

## COLLABORATION IN TEACHER EDUCATION: CULTIVATING AN INQUIRY STANCE

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Conventional approaches to teacher education have focused on student teachers' acquiring skills and knowledge under the tutelage of a master. One of the assumptions that underlies the training model of teacher preparation is that knowledge about teaching is static, reducible, and essentially transferable. When Information and Communication Technologies (ICTs) are added to this model of teacher education they tend to reinforce a teacher-centered, instructionist pedagogy. Courses in the integration of ICTs are siloed as speciality topics divorced from curriculum, policy and pedagogy. When both the content and the learning environments created for student teachers are inquiry-based, significant shifts in thinking and practice occur. We will present the initial findings of our research into ICT enriched, inquiry-based practicum experiences. These findings cluster around (1) the ways that beginning and experienced teachers collaborate to create classroom inquiries (2) the changed role of faculty advisors and (3) the impact of providing collaborative online environment in which student teachers have access to one another, to faculty, to their cooperating teachers and to a large community of practice focused on inquiry.. **TOPICS + KEYWORDS:** collaboration, communities of practice, teacher education. **PREFERENCE:** Oral Presentation.

### 1 Introduction

The arrival of new information and communication technologies (ICTs) in the lives of teachers and their students, student-teachers and those involved in teacher education means much more than simply the arrival of new ways to provide the same old news. These new technologies demand that educators re-think the nature of their work and the forms of collaboration and communication that are proper to this work.

The arrival of new ICTs in schools has tended to take the following form: courses in the integration of ICTs are siloed as specialty topics divorced from curriculum, policy and pedagogy. Students are sent "down the hall" to "computer labs" to learn keyboarding or the ins and outs of various program and/or software possibilities. Treated in this isolated way, the teaching and learning of ICT becomes squarely and simply a technical matter.

The difficulty we have encountered with this image of the place of ICTs is not only that it lends itself to an image of education that is no longer viable (education envisaged according to an industrial model of production, consumption and deliver). The arrival of ICTs has, in fact, aggravated and enlivened deep and difficult questions for educators regarding what our work should look like. We

have witnessed elementary and high school students, as well as student-teachers and classroom teachers, becoming swept up in a phenomenon that could be called “if you want to”: “if you want to create a web page (or cut and paste a document, or insert a picture into your work or divide your presentation into two columns or import sound-bites into a presentation, or, or, or. . .) here is how it is done.” What begins to occur here is that a wider and wider array of technical possibilities are opened up while, at the same time, this wide array becomes less and less tethered to any strong *pedagogical purpose*. More strongly put, this opening up of technical possibilities aggravates what is an ethical question: not “what can we do” but “what would be a good thing to do, a worthwhile thing, with ICTs in this work I am now exploring?” The arrival of powerful ICTs has faced educators with a dilemma: these technologies themselves cannot address the issue of what good work might look like in the classroom, nor do they avail us of any clear sense of what might be the place of ICTs *in* the discipline being addressed in the classroom. Such technologies “will never prevent us from doing anything we are able to do. The future of humanity, however, demands that we do not simply do everything we can. (3). It will not help us answer questions such as “Having the ability and desire to know, how and what should we learn? And, having learned, how and for what should we use what we know? One thing we do know is that better solutions than ours have at times been made by people with much less information than we have”(1). We believe that, as educators, these are *precisely* the sorts of questions that need to be asked.

## **2 The Logic of Fragmentation and Isolation**

We have found a powerful parallel to this fragmented, isolated, “technical” arrival of ICTs in our schools. ICTs are not the only thing that is “siloeed” and taught in ways that are divorced from any sense of how knowledge might operate in the living disciplines of, say, mathematics or poetry or chemistry. It is commonplace for teachers to break up each of the living disciplines that form the human inheritance into easily deliverable bits and pieces which are doled out to students in ways that can be efficiently managed and controlled. This industrial image of education has turned some classrooms into a version of an assembly line. And, under the auspices of educational psychology, teachers choose from these fragments activities that are geared and targeted to each individual student’s abilities, grade level, or developmental level. As with ICTs, it is commonplace to fragment students’ learning into developmental sequences, isolated activities and grade-level curriculum expectations. Once the work of students is thus fragmented, the work of teaching becomes one of trying to keep up and manage what becomes an ever-expanding and ever accelerating array of individual differences and an ever-expanding array of isolated demands. In this light, ICTs become one more thing to do, one more thing to get “covered.”

In this light, the most common types of questions that student-teachers ask is “What about the students who are having trouble?” “What about the students who are finished in a flash?” “What about the child who barely speaks English? who has a short attention span? who hates math? who is having trouble at home, who is bored, over-stimulated, not working at grade level, has an Individual Program Plan? Attempts by educators to outrun the differences that present themselves in any particular classroom are exhausting, confusing and, sometimes, nearly hopeless, especially with increasing classroom sizes, decreasing assistance in the classroom, and the social, economic and cultural pressures that are now ordinary in Canadian schools. If we now add ICTs into this mix and leave in place the “if you want to” logic that has driven their arrival, teaching with any sense of sanity and composure becomes nearly impossible. Or, even worse, ICTs become the technical means to deliver a form of pedagogy that has been untransformed by their arrival. Isolated worksheets, all form-fitted to individual differences can now be delivered and marked at the speed of light. Meaningless repetitive practice and drills can be self-correcting and geared to ever-narrowing student needs. The main characteristic of this scenario in our schools has been one of *acceleration*: not only are teachers, administrators and students inundated with an ever-multiplying set of demands. Into this setting is introduced ICTs which are (it sometimes seems deliberately) designed to become out of date and in need of replacement or evergreening—“keeping up” becomes the clarion of such a pedagogy based on fragmentation and isolation, and the promises of technology become imagined as cures to precisely to the sorts of panics that they have helped cultivate. “This new program, this new hardware or software will cure all your ills.” Worse yet, we can, with ICTs, place in the hands of our children the means of their own self-isolation, self-monitoring and self-correction. This, of course, is all done in the name of “freeing” them somehow and doing right by their individuality. What we have freed them for, in such cases, is the cultivation of the insatiable desire for new and flashier gadgets without any growing sense of place and possibility or of real, substantial work.

### **3 Stepping Away From This Logic**

We have found it essential to step away from this logic, both in classroom practice, in our theorizing about education, and in attempts to think through the work of student-teacher education. The arrival of new ICTs cannot and should not be expected to hold itself in check. As educators, we are called upon to re-imagine our work—with classroom students, teachers, student-teachers, administrators, those involved in professional development—in ways that cultivate a new sense of what it means to be an active, creative agent in the work of schooling, how to become “stewards of the intellect” rather than mere dispensers of knowledge. To interrupt this logic of isolation and fragmentation is the step towards what we are calling an inquiry stance, and the development of this stance, paradoxically, has been encouraged by the arrival of new ICTs.

Because of the widespread arrival of ICTs in North America, both in many homes and in most classrooms, our students have already, so to speak, “skipped school.” Many students are already able, with much more facility than many of the adults that teach them, to find on-line a tumultuous amount of often undigested, often brilliant work on any possible topic that might come up in school. Our students are already experiencing a world that is much richer, much more difficult and challenging, much more alluring and full of adventure than the version of the world made available in many classrooms.

We believe that it is essential to cultivate a vision of education that is able to sustain the sometimes overwhelming arrival of ICTs into our lives and into the work of stewarding the intellect in this burgeoning “information age.” It is this inevitability that, in part, has led us to something much older than these new technologies: inquiry. Inquiry begins by imagining the topics into which we might invite our students as a living topographies, living places full of their own worldliness, diversity, relations, multiplicity, history, ancestry and character. Rather than beginning with the common educational impulse to fragment and subdivide these living fields, inquiry begins with questions aimed at getting in on the conversations that constitute that life. Here is a simple example. Recently, a student-teacher talked about how he was approaching the topic of “percentages” with a Grade Six class. He noted that, in this particular case, he did what is very common in education: he started scouring resources to figure out *how to teach this topic*. At a certain point, however, he remembered an adage about inquiry: the first questions to ask in an inquiry are not how to *teach* such a topic, but rather these: *What is “percentage?”* What is it that matters about this topic as it is lived in the world? How did we come to have such a topic in our world? Why would we want to pass along such a topic to our students? Where does it belong in human experience? Once he started to ask himself such questions, whole families of relations and ancestries began to appear—the idea of “per hundred” (per cent) as a common denominator, a common standard; the founding of this idea on “base ten” and issues of place value; images of cents and centuries and centurions and decimals and decimation (the effective technique of domination of the Roman Empire, where every tenth person was killed in order to establish order in a newly-taken-over town). Once he got over the all-too-common spell of “How do I teach this?” and turned his attention to the topography itself, the ancestors, as he put it, began to show up—why was this invented? what was it for? what is important about this topic? how does it work? what does it do? What are the living questions for which “percentages” might be a good answer?

By allowing himself the time to enter into this sort of topographical meditation, he began, so to speak, to learn his own way around this phenomenon. He began to let himself become experienced in this place. There is a wonderful etymological twist occurring here: to become experienced means “to learn your way around,” that is, to have *ex-peri-ence* (as in the term “perimeter”—the “measure” [metre] of “around” [peri-]).

To become increasingly more experienced, however, does not mean to have any final, definitive knowledge, such that further, new experiences (e.g., the ones brought forward by students in a Grade 6 classroom) become less and less necessary, less and less possible, less and less interesting or relevant or pleasurable. In this foreclosing version of “becoming experienced,” students’ troubles become increasingly annoying and the “experienced person” becomes more and more cynical or condescending towards those newly arriving in some territory. This is the old saw about “the expert” and why we find such a notion so troublesome in education. It seems to bespeak impatience and a grim sort of finality.

In stark contrast to this, in inquiry, “becoming experienced” in something means quite the opposite:

“Being experienced” does not consist in the fact that someone already knows everything and knows better than anyone else. Rather, the experienced person proves to be, on the contrary, someone who...because of the many experiences he has had and the knowledge he has drawn from them, is particularly well-equipped to have new experiences and to learn from them. Experience has its proper fulfillment not in definitive knowledge but in the openness to experience that is made possible by experience itself (3).

The “expert” can be portrayed as the one who already knows and therefore as the one who is ready to simply dispense what they know to those who do not know, a moments notice, and with great ease and confidence. The experienced person, on the contrary, is someone who is ready for new experiences *because of* the experiences they have already undergone. Having himself entered into the great human conversations that constitute this phenomenon of “percentages,” he has cultivated in himself the ability to take up the differences that different students might now bring to this inquiry.

Once he had explored for himself this topography of “percentages,” this student-teacher realized that the ancestors faced a real, living question in the world for which “percentages” was a real, living response. He had opened up a space of genuine *inquiry*, where this topic had become a living topography and not just a meaningless fragment among others to be delivered to students as one more thing to learn. And, as he then noted, this is *precisely* the question that the students in his class now faced in coming to learn about percentages: what are the sorts of questions in the lives of students for which percentages might be the response? Or, as students often ask their teachers, “Why are we learning this?” If all we have examined for ourselves is how to teach percentages, this question is simply baffling. Interestingly enough, therefore, in an inquiry, the ancestors and

the children show up *at the very same time* and *in the very same way*, demonstrating that inquiry is a necessarily *intergenerational* enterprise (4).

Now, having opened up this rich territory, the place of ICTs can be asked in a pedagogically sound ways, ways. Now, *in the midst* of this inquiry and all its substantive questions, images and threads, the question of the proper place of ICTs can be asked. And it can be asked of not only for our student-teachers as they enter the classroom with children but also for our student-teachers as they enter the teaching profession. Implicit in our inquiry stance is a richer conception of what it means to enter the profession—to become a teacher:

Learning from teaching through inquiry assumes that beginning and experienced teachers need to engage in similar intellectual work. Working together in communities, both new and more experienced teachers pose problems, identify discrepancies between theories and practices, challenge common routines, draw on the work of others for generative frameworks, and attempt to make visible much of that which is taken for granted about teaching and learning. From an inquiry stance, teachers search for significant questions as much as they engage in problem solving. They count on other teachers for alternative viewpoints on their work. In a very real sense, the usual connotation of "expertise" is inconsistent with an image of teacher as lifelong learner and inquirer (2)

Is there a space that ICTs make possible so that our student-teachers might enter the profession as an inquiry, a space where they might slowly and deliberately cultivate those conversations that so many teacher education programs have never pursued? As part of our work with teachers and student-teachers in their inquiries, we are exploring the power of online environments which bind student-teachers, faculty, cooperating teachers, and professional developers together in ways that invite novice teachers into what it means to teach. These online environments are vastly different from the course delivery models that many universities adopt. The online environment we work in, *io*, provides a space where experienced teachers, professional developers, student-teachers and faculty can all come together to design engaging work for the classroom and work out the difficulties of practice together. It provides a place for asynchronous communication where University faculty, teachers, student-teachers and experts in the field can explore the living character of this topic/topography, open up threads and possibilities of exploration and discovery.

This sort of collaborative gathering together around a topic of inquiry is precisely what teachers and student-teachers are then encouraged to do with the students in their classroom. Rather than breaking up the topic of inquiry in light of the diversity and differences of classroom students, students are taken to a "place," a "topic" that has its own diversity and can embrace the full range of those who might explore it. Here is a simple analogy.

When I go out into the garden with my young son, I don't send him off to a developmentally appropriate garden. I take him to the same garden where I am going to work. Now, once we get there and get to the work that place needs, of course, each of us will work as each of us is able. We are not identical in ability, experience, strength, patience, and so on. But *both of us* will be working in the same place doing some part of the real work that the garden requires. This garden and the real work it requires, is *itself* rich and generous and multiple and varied enough to embrace our differences. This place, this topography, this topic, has room for us both. It is a place where we can gather together in our differences and work in ways that each of us has something to offer to this place that is irreplaceable. If we begin here, with the troublesome work of finding a topic of inquiry that is generous and rich enough to sustain a wide array of interests and abilities, the arrival of ICTs takes on a different character. This arrival is now *held in place* by questions that are not themselves technical: what does this place require of us as teachers and learners? what place do ICTs already have in the life of this living discipline? What role can they have in helping us sustain real conversations about our collaborative work? It is this sort of imagining that inquiry demands of educators, especially now, when new information technologies are ready to break apart the old, fragmented, school-bound versions of knowledge that will no longer do.

#### 4 References

1. Berry, W., ***Standing by Words***. (1983). San Francisco: North Point Press.
2. Cochran-Smith, M. & Lytle, S.L., Beyond certainty: Taking an inquiry stance in Lieberman, A. & Miller, L. (eds). *Teachers Caught in the Action*. (2001) NY, Teachers College Press.
3. Gadamer, H.G., ***Reason in the Age of Science***. (1983) Boston: MIT Press
4. Jardine, D., Clifford, P. & Friesen, S., *Back to the basics of teaching and learning: Thinking the world together*. (2002) Mahwah, New Jersey: Lawrence Erlbaum and Associates