality and justice” (Atkinson, 2001 p. 1227). After a review of over three hundred SoTL articles, my colleague and I also echo this call and assert that SoTL and the activities it fosters “can move us into a reconceptualization of teaching and learning as a shared endeavor that transforms not only teaching and learning but our relationship of one to another and of ourselves to our world” (Gilpin and Liston, 2009, p. 2). Although their definitions of what constitutes right moral action may vary somewhat, all are dedicated to the concept of education as an equalizer, moving our world toward greater equality. In this way, the impetus for SoTL is towards social justice through the accountability of teachers and students engaging in teaching-learning processes. In SoTL, it is not enough to score well on any given test. Rather, both learners and teachers must engage in the teaching-learning process. A part of this engagement is becoming more reflexive; awareness of one’s responsibility towards others is part of this reflexivity. Embedded within SoTL then, the ethic of reflexivity asserts that we are responsible for the applications and ramifications of our works in both our specific contexts and in society within the socio-political milieu in which our works are set.

Yet another layer in SoTL’s appeal is that it functions as a rich text forum for inquiry into learning from varied points of view, or “a big tent, if you will under which a wide variety of work can thrive” (Huber & Hutchings, 2005, p. 4). What the works have in common is a focus on improving student learning. Conveying this message, SoTL is defined as “a form of inquiry into student learning” (Huber & Morreale, 2002, p. 9). Although SoTL activities are often context specific, beneath the tent are multiple vantage points, methodologies, and understandings of topics, which provide opportunities to connect works across contexts. SoTL is informed by theory and contributes to theory building within and across fields. As such, as an undergirding for educational inquiry, SoTL affords us greater clarity in our understanding of educational issues and practices as we work toward improving teaching and learning for all. Given its goal to improve student learning, its symbiotic relationship with practice, and its versatility as a form of inquiry, SoTL’s appeal to educators in diverse parts of the world and varied locales within them comes as no surprise.

I invite you to ride the trades with me as we peruse the work of some of our SoTL colleagues across the globe and explore how these works individually and collectively reflect the nature and characteristics of SoTL. Our first stop is Canada, where we find

two professors and a professor emeritus teaming up to tackle this question: "To what extent can a single first-year inquiry course provide students with academic skills and intellectual habits that will positively impact their ability to learn (Justice, Rice, and Warry, 2009)?" Together they developed and executed an inquiry based course in which they matched course objectives to performance or "output indicators" used to measure students' skills. Their goal here is to obviously improve student learning through the development of intellectual skills and dispositions. This is perhaps a universal goal of SoTL in that the desire to create engaged lifelong learners is seen within and across disciplines and fields of endeavor. In fact, this study demonstrated this point to some extent, as data is drawn from social science and kinesiology students. It also shows the value of archival data in SoTL as they examined data from 1998-2002 in an attempt to answer their SoTL question.

Next we journey to Dublin, Ireland. Here, we find Roisin Donnelly (2009) analyzing a postgraduate teacher education program to see how collaboration, reflection, and philosophical development in the context of an experiential learning cycle influence the staff/faculty development at her institution. The program was part of faculty development. Program participants explore new forms of curriculum design and learned first-hand the rewards and challenges that they bring. "Not only does it involve them acquiring new knowledge and developing a range of new skills, it also requires that they become 'expert' in a new way of teaching and their students become proficient and enthusiastic about a new way of learning" (p. 57-58). Herein, the instructors inquired into and reflected upon their own attitudes toward the program and changes in their teaching behaviors as a result of the program. Their SoTL engagement in this particular case fits naturally into program assessment. This paper exemplifies the role of introspection, a part of reflexivity, in SoTL. Often, improving student learning means examining our own teaching and attitudes. The SoTL movement encourages and supports faculty development, self/peer evaluation, and program assessment as a route for improving student learning. This is done in a variety of contexts and under different labels. However, the goal is shared whether one engages in faculty learning communities, Commons, research teams, reading or writing circles, assessment teams, or any other context for shared development and reflection for the improvement of teaching and learning.

From Ireland, our itinerary takes us to the United Arab Emirates where Obaidat and Malkawi (2009) developed and implemented a diagnostic test to investigate students' state of knowledge in their introductory physics course, analyzed the results, shared insights into students' performance and possibly related factors, as well as offered strategies for improving affective (including attitudes toward physics) and cognitive dimensions (including "improved mental models of physics concepts) of physics learning. Through this article, I wish to illustrate how engagement connects with and benefits the broader community of scholars. The study is situated in the broader context of misconceptions or what the authors refer to as "wrong mental models," and negative attitudes toward learning in the sciences. It utilizes a host of previous research and instruments related to scientific learning, particularly in physics. Simultaneously, it gives back to the community as it offers the instruments created by the current researchers as well as their particular methodology of combining "concentration factor" with score. Finally, like other SoTL articles, the findings have been made public and accessible-after being subject to peer review, of course.

Our final stop before heading back to the United States is Australia. Here, Annetta Kit Lam Tsang (2011) investigates in-class group discussion and finds that it offers benefits not achieved through individual reflection. It offers multiple perspectives through a community of learners and facilitates critical dialogue. "By engaging in critical reflective dialogue, students and supervisors become collaborators in reflective interrogation, imaginative speculation, perspective transformation and in the creation of the kind of knowledge that empowers change within themselves and their social domains" (p.17). Here, we find the author seeking to improve student learning by moving undergraduates toward engaging in Oral Health Therapy as community-oriented and shared practice as opposed to an isolationist model. She uses reflective in-class group discussion as her vehicle for improved student learning. My colleagues and I have used peer observation and feedback as a passage for improved student learning and understanding of teaching as community oriented practice (Gilpin, Bodur, & Crawford, 2009). While our content area and methodology are different from the author's, our works, with their focus on improved student learning, find niches in SoTL. This is SoTL's rich text forum, through which works from different fields, interests, philosophical orientations, methodologies, and analyses find space and thrive, as the works, individually and collectively, seek to change the teaching and learning landscape for the better. Evident in these two works is the fact that SoTL inquiries are initiated by faculty for the purpose of improving their own teaching and their students learning. However, administrative support for and recognition of SoTL as legitimate scholarship can minimize anxiety among faculty.

Back in the United States, my mind travels back to the shorelines of the Persian Gulf to Obaidat and Malkawi's (2009) project designed in part to identify and alter incorrect mental models and improve attitude toward the subject matter in their introductory physics class, and its connections to the work of one of my colleagues in Statesboro, Georgia. Delena Bell Gatch (2010) grapples with similar issues (content knowledge gaps and dispositional issues) as Obaidat and Malkawi (2009) in her introductory physics classes. Her problems are compounded by large class sizes. She utilizes studio physics, in which she merged lecture and laboratory courses into an inquiry-based, student centered studio model. "Students in the studio courses demonstrated a better understanding of physics concepts than their peers enrolled in the traditional lecture courses based on measured results from the FCI and CSEM conceptual exams. Shifts in students' favorable attitudes were positive for the studio format in most categories measured" (Gatch, 2010, p.11).

I find it very interesting that in their discussion Obaidat and Malkawi (2009) and Gatch (2010) note some of the same drawbacks to traditional physics instruction. Amazingly, in my mind it is as if the authors are having a conversation. The former proposes "the traditional way of lecturing physics should be revised significantly, where physics instructors can spend more time on explaining physics concepts . . ." (Obaidat and Malkawi 2009, p. 11). After completely agreeing with the authors and sharing some of her own problems with traditional physics instruction, Gatch tells why she moved to a studio model. "A studio course seamlessly integrates the lecture and laboratory courses into a single course, devoting much of the class time to active, collaborative, inquiry-based learning. Concepts presented in the lecture can be explicated and reinforced by immediate hands-on laboratory experiences" (Gatch, 2010, p. 2).

The conversation would continue since Obaidat and Malkawi had called for things like group discussions, practice with conceptual problems, illustrations during 'lecture,' which are all part of the studio model. Perhaps Gatch would be interested in the instrument that Obaidat and Malkawi have developed as she uses a variety of instruments in her efforts to improve learning in physics. What is it that drove both projects? Problems affecting student learning fueled the projects. What did they do? They utilized existing instruments and created new ones in systematically collecting and analyzing data. They engaged processes such as questioning, designing, investigating, and analyzing that are typically associated with what is commonly called research (Bass, 1999 and Bender and Gray, 1999) for the purpose of improving student learning. Their research in the field of SoTL, like others noted in this paper, is subject to standards such as the CASTL Standards for Evaluating SoTL, including Standards for methodological rigor, substantive implications/outcomes, peer review, and accessibility (McKinney, 2007).

So we have cruised the winds through Canada, Ireland, United Arab Emirates, Australia, and the United States. Let's ride the wind one last time from coastal Georgia to the mountains of North Carolina. It is a few days after Spring Commencement exercises and several faculty have voluntarily convened for Western Carolina University's Summer Institute on Teaching and Learning. After the keynote address on the Scholarship of Teaching and Learning, faculty break into small interdisciplinary groups in which they will spend the next three days (and, hopefully, beyond) exploring their preselected topics ranging from assessment to critical thinking. The conversations are off to a robust start. What are they doing and why have we come here? The focus of the institute is to improve faculty's teaching and students' learning. The ultimate focus is on how to improve student learning for all.

In these vignettes I see, educators treating teaching as public and community oriented, not as private practice (Huber and Hutchings, 2005); and making their work subject to review and evaluation and accessible to others in the field (Bass, 1999). I see patterns, first and foremost, of individuals identifying problems and inquiring into issues related to their teaching and/or their students' learning -- and sometimes the inquirer's own learning. In each case, the learning is the eye of the inquiry. They convey the context-specific yet global questions that must be addressed in order to advance learning. How can I help students develop cognitively and affectively? How can we help them change attitudes and behaviors that negatively impact their learning? Does this approach to teaching work in this context? Is this curriculum approach effective? What are the benefits of specific strategies and approaches? How do we ascertain what students know and don't know? What misconceptions do students hold? Why do they hold these misconceptions? How can we help students correct these misconceptions? In order to improve student learning I see educators engaging in introspection and program evaluation. I see them trying to figure out the best ways to help students learn in general and specific contexts, how to help students develop habits of the mind, lifelong learning skills, professional dispositions, and the like.

Reflected in SoTL studies are definite patterns of trades.

- SoTL's existence rests on individual and collective desire to improve student learning and the contexts in which teaching and learning occur. Often

this means systematically assessing and evaluating the impact of our own teaching on students' learning.

- SoTL inquiries are initiated by faculty for the purpose of improving their own teaching and their students learning. However, administrative support for and recognition of SoTL as legitimate scholarship can alleviate undue stress in faculty.
- Part of SoTL's appeal is that it functions as a rich text forum through which works from different fields, interests, philosophical orientations, methodologies, and analyses find space and thrive, as the works, individually and collectively, seek to change the teaching and learning landscape for the better.
- Embedded within SoTL, the ethic of reflexivity asserts that we are responsible for the applications and ramifications of our works in both our specific contexts and in society within the socio-political milieu in which our works are set.

Whether it is across the sea or down the road, there is growing consciousness of the need to engage in introspection and inquire into teaching and learning for the purpose of improving student learning. Depending on the inquirer's theoretical orientation, the nature of the discipline, and the context, different questions are asked about teaching and learning. SoTL provides a vantage point from which to launch inquiry into teaching and learning and bridges gaps, such as between teaching and what has been traditionally considered scholarship and between education for social responsibility and education in the content areas or fields. SoTL, then, provides a practical and complementary under girding for inquiry into education regardless of the inquirer's worldview or geographic location as we have seen. SoTL is quite a rejuvenating breeze on the educational landscape. How refreshing!

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