Johnson, B., & Ryba, K. (2015). Cultivating a culture for the scholarship of teaching and learning. *Journal on Centers for Teaching and Learning, 7*, 51-71.

Cultivating a Culture for the Scholarship of Teaching and Learning

Brad Johnson
Ken Ryba

This article describes the approaches adopted by the Centre for Teaching and Learning (CTL) at the University of Calgary in Qatar (UCQ) Campus to create a culture for the scholarship of teaching and learning. This project consisted of three steps culminating in the implementation of a SoTL program. Step one consisted of an individual faculty needs analysis to document faculty experience with teaching, knowledge of SoTL, perspectives and theories on learning, research training, and interests in undertaking professional inquiries into teaching practice. Step two saw the development of an ecological model to help understand and place SoTL projects at the individual, community, and institutional level. Step three involved setting up teaching improvement projects and a Certificate of Professional Inquiry and Scholarship for faculty interested in SoTL related studies. Results of this case study indicate that the creation of learning communities centered on SoTL is an effective means of engaging faculty in pedagogical inquiries and research. CTL-sponsored events resulted in substantial research outputs on a variety of teaching and learning topics all aimed at creating better conditions for student learning. This case study confirms that CTLs have a vital role to play in facilitating teaching and learning projects and promoting the formation of a SoTL institutional culture.

Introduction

The scholarship of teaching and learning (SoTL) offers a paradigm for thinking about research in all its complexity and how this relates to teaching for effective learning. Such rethinking has substantial implications for the role of Centers for Teaching and Learning (CTLs), and the approaches used to support pedagogical scholarship among faculty within educational institutions. The purpose of this article is to share experiences on the development of a SoTL culture at our university. We adopt an ecological model to help examine the process of cultivating an institutional SoTL culture

concerned with optimizing teaching at the individual, community, and system levels.

Ernest Boyer's model of scholarship (1990) advocates the expansion of the traditional definition of scholarship and research into four types of scholarship:

(1) The scholarship of discovery that includes original research that advances knowledge;
(2) The scholarship of integration that involves synthesis of information across disciplines, across topics within a discipline, or across time;
(3) The scholarship of application (later called the scholarship of engagement) requires sharing work with others and/or having work evaluated by peers; and
(4) The SoTL through systematic study, public sharing, and application by others.

According to Boyer, traditional research (the scholarship of discovery) was at the center of academic life and institutional advancement. His vision was to change the research mission of universities by introducing a redefinition of scholarship that includes SoTL. In line with Boyer's design and that of other institutions in countries such as the United States., Australia, and Hong Kong (Asmar, 2004; Richlin & Cox, 2004; Kwong, T., Chong, K., Wong, WL., & Nie, S., 2016**),** we offer readers a means of cultivating and infusing an institutional culture that recognizes, rewards, and advances SoTL (Allen & Field 2005).

Background

The University of Calgary in Qatar (UCQ) is a branch campus of the University of Calgary in Canada. It offers a single degree program, the Bachelor of Nursing Degree that prepares students for professional nursing careers in Qatar and the Middle East Region. UCQ nursing students and graduates practice in the community, in primary health centers, in clinics and schools in addition to acute care hospitals. Faculty deliver our program in English, a second language for most of the students. Consequently, students may be required to take foundation studies in English for Academic Purposes (EAP), and mathematics and science. UCQ currently has 336 students from 33 different nationalities. There are 56 Canadian instructors and faculty members.

The UCQ Centre for Teaching and Learning (CTL) works with faculty to support and improve teaching. All CTL staff are masters or doctorate prepared, hold the rank of instructor or professor respectively, and have active research programs in SoTL. A primary goal of the center is to facilitate a change of orientation from instructional and professional skills development toward a more dynamic "ecological" approach that is holistic and evidence-based. This change in orientation focused on the cultivation of an institutional culture for the SoTL.

The CTL undertook this project in three distinct steps:

1. conducting a needs and strengths analysis;
2. developing an ecological framework to integrate the range of needs and strengths across all program areas; and,
3. developing and implementing a SoTL program aimed at bringing together the findings from steps one and two.

Step 1: Strengths and Needs Analysis

The CTL designed the strengths and needs analysis to provide an opportunity to gain a picture of the diverse experience, qualifications, expertise, and interests in the SoTL that faculty bring to UCQ. The needs analysis was designed to answer the following questions:

1. What qualifications, training, and development on teaching have faculty received to this point?
2. What research experience do faculty have?
3. How do they incorporate research into their teaching practice?
4. What knowledge and information do faculty have on reflective practice and the SoTL?
5. How do faculty describe their approaches to teaching?
6. What perspectives and orientations inform their teaching practice?
7. How have they tried to improve their teaching practice in their classrooms?
8. What is the level of interest amongst faculty in doing inquiries or research projects related to their teaching and students' learning?
9. What support for teaching and scholarship have faculty received from colleagues?
10. What kinds of support would faculty personally like to receive to develop further their teaching and scholarship from the CTL.

A faculty meeting was held to provide information and to gauge the level of interest in scholarship and research on teaching and learning. It was notable that 22 faculty attended the initial meeting and that eight others subsequently expressed an interest in being part of the SoTL Project. This represented 54% of the faculty at UCQ.

Following a pilot interview with two faculty, an interview protocol was designed to explore the scholarships of discovery, application, integration, and teaching (Boyer, 1990, 1997). A protocol was developed in which faculty were asked to:

- Outline their qualifications, training, and professional development on teaching—scholarship of teaching
- Describe what they are doing to improve their teaching practice—scholarship of discovery
- Describe their understanding of reflective teaching practice and SoTL—scholarship of integration
- Comment on their preferred methods and approaches to teaching—scholarship of application.

We conducted meetings individually with 30 faculty teaching in nursing, electives, and foundation areas. Each participant was given a handout and briefed on the SoTL orientation adopted by the CTL. Each participant was then asked to respond briefly to a list of focus questions. Responses were recorded verbatim on a laptop computer.

The following is a summary and discussion of the results for each aspect of the needs analysis divided into two parts: Academic and Research Profile and Teaching Profile. A thematic analysis was conducted on the responses to the interviews to determine the primary areas of support that faculty were interested in having our CTL provide.

1. Academic and Research Profile

The academic and research profile provides insight into the academic qualifications and research experiences of faculty at UCQ. Understanding the levels of experience would have an impact on the types of SoTL support faculty would need and be interested in receiving. Given the teaching focus of SoTL, it was also interesting to note the training that faculty may have had in education.

Table 1: Qualifications and Research Experience

Academic Qualifications	**% (n)**
• Ph.D. or Professional Doctorate	17% (5)
• Masters Degree or Postgraduate Qualifications	73% (22)
• Undergraduate Degrees	10% (3)
Training and Professional Development related to Education	
• Non-Education Related Professional Qualifications	40% (12)
• Education Related Qualifications	60% (18)
Research Experience	
• Highly Experienced (Established Doctoral/Professional Researcher)	23% (7)
• Some Experience (Research active, published in the area of interest)	13% (4)
• Little Experience (one or two publications or research reports)	37% (11)
• No Experience	27% (8)

Training and Professional Development related to Teaching

Overall, the faculty at UCQ have a strong profile of education qualifications and experience. All of the EAP faculty and many of the nursing faculty had education-related undergraduate and graduate degrees. It is notable that many of the nursing faculty also hold education-related qualifications in Nursing Education, Adult Education, and Master of Nursing with a focus on education.

Research Experience

It is evident from the above table that the majority of faculty at UCQ are not research active. Although 80% of the faculty reported having taken specific courses in research methods at undergraduate and graduate level, 64% reported that they had little or no research experience.

2. Teaching Profile

In addition to their academic and research profiles, an understanding of faculty engagement with teaching was considered an indicator of motivation and existing community support.

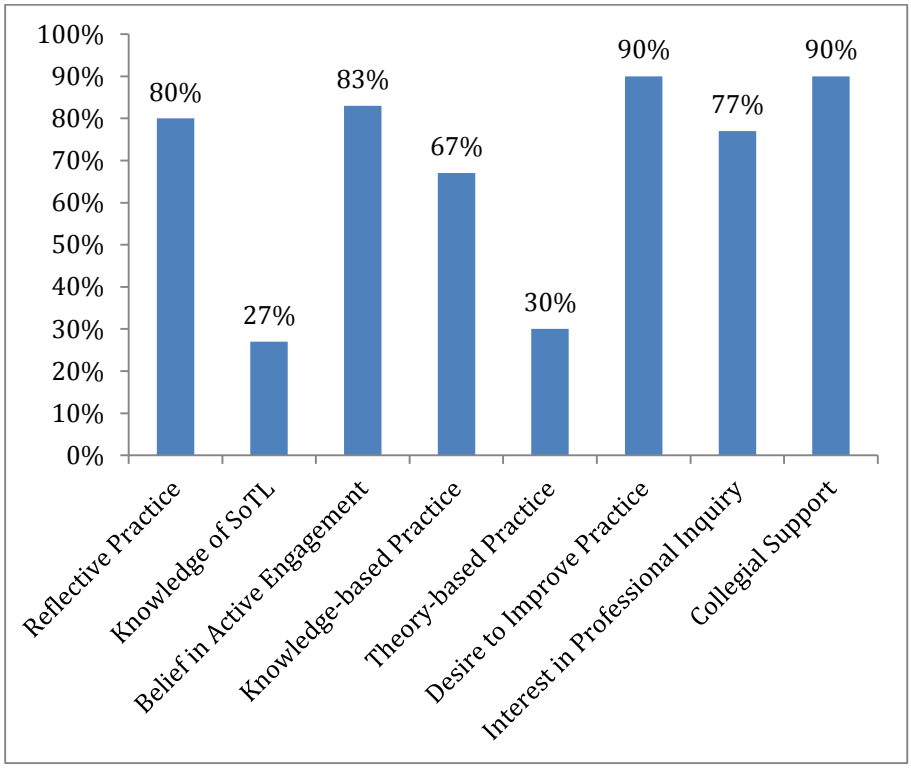

Figure 1: Faculty Profile

Reflective Practice and the Scholarship of Teaching

The majority of faculty (80%) expressed an understanding of the concept of reflective professional practice. They cited many practical examples and illustrations of how they undertake reflection in a variety of ways.

Faculty reported that they had a "little understanding" or "an incomplete understanding" of the SoTL (27%). They included in their descriptions that they had little or an incomplete understanding of how to conduct professional inquiries and research into teaching methods.

Several faculty have undertaken innovative projects (e.g. problem-based

learning, e-dose, digital story-telling, smartphones in clinical nursing practice). The majority of these participants, however, had not considered the research and scholarship aspects of teaching or the opportunities that they could have to integrate research and professional inquiries into their teaching practice.

Several participants expressed an interest in engaging in scholarly work through inquiries and research related to teaching and learning. They strongly endorsed the concept of the SoTL as a model for faculty development at UCQ.

Teaching Approaches, Perspectives, and Orientations

The majority of faculty explained that they were using diverse teaching and learning methods that often involved active student-centered learning strategies. Many faculty expressed an interest in teaching and told how they had adapted their classroom practice to meet the needs of their students.

Approximately 67% of the faculty made mention of particular theories and perspectives that informed their teaching practices. For example, there was a general understanding of constructivist perspectives and inquiry learning. However, the majority of those interviewed did not have a detailed understanding of how the theories and perspectives could be operationalized to create better conditions for students learning. It was evident, however, that only a minority of faculty (30%) could describe in any depth how particular educational theories and writers had informed their teaching approaches and pedagogical orientations.

Many of the faculty explained that they had used innovative teaching methods but not documented the learning outcomes or written up a description of the procedures.

Steps Taken to Improve Teaching

Many faculty had a strong focus on their teaching and a commitment to improving teaching practice as was evident in the methods and strategies that they shared.

<u>Examples of Teaching Improvement Practices</u>

- active learning
- guided inquiry and reflection

- innovative teaching approaches using technology
- group presentations, active real-life projects
- interprofessional collaboration between nursing and EAP
- improving cultural understanding
- spending more time building relationships
- reinforce connections between learning events and course learning objectives
- materials development adapted to nursing scenarios, act on feedback from students

Faculty indicated in their responses active engagement in improving their teaching and have adopted a wide range of innovative methods to provide for active learning within the cultural context of UCQ.

Faculty Interest in Inquiries and Research on Teaching and Learning

Faculty reported an active interest in professional inquiries and scholarship concerning the teaching and learning process.

Faculty Comments on Support from Colleagues

It is clear that there is a positive and supportive academic collegial environment at UCQ. Newcomers are typically guided by the old timers to become established and settled into their new surroundings and teaching roles. There are currently several pairs or groups of faculty who are undertaking projects or inquiries concerning their teaching. The Undergraduate Research Experience Program (UREP), a funded research program designed to provide students with mentored experience in conducting research, has provided a useful context for faculty and student collaboration in teaching and research. Likewise, several faculty have published together and presented at professional forums in Qatar and overseas.

3. Types of Support that Faculty wold like to Receive from CTL

Faculty development is a dynamic role that needs to be proactive and reactive. Proactive initiatives are needed to create opportunities for academic growth that might not otherwise be available (e.g. innovative teaching methods seminars and workshops). Reactive support is required to respond to particular problems and issues with teaching and learning (e.g. responsive

feedback on classroom teaching, dealing with teaching and learning problems).

Many of the UCQ faculty held the rank of instructor and have had limited opportunities to engage in scholarship. The majority of those interviewed expressed a desire to engage in writing or research but were not sure how to get started down a scholarly path. Accordingly, it is clear that there is a significant opportunity for faculty development in the area of professional inquiry and scholarship related to teaching. On the other hand, some faculty reported being self-sufficient in that they already have research supervision from overseas or are engaged in individual or collaborative projects and research that advance their professional development and scholarship.

A thematic grouping of the main areas in which faculty would like to receive support from the Centre for Teaching and Learning indicated the following (see figure 2):

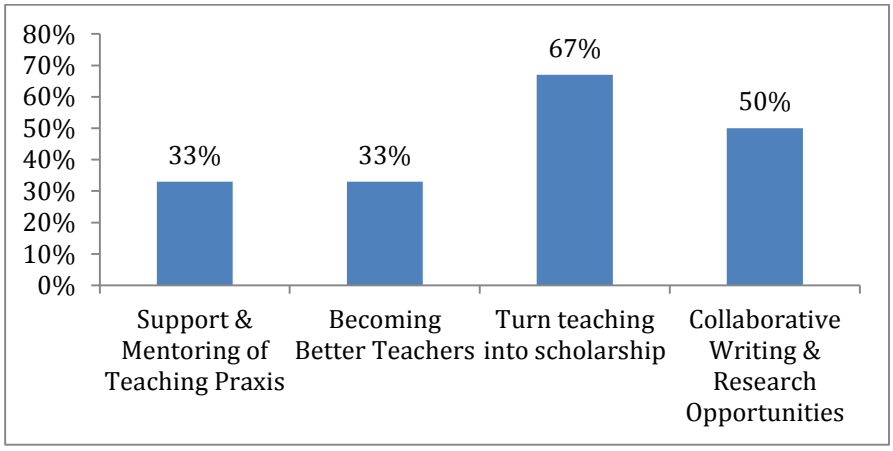

Figure 2: Categories of Support desired by Faculty

The above analysis and profiles suggest that UCQ faculty feel they are strong in the areas of community and teaching practice but weaker in research or scholarship experience. More specifically, faculty strengths are:

- Strong commitment to teaching
- Reflective practitioners
- Model-based practice
- Strong community support

However, faculty had less experience with:

- Theory-driven adaptation
- Knowledge of SoTL
- Research or Scholarship.

Step 2: Ecologicial Model

The Centre for Teaching and Learning (CTL) adopted a socio-ecological model based on Bronfenbrenner's work (Bronfenbrenner, 1994). Bronfenbrenner suggested that studies of human development needed to take into account the entire ecological system in which development takes place. His systems model proposed five reciprocal elements that ranged outwards with increasing complexity but yet remained reciprocally related to each other: individual, microsystem, mesosystem, exosystem, and macrosystem. In this way, relationships with family and society as well as sociocultural values were taken into account. In our work, we have found that SoTL development, considered as a systems model similar to Bronfenbrenner's, occurs and progresses at the individual, group, and institutional level:

Individual level:

CTL provides consultation and guidance to individual faculty, pairs or small groups who are undertaking inquiries or projects related to teaching and learning.

Developing personal relationships are a key to much of the work that we undertake in CTL. Our approach is to be available and visible in all aspects of the institutional life. We have developed a reputation for being "on call" for faculty who need help or support with teaching and class management.

It is through the personal relationships that we often make connections and bring people together to work on projects, grants, and interest groups.

An essential part of our work involves forming teams and creating learning communities [1] to work on particular projects.

Community Level:

An increasing amount of our work is at the "community level" in which we facilitate working or problem-solving groups to undertake identified

[1] We purposely use the term "learning communities" rather than "professional learning communities" or "faculty learning communities" to avoid over categorizing the term and to focus on the community and the aim of the community.

projects aimed at improving teaching and learning. These can include projects that we initiate ourselves or that we are asked to facilitate.

The CTL adopted a "community of practice" approach in which "newcomers" work alongside "old-timers" (Lave and Wenger, 1991). In the process of working together, the newcomers gradually acquire more proximity to and responsibility for the community's production (Gieselman, Stark & Farruggia, 2000). Communities of practice are groups whose members "share a passion for something they know how to do and who interact regularly to learn how to do it better" (Wenger, McDermott, & Snyder, 2002). Each community meets to share knowledge, expertise, scholarship, ideas, and suggestions, both face-to-face and electronically.

When working within situated learning communities such as the ones described here, cognition is distributed over several individuals and is thus "scaffolded" by collaborators. As Vygotsky (1978) has pointed out, learning is socially situated, and the construction of knowledge takes place within the zone of proximal development (ZPD). In a practical sense, when faculty engage in collaboration with more capable peers they can carry out cognitive processes jointly that are more advanced that would be possible if they were to work independently. Both participation and guidance are mutual efforts of faculty that can result in advances in learning for all of the participants. The learning community thus serves as, what we've come to call, a "collective zone of proximal development (CZPD)." In a CZPD, there is potential for faculty to make greater advances in learning than would be the case if they were working independently.

System Level:

UCQ campus-wide initiatives that aim to enhance teaching and learning processes.

At the wider institutional level, we have developed and delivered programs, projects, and qualifications aimed at promoting an institutional culture for SoTL. Our focus is on bringing faculty together from across the university to engage in scholarship and research with the aim of optimizing teaching.

The ecological model described above serves as a framework for the development of a SoTL culture by recognizing and delineating areas of focus (individual, community, and institutional). Together these areas of focus benefit the institution through the:

- creation of learning communities facilitated by CTL aimed at solving problems and creating improvements in teaching and student achievement
- systematic procedures for linking research with the development of teaching scholarship
- design of institutional events that promote and celebrate the scholarship of teaching
- creation of knowledge networks and professional communities of practice that strengthen the UCQ academic programs
- situated learning that places faculty within learning communities that have a shared aim to engage in studying, inquiring, and researching about teaching and learning processes.

Step 3: Implementation of a SoTL Program

The primary outcome of this project was the development of a SoTL program that provided support for faculty who were interested in improving their research and scholarship skills and learning ways to disseminate their work. The ecology of teaching and learning at UCQ was subject to analysis to determine:

1. The extent to which faculty are currently engaging in scholarship related to learning and teaching
2. The opportunities for creation of learning communities aimed at solving problems and improving teaching to achieve better learning outcomes
3. The faculty development needs at the individual, community, and system level

The ecological model helped provide the CTL with an understanding of the types of support most suited to each level. With the model as a guide, several projects were developed using the SoTL framework to improve research and scholarship skills through authentic work.

Following is a brief outline of projects and initiatives currently in progress at each level.

1. Individual Level

Support provided to individual faculty members includes:

Project Grants: CTL staff facilitate the development of research teams and often serve as investigators or principal investigators on project proposals as appropriate.

Individual Faculty Consultation on Teaching: CTL staff provide advice, guidance, observations and responsive feedback on teaching as requested by individual faculty or instructors.

Individual Faculty Consultation on Research and Degree Completion – CTL staff provide advice, guidance and mentoring for faculty who are undertaking postgraduate degrees.

2. Community Level

The following is a description of one key project to illustrate the collaborative community of practice approach adopted by the CTL:

Math Skills Improvement Project: Our aim was to create better conditions for student learning through engaging faculty across disciplines to work together to identify, implement and study teaching methods and strategies to improve students' numeracy and maths knowledge and skills.

We facilitated a situational analysis process in which the faculty worked together to examine factors that were impacting on learning and methods for improving the situation. This resulted in a set of recommendations on how to improve the situation:

1. Provide opportunities and procedures for collaboration between foundations and nursing faculty;
2. Create a consistent, coherent and integrated approach to foster better conditions for learning basic numeracy, math concepts;
3. Use situated learning experiences to assist students in gaining a practical understanding of how mathematics learning applies to nursing;
4. Give attention to how theory and concepts of math translate into nursing practice;

5. Foster thinking skills and learning strategies from an early stage to enable students to "learn how to learn";
6. Use meaningful materials and realistic training events to scaffold students learning (clinical simulations, scenarios, manipulatives).

The six recommendations guided the establishment of four working groups to undertake different aspects of the project:

- **Language mapping and creation of a nursing corpus:** Map the language (math) used in clinical nursing practice. Identify a corpus of the language used in clinical nursing practice. Distribute the corpus for use across foundation and nursing courses to ensure consistent use of language as a means of enhancing comprehension;
- **Development of entry baseline math assessment:** Develop and deliver a baseline math evaluation test to use as a pre- and post-measure of math pedagogical interventions;
- **Situated learning methods:** Prepare foundations lesson plans and a manipulatives kit to be used by faculty to provide practical, hands-on learning; prepsare simulated hospital experiences to engage students in experiencing the use of mathematics in a clinical setting;
- **Textbook evaluations:** Book representatives were contacted to obtain a selected set of texts. One textbook was chosen for a detailed pedagogical analysis to examine: math and drug measures, dosage calculations, oral medications, intravenous therapy, and pediatric medical calculations.

The maths project resulted in improved collaboration between foundations and nursing faculty, greater practical, hands-on experiences through situated learning, increased student engagement and improvements in mathematics achievement and application. Several of the faculty used the maths improvement project as a basis for conference presentations. A few of the faculty are also planning future studies aimed at attracting research funding (Undergraduate Research Experience Program) and preparing reports and articles for conference presentations and publications.

Additional Projects: Other projects that we have completed or underway include:

- *Learning Support Project* –facilitating a situational analysis of University 205 course entitled *Learning Beyond High School – Theories and Practices.* The aim is to improve the course and develop a system of support required to promote student success in university studies.
- *Situated Learning as a Framework for Clinical Simulation* – facilitating a professional inquiry and student evaluation of an End of Life simulation. The overall aim is to assist the Clinical Simulation Centre to develop a teaching and learning research program.
- *Academic Forums on the SoTL-* hosting academic forums on the SoTL (e.g. action research) for practice development, creating effective teaching and learning relationships within the transnational university
- *Special Interest Group on New Educational Technologies* – establishing a special interest group concerned with promoting the use of technologies to enhance teaching and learning. This group also focuses on the coordination of the selection of hardware and software and their application to teaching and learning at UCQ.

3. Systems Level

- *Certificate of Professional Inquiry and Scholarship*

The CTL designed the Certificate Program for faculty who wanted to gain skills and experience in conducting inquiries and research into teaching and professional practice. The CTL included a range of inquiry and research methods in the design that allowed for public sharing within the professional community and the opportunity for application and evaluation by others (Boyer, 1990).

The Certificate provides an opportunity for faculty to get started in researching their professional practice. It is about using everyday activities (e.g., teaching, clinical work) as an opportunity for inquiry and scholarship. Each participant has an opportunity to carry out an inquiry or research project related to their teaching or professional work – e.g., study of innovative teaching methods, evaluation of clinical training procedures. Twenty faculty attended the five 2-hour seminars and carried out professional inquiry projects. Faculty presented the results of their inquiries at the first UCQ Teaching and Learning Conference.

- *UCQ Teaching and Learning Conference*

  With a theme of *Multiple Pathways for Learning*, the conference brought together UCQ faculty to showcase the innovative teaching methods and learning strategies that we use in all our programs at UCQ. Faculty presentations included teaching methods, professional inquiries, reflections on teaching, or research projects (planned, underway, or completed) that are concerned with creating better conditions for students' learning.

- *New faculty orientation*

  Orientation features development of a guided inquiry approach for new faculty that provides opportunities to critically reflect on their roles within the transnational university, and how they might use these person reflections to inform their teaching.

- *NPRP Grant: Interprofessional Collaboration*

  The grant marks development of a large-scale project aimed at promoting interpersonal collaboration within healthcare education settings and establishment of a Teaching and Learning Research Lab.

Figure 3:

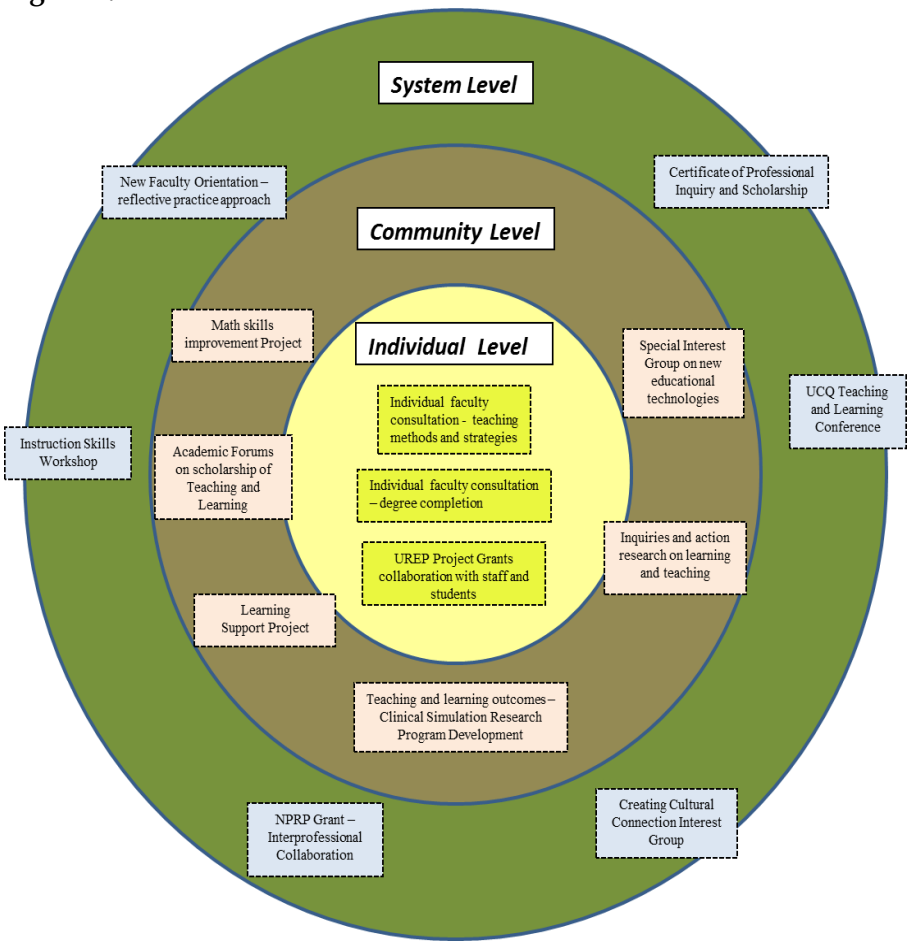

Figure 3 shows the SoTL projects and profesional development activities currently underway or as planned outcomes of this projects mapped into the ecological framework. Overall, approximately 30 faculty, or 54% of the faculty complement, are actively engaged in scholarship at the individual, community, or system level.

Ethical Accountability

The Scholarship of Teaching and Learning is at heart a research activity. It is subject to, and requires, the same rigor as any other research activity (Kanuka, 2011; Stockley & Balkwill, 2013; Bishop-Clark & Dietz-Uhler, 2014). Even though the methodologies may differ from discipline-specific research, SoTL is a legitimate research activity deserving of the same respect as any other research. However, to be considered a legitimate research activity

SoTL, needs to follow the same rigor and guidelines as any other research activity.

During the development of the Certificate of Professional Inquiry and Scholarship, the question of ethical approval and approval processes were discussed amongst CTL staff and with the UCQ's research committee. As a branch campus, all ethics review was conducted at the home campus in Canada by the university's institutional ethics review board (IERB). The discussion, initiated and facilitated by the CTL, included feedback from the UCQ's research committee, the University of Calgary's IERB, and experts in SoTL research including references to recent work in SoTL and ethics.

Stockley and Balkwill (2013), for example, provide an excellent account of the misconceptions that are common amongst SoTL researchers, particularly in their understanding of the need for ethics review at all stages of research. They emphasize the articulation of ethics requirements in the Canadian Tri-Council Policy Statement (TCPS2) and how they relate to SoTL research. Stockley and Balkwill discuss several common myths including the notion that ethics review is a barrier to conducting research and that pilot research does not need ethical approval. Bishop-Clark and Uhler Dietz (2014) echo these statements also making the point that SoTL research often involves testing different pedagogical strategies and thus introduce potential tensions between methodology and ethics (e.g., comparative studies may provide half the students with an improved pedagogical strategy, disadvantaging the remaining students). Kanuka makes the point that proper ethical review helps assure the consumer of SoTL research that biases in the research (e.g., demand characteristics) are properly addressed.

Based on these discussions the CTL determined a need to encourage rigor in all aspects of SoTL including obtaining ethics approval from the appropriate ethics review body.

To provide the support that faculty needed to understand and undertake ethics review, the CTL certificate developers added a component specifically targeted at the need for and process of acquiring ethics approval for SoTL research both generally and at UCQ.

Recommendations and Conclusions

The ecological approach provided a useful framework for cultivating a SoTL culture within UCQ. Along with regularly organized teaching and learning development events, there was a great deal of networking and sharing of information and support within the projects being undertaken by the

learning communities. Thus, the CTL helped create an environment in which faculty could reflect on and improve their practice as well as participate in projects aimed at creating better conditions for student learning and improved academic achievement.

The following are recommendations on how to nurture the growth of a SoTL culture within learning institutions:

1. *Continuously update the SoTL Needs Analysis:* It is desirable to update the needs analysis on an regular basis to capture changes in need and demand.
2. *Clearly communicate the SoTL orientation to faculty:* The adoption of SoTL as an institutional process is a significant way to value teaching and to provide encouragement and support for faculty to improve their teaching practice.
3. *Establish qualifications and programs based on Identified needs:* The needs analysis should serve as evidence to provide a rationale for establishing particular qualifications and programs. It can also be used to help utilize resources in a systematic and efficient way (e.g., Certificate of Professional Inquiry and Scholarship).
4. *Adopt a learning communities approach to SoTL:* Building learning communities in response to identified needs and areas of concern provides a context for faculty to work together. This project-oriented approach allows for the creation of communities that are inclusive of faculty from across programs and academic units that are working together to solve problems and creation better learning conditions for students.
5. *Map the Ecology of Teaching and Learning:* A SoTL culture should be mapped at the individual, community, and institutional level. An ecological approach helps document the ways in which faculty engage in SoTL and understand the impact of each level on the others as a developmental process.

Through delineating aspects of our CTL work (individual, community, institutional), we have been able to track and encourage better a cultural shift that embraces SoTL at our campus in Qatar. Like other teacher developers who have undertaken such cultural changes at their schools through use of learning communities and other models, we believe this ongoing substantiation of SoTL culture at our school continues to vitalize teaching in ways that optimize student learning.

References

Allen, M. & Field, P. (2005). Scholarly teaching and scholarship of teaching: Noting the difference. *International Journal of Nursing Education Scholarship, 12 (1),* article 12, 1-12.

Asmar, C. (2004). Innovations in scholarship at a student-centered research university: An Australian example. *Innovative Higher Education,* 29(1), 49-66.

Bishop-Clark, C. & Dietz-Uhler, B. (2012). *Engaging in the scholarship of teaching and learning*. Sterling, Virginia: Stylus Publishing.

Boyer, E. (1990). *Scholarship reconsidered*. Princeton NJ: Princeton University Press.

Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *International Encyclopedia of Education* (2nd Ed., Vol. 3, pp. 1643– 1647). Oxford, England: Pergamon Press.

Giesleman, J, Stark, N., & Farruggia, M. (2000). Implications of the situated learning model for teaching and learning in nursing research. *Journal of Continuing Education in Nursing*, *31*(6), 263-268.

Kanuka, H. (2011). Keeping the scholarship in the scholarship of teaching and learning. *International Journal for the Scholarship of Teaching and Learning*, 5(1), Article 3.

Kwong, T. Chong, K., Wong, WL., & Nie, S. (2016). Assessing the effect of communities of practice in higher education: The case at Hong Kong Baptist University. *Learning Communities Journal* 8(2), in press.

Lave, B. and Wenger, E. (1991). *Situated learning: legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.

Richlin, L. and Cox, M. D. (2004). Developing scholarly teaching and the scholarship of teaching and learning through faculty learning communities. *New Directions for Teaching and Learning,* (97), 127-135.

Stockley, D. and Balkwill, L. (2013). Raising awareness of research ethics in SoTL: The role of educational developers. *The Canadian Journal for the Scholarship of Teaching and Learning*, 4(1), Article 7.

Vygotsky, L.S. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

Wenger, E. Richard McDermott, R. & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Harvard, CT: Harvard Business School Press.

Dr. Brad Johnson is the Director of the Center for Educational Innovation (CEI) at Zayed University in the UAE. The CEI is a multi-service academic unit providing support for faculty in the areas of Pedagogical Change, Educational Technology Integration and the Scholarship of Teaching and Learning. Brad's areas of research include Interprofessional Healthcare Education and Practice, Faculty Orientation Strategies for faculty new to working at transnational institutions, and the development and implementation of Mobile-Enhanced Learning strategies. **Dr. Ken Ryba** is an International Education Consultant based in Auckland New Zealand. He has extensive experience in faculty professional development at universities in Canada, New Zealand, Australia and the Middle East. At the time of writing this paper, he was a Teaching and Learning Specialist at the University of Calgary in Qatar.