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Multiple Ways of Knowing in Teaching and Learning

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Abstract

In this essay, I advocate for a broader and inclusive understanding of knowing and knowledge. I borrow from the field of Nursing and the accepted ways of knowing based on the seminal work done by Professor Barbara Carper (1978) and Chin and Kramer's (2008) in addition to the fundamental patterns of knowing in nursing education. I translate and transform this work to argue for the acceptance of a framework for multiple ways of knowing in teaching and learning. I encourage the academic academy, to reflect on the multiple ways of knowing and in turn accept that all knowing is not about empirics, and excellent teachers have aesthetic knowing and are engaged in the scholarship of teaching and learning.

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Teaching, like nursing, is a practice profession. It is also known that higher level learning using Bloom's taxonomy occurs best in interactive classrooms (IUPUI Centre for Teaching and Learning, 2006). Therefore, good teaching involves participation and interactions with students. Over my 20 years in post-secondary education I have dialogued with many faculty members both locally and internationally about their teaching (knowledge); most are not able to articulate it. That is because the positivistic paradigm of empirical knowledge, that based on scientific facts and principles (published in peer reviewed research articles) only partially reflects the knowledge used in the teaching and learning environment (T&LE). Four years ago (May, 2007) when we started *Transformative Dialogues: Teaching and Learning Journal* (TD) as part of our action to create scholarly communities in the Carnegie Foundation initiative for the Advancement of the Scholarship of Teaching and Learning (CASTL) Leadership program, I too fell into this trap of only recognizing empirical knowledge because we published on TD's website that submissions "span a wide range of reflections on the processes of teaching and learning ranging from the scholarly to scholarship" (drawing from Richlin, 2001, 2003). Although we did not recognize narratives and reflections about teaching as scholarship, we encouraged their submission, and this framework helps me understand our decision and the knowledge of teachers (practitioners). Even though, in nursing, I recognize and accept multiple ways of knowing, I did not consciously transfer this knowledge to my role as educator (even though my formal education is in nursing and education), but I always believed that reflection on teaching and learning to improve teaching was scholarship. Ernest Boyer (1990) in his seminal work, *Scholarship Reconsidered: Priorities of the Professoriate*, when the scholarship of teaching was first introduced, had it right. Teaching is about "transforming and extending knowledge, it is about the "continuity of knowledge" (Boyer, 1990, p. 24) and its

transformation through critical analysis. Excellent teaching in itself is scholarship. We can help educators make their knowledge public if we value and integrate multiple ways of knowing in teaching. This framework can help us understand what it means to know in teaching and learning and multiple ways of adding to this knowledge, as well as what it is that we value most in the role of a teacher. After all the scholarship of teaching and learning (SoTL) is about helping us understand and improve our role as teachers because when we improve our role, we are extending knowledge. According to the philosophy of critical humanism, our role as educators is to facilitate an environment where students feel free to express their ideas and needs, and critically analyze theories and assumptions in order for students to inquire and acquire personal knowledge (Nemiroff, 1992). When we add knowledge to this understanding we are engaged in the scholarship of teaching and learning.

The two inter-related concepts, knowing and knowledge, are defined. The concept of knowing is about perceiving and understanding ourselves within our environment; whereas, knowledge is about being able to communicate the knowing (this is making it public). Both concepts are inter-related. Multiple ways of knowing contribute to the knowledge of teachers. When Professor Barbara Carper (1978) developed ways of knowing in nursing, she did it for reasons similar to why I am proposing multiple ways of knowing in teaching and learning. A framework for multiple ways of knowing in teaching and learning is necessary to:

1. Formally make public the knowledge of teachers engaged in T&LE
2. Value the practice of teaching and learning
3. Create excellent teachers
4. Open learning environments to the public.

The proposed framework for multiple ways of knowing in teaching and learning has five ways of knowing. I have borrowed and adapted the first four from Carper (1978) and the fifth from Chin and Kramer (2008).

1. Empirical – empirics is the science of education. It is about what we can experience through our physical senses: hearing, seeing, touching. It is about seeking the truth; it draws on traditional science and is expressed as scientific knowledge. It is conscious reasoning and problem solving, predicting, explaining and describing to develop formal theories and descriptions or use them to substantiate actions. This is about laws, theories and explanations that are generalizable and allow prediction; it is consistent with the traditions of scientific knowledge which require it to be publically verifiable. These are educational theories or the canon of education.
2. Ethical – ethics is the moral knowledge. It is about how teachers act or conduct themselves in their roles. It requires experiential and empirical knowledge of social norms and values as well as ethical reasoning. The goal is to know your responsibility and know right from wrong. It is being able to solve a conflict of values, principles or norms. Ethical knowing can come from a professional code. In Canada, the 3M National Teaching Fellows Program of the Society of Teaching and Learning in Higher Education has developed “Ethical Principles in University Teaching” (<http://www.stlhe.ca/awards/3m-national-teaching-fellowships/initiatives/ethical-principles-in-university-teaching/>) Other sources of ethical knowing may be different philosophical positions including duty and social justice. These are all based on the premise that teaching is a service, is available to everyone, and in some countries considered a right. It goes beyond the code and considers all actions that are deliberate and involve a decision of right and wrong. In education we create goals for learners and implement and evaluate, and all of these

steps involve judgment. "Goals are, of course, value judgments and not amenable to scientific inquiry and validation (Berthold 1978 in Carper, 1978). When we create a goal or learning objective we make a choice, signal to students that this is worthy and significant, and draw attention to certain knowledge or knowing. A difference in normative judgment of what is a pass or fail in a course is about what constitutes success rather than empirical evidence or ambiguity in description. Moral choices are made in specific concrete situations. Ethical knowing involves an understanding of different philosophical positions designed to deal with moral judgment and notion of service. The more explicit educators are about the norms that govern their decisions, the more they will assess the environment, their action, and potential outcome and consequently make a better "moral" decision.

3. Personal – Personal knowing is about knowing one's self and the participation in the act. It is based on the assumption that when we engage or interact with students, we bring our personal biases; in contrast to empirics, where the teacher is objective. It is about having an authentic relationship with the learner and the knowledge where the student and teacher are seen as open systems that interact and move toward what Maslow calls self actualization or growth of human potential (Huitt, 2007). It is about recognizing that individuals are not objects and fixed entities but continue to develop so both students and teachers develop through all interactions in T&LEs. The teacher has to reconcile this with the professional role of controlling and manipulating (facilitating) the T&LE and even the student (classroom management skills) to maintain an accepted norm or standardized approach. Empirical knowledge provides us with theories about who is in our classrooms and classroom management. Educational institutions collect statistics on categories such as age, gender, ethnicity and languages spoken, and provide generalizations which may lead to stereotyping because they provide us with characteristics for all individuals due to their membership in a category or group. These theories do not address the fact that there is as much variation within these categories as across these categories. The theories on general characteristics do not account for the uniqueness of each individual in a class or the uniqueness of the teacher. Each person (both teacher and student) have personal histories and biases, and teachers make assumptions about the student, one's self, the subject matter, and pedagogy. As well, general theories may not work in particular situations because T&LEs are not closed systems. They are open systems. Each person in the T&LE has communication networks, both personal and professional (Stohl, 1995). Personal knowledge is subjective, concrete, and existential; it is about being true to one's values, intentions and actions. Dan Pratt, professor of adult education at the University of British Columbia and past recipient of the 3M National teaching Fellowship Award, developed a tool for helping teachers assess this element. This is about engaging with our students and achieving and helping promote integrity.
4. Aesthetic – is the art of teaching and learning. Aesthetic knowing is what I see as the most problematic or most difficult to accept by the academic community because the academic community favours knowing by empirical research and objective truths, even though it is acknowledged that there are multiple truths. It acknowledges that teaching and learning is an art and that you can know by acting and doing. Aesthetic knowing recognizes the practical skills that are required to be an educator. When considering possibilities and outcomes, they draw from their previous experiences and not necessarily empirical frameworks (though it is acknowledged that all knowing is overlapping and inter-related). In contrast to empirical knowing, in aesthetics, educators draw on what has worked in the past, but do not respond to a similar situation in exactly the same way. It requires a deep appreciation of the

context and moves beyond the surface elements of the situation to a deep understanding of the whole. Educators draw on their toolkit of experiences and is open to understanding the particular nuances and assumptions inherent in the situation and being creative in actions and decisions. It may involve intuition. It is the art of teaching that leads to transformation and creativity and new knowledge in a very particular context; T&LE that is an open system. This is done by experienced educators, and excellent educators do this automatically even if they are not conscious of the process. Donald Schon (1983), one of the great theorists in education, articulated this concept:

...when we (excellent teachers) go about the spontaneous intuitive performance of the actions of everyday, we show ourselves to be knowledgeable in a certain way. Often we cannot say what it is that we know. When we try to describe it we find ourselves at a loss, or we produce descriptions that are obviously inappropriate. Our knowing is ordinary tacit, implicit within our patterns of action with which we are dealing. It seems right to say that our knowing is in our doing (p. 49)

5. Emancipatory – emancipatory knowing is knowing that critically examines the context or the environment in which the teaching and learning experience occurs: the social and political process of the organization, province/state and country. It is about understanding the mission/goals of post-secondary education and the social barriers to education. It is about understanding who is in our T&LEs and their journey (historical oppression), so that we may better understand the multiple roles of learners and be better informed to address their learning needs. It requires teachers to have capacity to recognize hegemony and the changes that are required to 'right the wrongs' that exist. Emancipatory knowing is developed through action in and on reflection or praxis.

The five ways of knowing are all inter-related and overlapping. All these ways of knowing are necessary in understanding the role of the teacher, and I would argue that aesthetic knowing and emancipatory knowing are central to the role of the teacher because you can know (empirics) and not be able to put them into practice (application), which is a higher level skill scholarship of teaching and learning. This truth was first articulated by Schon almost 50 years ago and again in 1991 when he argued that the higher level problem solving that occurs in the classroom cannot be reduced to a simplistic problem that is required to do positivistic research. The positivistic model for SoTL that was introduced by Glassick, Huber and Maeroff, (1997), however, dominates the conversation. Schon (1991), in *The Crisis of Professional Knowledge and the Pursuit of an Epistemology of Practice*, articulated that actions such as teaching should not use the positivistic framework of asking a question and answering it. Using the positivistic framework that first you learn knowledge and then you apply it does not work for the practice professions. A T&LE is a messy complex situation that does not have a clearly articulated problem but requires immediate action and is not a basic science with rigor and purity. Schon (1991) further stated "a competent practitioner recognizes in a maze ...(patterns)... for which he cannot give a complete or even a reasonably accurate description. Practitioners make judgments of quality for which they cannot state adequate criteria, display skills for which they cannot describe procedures or rules" (p. 7). Problems which are of significant issue cannot be studied using this positivistic model. Upon reflection, I find the academic community commonly accepts this model for making knowledge and its extension (aesthetic and emancipatory knowing) public

in a model that requires teachers to reduce complex practice issues into simplistic problems that are measurable, quantifiable, and generalizable. Complex issues are solved by aesthetic knowing. By not having aesthetic knowing recognized and valued as contributing to the scholarship of teaching and learning, those who (excellent teachers) solve these messy problems daily are excluded. Those excellent teachers functioning at higher level problem solving (Bloom's taxonomy) can be valued and recognized by accepting aesthetic knowing, and accepting that they can share their knowledge by description and reflection. Asking excellent teachers who are functioning at higher level problem solving in the T&LE to reduce their understanding to a simplistic problem and use the scientific method to explain their process is akin to testing our students only to recall information without applying it in complex situations. This places excellent teachers in a dilemma about whether they want to be rewarded by the academy for their scholarship of teaching and learning, or if they want to make a difference in how teaching and learning best occurs by sharing their experience of a particular complex messy situation and how it was solved. The academy would be wise to recognize aesthetic knowledge and encourage detailed descriptions and reflections about the issues in the T&LE (Schoen, 1983, 1991). Excellent teachers should be encouraged to describe, in detail as much as possible, the specific situation and their actions. This description of their aesthetic knowing needs to be accepted as the scholarship of teaching and learning.

Boyer (1990) originally described teaching (the act of doing) as scholarship, but it evolved into a more exclusive definition that reflected the scientific paradigm. By 1997 it started to look the positivistic paradigm:

1. Clear goals—does the scholar state the basic purposes of his or her work clearly? Does the scholar define objectives that are realistic and achievable? Does the scholar identify important questions in the field?
2. Adequate preparation—does the scholar show an understanding of existing scholarship in the field? Does the scholar bring the necessary skills to his or her work? Does the scholar bring together the resources necessary to move the project forward?
3. Appropriate methods—does the scholar use methods appropriate to the goals? Does the scholar apply effectively the methods selected? Does the scholar modify procedures in response to changing circumstances?
4. Significant results—does the scholar achieve the goals? Does the scholar's work add consequentially to the field? Does the scholar's work open additional areas for further exploration?
5. Effective presentation—does the scholar use a suitable style and effective organization to present his or her work? Does the scholar use appropriate forums for communicating work to its intended audiences? Does the scholar present his or her message with clarity and integrity?
6. Reflective critique—does the scholar critically evaluate his or her own work? Does the scholar bring an appropriate breadth of evidence to his or her critique? Does the scholar use evaluation to improve the quality of future work? (Glassick, Huber & Maeroff, 1997).

The trajectory continues because as Schon (1991) explained, there is the need to be seen on par with researchers. Interpreting equal as the same and not equal as equitable and not recognizing that there are multiple ways of knowing is what may be leading to applying the positivistic framework where it is not appropriate. There needs to be acceptance and recognition that the work does not need to be the same to be equitable, and that education is not an exact science, it involves people, their personal knowing, histories, and networks.

Acceptance is an obstacle. Aesthetic knowing was identified as being the hardest to accept and explain by Carper (1978) and I find it is still the case many years later.

It would be wise for the academy to put on breaks and critically reflect on the direction the canon is moving. In other words, the academy must become what Peter Senge (1990) calls a 'learning organization'. The key features of learning organizations are shared ideals, collaboration, flexibility, and reflection. Senge cautions us "All disciplines matter. ... People discover that the best systemic insights don't get translated into action when people don't trust one another and cannot build genuinely shared aspirations and mental models" (1990 p. xviii). The concept of shared vision starts with two people wanting a similar outcome. This essay is the beginning of a vision. Think of the academy as an organization that has flexible boundaries and multiple networks that seek to understand and not find an objective truth. So stop, listen and be flexible, collaborative, and reflexive. There are paradigms other than natural science.

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