

Linda Farr Darling  
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*Editors*

# Collective Improvisation in a Teacher Education Community

COLLECTIVE IMPROVISATION IN A TEACHER  
EDUCATION COMMUNITY

# Self Study of Teaching and Teacher Education Practices

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Volume 4.

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# COLLECTIVE IMPROVISATION IN A TEACHER EDUCATION COMMUNITY

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*Dedicated to Murray Ross, Lynda Erickson, and Gillian Rudge,  
who have supported and encouraged us in this and all our work  
as teacher educators*

## CONTENTS

Acknowledgements ..... xiii

Series Editor's Foreword..... xv

CHAPTER ONE: Stepping Lightly, Thinking Boldly, Learning  
Constantly: Community and Inquiry in Teacher Education  
*Linda Farr Darling, Gaalen Erickson and Anthony Clarke*

1. Introduction to CITE: A community of inquiry in teacher education ..... 1
2. Considering a community of inquiry in 1997..... 2
3. Considering the story of CITE in 2006..... 3

### SECTION I VISIONS

CHAPTER TWO: Looking Back on the Construction  
of a Community of Inquiry  
*Linda Farr Darling*

1. Early days ..... 9
2. From principles to practices ..... 12
3. CITE takes shape ..... 16
4. Our report card..... 17
5. Perennial tensions..... 18
6. Conclusion ..... 22

CHAPTER THREE: Learning in Synchrony  
*Pamela Essex*

1. My introduction to CITE: A community of inquiry for teacher  
education ..... 25
2. CITE year 2: Campus, cohorts and the classroom..... 27
3. CITE year 3: Navigating as a faculty advisor..... 29
4. CITE years 4 and 5: Connecting theory and practice ..... 36
5. A hiatus and a new view..... 37

## CHAPTER FOUR: Seeing the Complexity of the Practicum

*Steve Collins*

1. Introduction .....	39
2. Elements of complexity thinking .....	40
3. Ongoing complexity .....	48

## CHAPTER FIVE: Enjoying Their Own Margins: Narratives of Innovation and Inquiry in Teacher Education

*Anne M. Phelan*

1. Introduction .....	51
2. Practices of reform .....	52
3. A narrative of innovation .....	54
4. A narrative of inquiry .....	58
5. Closing by way of return .....	61

**SECTION II IMPROVISATIONS**

## CHAPTER SIX: In Open Spaces

*Sylvia Kind*

1. Introduction .....	67
2. With open minds .....	69
3. With open hearts .....	69
4. With open eyes .....	70
5. With open ears .....	71
6. With open hands .....	71
7. Leaving traces .....	72

## CHAPTER SEVEN: Practicing What We Preach: Helping Student Teachers Turn Theory into Practice

*Rolf Ahrens*

1. The problem of useful work .....	75
2. Changes in order to increase student teacher involvement .....	76
3. The major focus .....	77
4. Summary comments .....	85



## CHAPTER EIGHT: Social Studies Education in School

*Dot Clouston, Lee Hunter and Steve Collins*

1. Introduction .....	87
2. The essence of a primary classroom: Establishing community .....	88
3. Establishing a community on campus .....	89
4. Social studies methods at the university .....	92
5. Conclusion .....	99

## CHAPTER NINE: Learning by Design: A Multimedia Mathematics Project in a Teacher Education Program

*Jane Mitchell, Heather Kelleher and Carole Saundry*

1. Introduction .....	101
2. Multimedia design and technology integration .....	102
3. The case study .....	105
4. Transfer to other contexts .....	113
5. Conclusion .....	117

## CHAPTER TEN: Teacher Educators Using Technology: Functional, Participative, and Generative Competencies

*Anthony Clarke and Jane Mitchell*

1. Introduction .....	119
2. CITE: A context for exploring teacher educators using technology .....	120
3. Understanding change: Innovation and resistance .....	120
4. Teacher educators using technology: Two narratives.....	122
5. Rethinking the use of technology in CITE .....	129
6. Concluding word .....	134

## CHAPTER ELEVEN: Virtually Aesthetic: The CITE Cohort's Experience of Online Learning

*Anita Sinner and Linda Farr Darling*

1. Introduction .....	137
2. Methods .....	138
3. Analysis of the CITE cohort experience of virtual learning.....	139
4. Insights for educational practice .....	152

CHAPTER TWELVE: Learning to Teach Technology: The Journey  
of Two Beginning Teachers

*Jennifer Sutcliffe and Sanyee Chen*

1. Introduction .....	155
2. Planning the DLT program.....	156
3. A teaching model.....	157
4. Implementing the DLT program.....	159
5. Other DLT activities for the term .....	163
6. Reflections on our experiences teaching the DLT component in CITE.....	165

CHAPTER THIRTEEN: Mid-Course Feedback on Faculty  
Teaching: A Pilot Project

*Stephanie Springgay and Anthony Clarke*

1. Introduction .....	171
2. Mid-course feedback versus end-of-course feedback on practice .....	171
3. The study .....	172
4. Conclusion.....	183

CHAPTER FOURTEEN: Portfolio as Practice: The Narratives  
of Emerging Teachers

*Linda Farr Darling*

1. Introduction .....	185
2. Part one: Portfolio construction as a practice .....	187
3. Part two: The practice of twelve preservice teachers talking about their portfolios.....	191
4. Part three: Refining portfolios in teacher education .....	200
5. A few concluding remarks.....	204

**SECTION III REVISIONS**

CHAPTER FIFTEEN: Complexity Science and the CITE Cohort

*Anthony Clarke, Gaalen Erickson, Steve Collins and Anne Phelan*

1. Introduction .....	209
2. Cohorts in teacher education .....	210
3. Complexity science.....	211

4. A reading of CITE as a complex system .....	219
5. Concluding commentary.....	223

CHAPTER SIXTEEN: “The Filter of Laws”: Teacher Education  
and the British Columbia College of Teachers’ Teaching Standards  
*Anne Phelan, Gaalen Erickson, Linda Farr Darling, Steve Collins  
and Sylvia Kind*

1. Teaching standards in Canada .....	227
2. Teaching standards in British Columbia.....	229
3. Community and inquiry in teacher education.....	232
4. Self-study in teacher education.....	234
5. Emerging themes .....	235
6. Teaching standards as hypotheses .....	243
7. Conclusion .....	245
Contributors.....	247
Index.....	251

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## SERIES EDITOR'S FOREWORD

As has been well illustrated in the other books in this series, the notion of self-study of teaching and teacher education practices has been taken up by teachers and teacher educators as they have searched for new ways of better understanding the complex work of teaching and learning. Self-study appears to be attractive to practitioners because a self-study approach to researching practice is largely driven by their questions, issues and concerns. Therefore, one immediate value of self-study is in the way it can inform and almost immediately influence practice.

This book, edited by Linda Farr Darling, Gaalen Erickson, and Tony Clarke offers an in-depth investigation of the CITE program (A Community of Inquiry in Teacher Education) and is one of the few examples of that which might be described as an institutional self-study (Loughran, 2005). As such, the book illustrates the level of commitment and concern that these teacher educators have for their teacher education practices and for the learning about teaching of their student teachers. They demonstrate that it is crucial to question the taken-for-granted and that in so doing, to be careful to seek to be appropriately responsive to disconfirming data.

At a time when teacher education is yet again under scrutiny (see, for example, Cochran-Smith & Zeichner, 2005) and being called upon to do more with less – and to do it quickly – these teacher educators illustrate how a sustained approach to innovation and excellence in teaching and learning about teaching is in fact central to good teaching and teacher education practices. The CITE program is remarkable in many ways, but perhaps central to its success is the ongoing collaboration, support and sense of responsibility inherent in the manner in which these teacher educators work and learn together; a critical issue rarely raised by those who consistently seek to define what teacher education should do or what outcomes it must produce.

The CITE program illustrates well how, with inquiry as a central focus, that teaching and teacher education is able to respond in appropriate ways to the ever-growing expectations inherent in the calls for educational change. Through serious attention to personal practice and experience, the outcomes of teacher educators' (and student teachers') inquiries enhance our understanding of the complexities of teaching and learning and the importance of valuing a knowledge of practice.

The “self” in the research on practices central to the CITE program clearly depends on the work of the individuals – as different chapters attest. The “self” is also evident in the strong sense of collaboration and sharing so important to the learning displayed throughout this text and particularly evident in the multi-authored chapters. However, it is at the institutional level that the “self” in this self-study stands out for me as being particularly distinctive. Although self-study encourages a focus on teaching and students’ learning, it is not easy to maintain the impetus to do so across a program as a whole – much less as a retrospective following ten years work.

Hamilton and Pinnegar (1998) stated that:

As teacher educators, we recognize that we are teachers. We believe that research on teaching practice by teachers holds invaluable promise for developing new understandings and producing new knowledge about teaching and learning. Formalizing such study of practice through self-study is imperative.... The value of self-study depends on the researcher/teacher providing convincing evidence that they know what they claim to know [and to] provide evidence that self-study undertaken with rigor ... will lead to both reconstruction and reconceptualization of teacher education. (Hamilton & Pinnegar, 1998, pp. 243–244)

I suggest that this book by Farr Darling, Clarke and Erickson as part of the series designed to complement the *International Handbook of Self-study of Teaching and Teacher Education Practices* (Loughran, Hamilton, LaBoskey & Russell, 2004) extends the work of self-study in ways that begin to respond to the claims of those who seek more of teacher education. The editors and their authors have worked long and hard to draw together their collaborative learning about teaching and teacher education and by paying careful attention to the totality of their teacher education program they are able to offer insights that are informing and valuable to others equally committed to quality in teacher education.

J. John Loughran

*Series Editor*

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## Chapter One

# STEPPING LIGHTLY, THINKING BOLDLY, LEARNING CONSTANTLY: COMMUNITY AND INQUIRY IN TEACHER EDUCATION

Linda Farr Darling, Gaalen Erickson and Anthony Clarke  
*University of British Columbia*

### 1. INTRODUCTION TO CITE: A COMMUNITY OF INQUIRY IN TEACHER EDUCATION

The stories told in the chapters in front of you represent a special collaboration between colleagues involved in teacher education. We hope the curiosity that brought you to the book is further sparked by what you find in its pages. The collection is, as the title of the series says, a self-study with multiple “selves” contributing to it. For over ten years, a small group of teacher educators at the University of British Columbia, along with numerous school partners, has annually led a cohort of students in an ongoing experiment and research agenda in teacher preparation. After 12-months of coursework and school experience, these post-baccalaureate students are awarded a Bachelor of Education degree, their entry to elementary teacher certification. The project is called CITE: A Community of Inquiry in Teacher Education. As small-scale reform initiatives go, CITE has had a relatively long and vibrant life, despite some inevitable setbacks and struggles. In fact, it is the longevity of CITE that prompted its founders to focus our inquiries about teaching and learning on the challenges of sustaining our own project. The result is a collection that chronicles some of our experiments, our deliberations, and the lessons learned through these experiences. It would be accurate to say that *Collective Improvisation* is many stories, not just one. That is because the book represents the perspectives of university-based instructors, school partners, former students, and graduate student researchers, each of whom contribute a different and valued voice to the whole composition.



*Collective Improvisation* came about as most initiatives have in our group since the cohort's inception in 1996. Someone has an idea or a question, and the moment he or she voices it, other members of the team are off and running. Many creative and fruitful experiments in CITE have come from our weekly meetings, and especially from our yearly retreats in which we try to combine celebration with sincere introspection. For some time, we have been curious about the reasons CITE has lasted as long as it has, and interested to see if by writing our own story, we could make better sense of perennial questions about reform in teacher education. Even so, there are more questions presented here than there are answers. As an introduction to what lies ahead, we begin our story with two vignettes that take us back to the first teacher education cohort we called CITE, and to several questions that have been with us ever since about the very meaning of our name.

## **2. CONSIDERING A COMMUNITY OF INQUIRY IN 1997**

### **2.1 Community**

The two-day orientation with our first cohort of 36 aspiring teachers had just ended. People packed up their belongings and casually collected in groups. I was pleased with the introductory words my colleagues had chosen to describe our intentions for this budding community of inquirers. There were murmurs of approval from students, and a visible eagerness to get started that reflected our own. It was a hopeful beginning for communal activity. Already I could imagine us working productively together over the year of teacher preparation, enthusiastically deliberating about what matters in education, collectively discovering what is truly important in learning to teach...Lost in musing, I failed to hear Sam shuffle up to me, a lanky twenty-one year old under a baseball cap. When I looked under its brim, I saw Sam's expression was one of a deer caught in the headlights.

"There's no place to hide here," he said simply.

### **2.2 Inquiry**

Wednesdays such as this one were set aside for community meetings. With our avowed commitment to democratic participation, governance is a shared endeavor in CITE, and at each meeting, two elected students represent the rest. It was mid-October, just before the first three-week practicum in elementary classrooms. Over brown bag lunches, instructors cheerfully tossed out project ideas, curricular themes, and thought

experiments for the year. We were an enthusiastic bunch, faculty with attitude, ready to take on teacher education and turn it on its head. We had a hundred questions, and a dozen research agendas. Now our community was extending outward to embrace six schools that would share and extend our vision, adopt our student teachers like family, and help us bridge the culture gap between campus and elementary classroom with creativity and innovation. The possibilities for full-blown inquiries into teaching and learning were immense.

“Student issues are next,” Heather said brightly. Nikko, the newly elected student representative cleared her throat. “Everybody wants to know...when do we get lesson plans?”

### **3. CONSIDERING THE STORY OF CITE IN 2006**

The two vignettes illustrate part of what this book is about: community and inquiry in a teacher education initiative and how these two ideas have evolved over time. In the first vignette, the teacher’s enthusiasm about collectivity sharply contrasts with one student’s dread of the very same thing. Community means different things to different people. In this case a CITE founder and a student member of the first CITE cohort express a tension that has run through our project since the beginning. This tension has several related strands including the pull between the public and private work of learning to be a teacher, and the strain between competing expectations of the form and content of teacher preparation. Sam’s undergraduate experience led him to believe that learning is a solitary, independent venture in which answers come through literature and lecture. He was unprepared for the high visibility that comes with membership in a cohort, and he was unfamiliar with dialogue as a means for learning. In contrast, CITE is committed to constructing understandings about teaching and learning through community deliberation in which everyone has a voice, and everyone participates.

In the second vignette, it is clear that for the faculty involved, CITE has meant imagining possibilities for preparing teachers that can be enacted and then examined. We share a belief that teaching, ours included, should be continually informed by research and investigation. On this view, learning to teach is a less a matter of acquiring skills and content than cultivating certain dispositions toward understanding and knowledge. Among these dispositions are intellectual curiosity and a spirit of discovery. The new students, understandably nervous about an upcoming school practicum, instead want access to the toolbox of skills they believe their teachers and supervisors

hold. They are not inclined to accept the idea that tools are worth little without judgment or discernment.

Many readers will recognize these persistent tensions from their own work in education: conflicting views about the aims of schooling, and competing notions of what teachers do, and how they should be prepared to do it. Educational reform of any sort has to address these perennial contradictions. Reform efforts in teacher education bring their own set of antinomies to the surface. Our struggles to sustain a coherent, constructive community of inquirers are not unique to our cohort project. Through the course of this collection, CITE authors explore these and other familiar tensions, along with ideas for their reconciliation, or at least peaceful co-existence. The tensions also provide an opening through which other philosophical and pragmatic issues are considered. We are certain that some of these issues also go beyond the particular setting of our work.

The collection is illustrative of our story as collective improvisers. We are a decade-long initiative that has tried to become a viable community of inquiry, and a research and teaching project with one foot on campus and the other in schools. We have spent years looking for common ground between these two places so we can keep growing and moving forward. Thankfully, we have found some shared earth that is fertile and rich, as we hope you will discover in your reading. However, unbridgeable gaps, and even false leads are inevitable on any reform path. There are rocky ledges on which nothing grows, and sometimes it is just too far to jump to safety. You will read about some of that ground, too. Improvisation can be wonderful and generative; but it can also lead to confusion or chaos, and even the need to go back to retrace our steps.

There are three parts to *Collective Improvisation*. The first, *Visions*, recounts the possibilities we articulated when we proposed CITE. This section places our ideas against a wider backdrop of reform discussions both in teacher education and in schools. Linda Farr Darling takes up themes and structural concerns related to creating our teacher education cohort in its early days. Her chapter describes some of the theoretical and practical issues with which a small group of us grappled in animated conversations over tea or wine. Pamela Essex brings the voices of teachers in schools to her chapter, and in this way embraces one of the first principles of CITE: to be responsive to all the communities in which it resides. As one of the first sponsors to take a cluster of CITE students into her school, Pamela reveals a special perspective on the relationship between our intentions as teacher educators, and the intentions of teachers in schools inquiring into their own roles as mentors and practitioners. Steve Collins also takes us to the world of schools with his exploration of the complexities in the practicum as seen from his perspective as a Faculty Advisor supervising student teachers. In

the next chapter, Anne Phelan discusses philosophical bases of reform and critically examines CITE's work "on the margins." Anne arrived on the scene in our ninth year and brought with her valuable insights from her experiences, and a fresh outlook on our project that brought many new questions to light.

The second section, *Improvisations*, takes the reader into the business of daily detail with chapters on various innovations and experiments within the cohort, and our reflections on these. Sylvia Kind discusses why learning about art and making art are such essential pursuits in learning how to teach. Sylvia's work in CITE spans the length of her doctoral studies at the University of British Columbia and is rich evidence for the promise of bringing one's own research into a methods course. Rolf Ahrens, a former elementary school principal, is also a long time instructor with CITE. He has contributed a chapter that describes the challenges and opportunities of teaching Educational Psychology in the various CITE cohorts over the years. In the next chapter Steve Collins and co-authors Lee Hunter and Dot Clouston describe a two-year experiment that took a methods class directly into the life of an elementary school. The three authors, a university based instructor, a school vice-principal and a classroom teacher worked together to make an exciting context for learning social studies curriculum and pedagogy.

The problems and promise of digital learning are first taken up in a chapter by Jane Mitchell, a former doctoral student who researched several aspects of CITE, along with instructor Heather Kelleher and educational consultant Carole Saundry. Their chapter chronicles CITE's early attempts to integrate digital learning technologies into the program. The perspective of teacher educators examining the pedagogical challenge of digital learning technologies in their own practice is the frame for Tony Clarke's and Jane Mitchell's chapter which follows. Their lines of inquiry blend theoretical examination with careful scrutiny of more practical matters. Meaningfully integrating digital technologies into coursework is also the subject of Anita Sinner's and Linda Farr Darling's chapter on the aesthetics of on-line learning as seen through students' interactions and reflections within an electronic forum. This chapter is followed by a description and discussion of the most recent efforts to help create technologically literate teachers in CITE. The piece is contributed by two of our CITE graduates who rejoined us recently as part-time instructors. Finding constructive ways to bring our students into the process of reshaping the CITE experience for themselves and future cohorts has been a goal since the beginning. Also in this spirit, Tony Clarke and Stephanie Springgay present an account of an experiment in mid-term teaching evaluation by CITE students. Linda Farr Darling closes

out the section with a piece on the use of portfolios as a way to capture students' learning through their year with us.

The last section, *Revisions*, is the most speculative of the three. Here, two co-written chapters reveal the nature and form of our most recent conversations about the possible future of CITE. We are curious about our next steps. Our commitment has always been to create in our cohorts the conditions for open, meaningful inquiry into learning and teaching. We have based our practices on a simple shared belief: an inquiring spirit should be a defining characteristic of all teachers, including, of course, teacher educators. One of the more promising lines of inquiry within the present CITE community has involved themes and concepts taken from complexity science. These ideas are explored in the first piece by co-authors Anne Phelan, Gaalen Erickson, Anthony Clarke, and Steve Collins who came together on many occasions to discuss the implications of complexity science for their work. The second chapter is also a group conversation including many of the same authors who are joined by Linda Farr Darling and Sylvia Kind. This final chapter addresses the complex and ever-looming topic of professional standards and accountability in teaching. It highlights concerns that animate present discussions around the CITE table about the possibilities for reform in teacher education within the present political climate. It also includes a few speculations about what might be on our individual and collective horizons.

## **SECTION I VISIONS**

## Chapter Two

# LOOKING BACK ON THE CONSTRUCTION OF A COMMUNITY OF INQUIRY

Linda Farr Darling  
*University of British Columbia*

### 1. EARLY DAYS

This chapter takes us back to the beginning of our story. In 1996, a group of five faculty members in the Department of Curriculum Studies began to share our concerns and hopes about teacher education. We were not alone in our criticisms of initial teacher preparation at UBC. Many students and faculty described our programs as piecemeal, mechanistic, and full of content duplication. “Too many assignments and not enough time for reflection,” were frequent complaints on surveys to graduates. “Not enough hands-on school experience before the extended practicum,” noted other students. Their voices echoed a host of contemporary critics of teacher preparation programs (Russell & Munby, 1992; Zeichner, Melnick & Gomez, 1996) who also pointed to persistent theory-practice gaps, and an overemphasis on skills training to the detriment of teaching for understanding.

The five of us were also concerned about the sorts of moral and intellectual attitudes that were being cultivated (or not) in our pre-service teachers. Curiosity, humility, initiative, and empathy are among the qualities teachers should possess. These qualities are best cultivated in a learning environment that encourages open inquiry, responsible deliberation and constructive exchange between colleagues. Instead, we saw teacher preparation programs, including our own, that made the teaching enterprise look highly technical. These programs focused on the mechanics of teaching, rather than on the development of dispositions, sensitivities and understandings that guide thoughtful judgments about what to believe or do in the complex world of the classroom (Schön, 1987; Fenstermacher, 1990; Goodlad, 1994). Some writers complained that this dominant model of

professional preparation was rooted in an “applied science approach” or a “technical rational model” (Schön, 1983, 1987), inappropriate for learning about the uncertainties and complexities of professional practice and school culture.

One result of these critiques was the movement to reconceptualize teacher preparation programs in terms of a complex set of learning practices (Britzman et al., 1995), rather than the acquisition of professional knowledge and skills. Associated with this shift was a concurrent shift in the literature on learning from a focus on individual models of learning towards more socio-cultural models (Bruner, 1990, 1996; Lave, 1996; Varela, Thompson & Rosch, 1991). Over the last decade these socio-cultural models of learning have appeared in the design of teacher preparation programs and professional development models, particularly in cohort initiatives based on building communities of learners or inquirers (Thomas et al, 1998; Palinscar et al., 1998). Like many other teacher educators, we found this a welcome shift in emphasis, and wondered what it might mean for program renewal within our own Faculty.

One of our five, Karen, challenged us to take seriously the first question of dreamers, “What if...?” “What if we could create a teacher preparation program of our own design? What would be its theoretical foundations? What would it look like? How would it operate?” The five of us began to imagine alternatives to our own pre-service classes by asking other basic questions, “What matters in teacher education? What kind of teachers do we want to see?” We continued our conversations with the goal of designing a small-scale program option based on principles we believed could lead to meaningful learning experiences for pre-service teachers. Based on our aggregated teaching and research experience we believed that there was merit in the development of cohorts, thematically linked subject matter, and team teaching practices. We also saw a need to construct our program collaboratively with our campus instructors, school based educators, and the pre-service teachers. These participants do not often share common expectations for teacher preparation (Holmes Group, 1990). We hoped that collaboration right from the start would foster greater understanding of each other, and strengthen connections between the teacher education classes on campus, and the school experiences our pre-service teachers would have.

The most influential perspective in our program design is that associated with the nature of learning through active participation in a “community of practice” (Wenger, 1998) or as others have called it, a “community of learners” (Bereiter & Scardamalia, 1993; Brown, 1994). For Bereiter and Scardamalia, a community of learners must be structured so that community members can productively engage in activities to share their knowledge, and support one another in knowledge construction. Their notions of



“progressive discourse” (in which ideas build on one another through dialogue) and “collective expertise” are reflected in CITE approaches to collaborative inquiry into “learning to teach.” Our common belief has been that the heart of teacher education reform should be open and democratic dialogue about the purposes of schooling, the substance and delivery of curriculum, and the moral and epistemic responsibilities of teachers. A community of inquiry in which members shared a commitment to creating better learning experiences through collaborative deliberation and research, has served as our model.

The concept of a community of inquiry has enormous intuitive appeal to educators (Raywid, 1988; Nicholson, 1991). It appears in literature on educational reform that claims such communities provide regulative ideals for social interaction and constructive intellectual engagement in settings from preschool to university (Noddings, 1992; Lipman, 1997). The dual notions of ‘inquiry’ and ‘community’ are both regarded favorably, but there is little in the teacher education literature that explains why this is so. If we revisit Dewey on this matter, we find that his notion of classroom communities combined both political and philosophical elements, and the goal of a deliberative and democratically minded classroom was an informed and engaged citizenry. One could only participate in a democracy by learning to engage in collective inquiries in many disciplines, and by practicing democratic decision-making (Dewey, 1916, 1927). Following from Peirce, Dewey believed that the purpose of inquiry was the resolution of doubt, made possible through rigorous examination and justification within a critical and informed community (Mounce, 1997).

The idea of a community of inquiry became an important part of our initial vision for a cohort. In a teacher education community, inquiry is obviously focused on learning to teach (in other words, the means) and less obviously on investigating what counts as an educated person and a responsible citizen, or on examining the worth of a liberal education (the ends). In order to provide a teacher education program that would do justice to both community and inquiry in Dewey’s sense we would have to bring our fledging community together in dialogue about both the ends and means of education. In a genuine community of inquiry people communicate their goals, revise them together, and work collectively to achieve them. They engage with each other in a critical process of personal and social reconstruction. They do this by responding to and building on each other’s ideas. Inquiry in a community challenges the outer limits of each member’s epistemological horizons. The challenge requires vigilant efforts to engage multiple viewpoints. Community members come to understand that any “argument is bigger than anyone of us comprehends from our own perspective” (Kennedy, 1998, p. 21). We believed that by bringing students

together with instructors, school personnel and other teacher educators we could construct a community in which no single member holds the answers to questions about how to teach. Ours would be a collective pursuit of knowledge and understanding (Dewey, 1916, Calderhead & Gates, 1993; Elliott, 1993). Early in our discussions, we agreed that the following principles would guide construction of the program:

- Learning is social; it takes place in a variety of contexts and through different kinds of inquiry. To learn with and from others, is to enter into a community of inquiry.
- Learning to teach is a matter of developing dispositions towards others and towards inquiry, as well as gaining content and pedagogical knowledge. These dispositions can be cultivated within a community of inquiry.
- In a community of inquiry, members are committed to ongoing research, critical reflection, and constructive engagement with others. The epistemic and moral virtues developed and expressed in the community include respect, open mindedness, perseverance, integrity, and a sense of justice.

The cohort community was one in which the notion of inquiry would be developed over time with all participants constructing and refining common understandings (Erickson, 1991; Tom, 1997). Seyla Benhabib's conception of a participationist community became one cornerstone. Benhabib contrasts two sorts of community: the integrationist, in which members share both purpose and vision as prerequisites for membership, and the participationist, community in which the members share only a commitment to creating common ground through dialogue and inquiry (Benhabib, 1992). The latter seemed to capture our desire to bring the students into the picture in an unprecedented way, as pre-service teachers who would help shape their program, set the research agenda, and make meaningful links between their learning experiences on campus, in schools and within the larger public sphere (Rainer & Guyton, 1999). It also captured our desire to bring school based educators, particularly sponsor teachers, into the planning and implementation of the entire program, the sort of initiative advocated by many educators (Holmes Group, 1995; Darling-Hammond, 1994; Sachs, 1997; Brandes & Erickson, 1998).

## **2. FROM PRINCIPLES TO PRACTICES**

The five of us had been involved in teacher education reform for some time, and we realized there is a long road between philosophical visions and sustainable programs. As with all reform efforts, our own initiative would be

set against a backdrop of dynamic political and social factors, including tensions between the University's expectations for professional programs and the mandates of our Provincial credentialing body, the British Columbia College of Teachers. Against this backdrop, we began to think about workable structures. Our foundational principles provided the regulative ideals we needed, but they did not lead us to one particular framework. Mindful of our overall aims, we hoped to create a program characterized by three elements:

- coherence
- reflection, and;
- responsiveness

If we could attend to these elements, we might begin to address some endemic ills in teacher education described (in turn) by school personnel, teacher education students and teacher educators: fragmentation and communication breakdowns between campus and schools, too much time in classes and not enough time to think, and finally, a misplaced emphasis on teaching techniques. (Clift, Houston & Pugach, 1990, Goodlad et al, 1990).

First, a coherent program is one in which the pieces fit together both conceptually and practically. Our shared beliefs in the aims of education brought initial coherence. We had many of the same commitments to helping students develop habits of mind, sensitivities, and ethical understandings in addition to gaining content knowledge and pedagogical expertise (Fenstermacher, 1990, 1994). We wanted structural coherence as well. That meant building a framework for courses and practica with three interlocking parts: the foundations core, the curricular core, and the professional experience core. Each of these cores would retain its own focus, but would inform and enrich the others. We posed three questions to address in the foundations courses, curricular courses, and in school settings. These questions represented thematic coherence. We visualized them as a three-strand rope weaving through the subject areas:

1. What do we mean by a community of inquiry?
2. What are the necessary features of a community of inquiry?
3. What is the teacher's role in shaping a classroom community of inquiry?

Building on the notion that we were creating common ground through dialogue, we worked on these questions in a variety of ways including empirical investigations of diverse communities, on-line discussions about the philosophical and sociological literature on community, and case study exploration of schools and classrooms. Each inquiry enriched our

understandings of how a community of inquiry might be created and sustained within our cohort, and how elements might be applied to school settings (Boyer, 1994, Gardner, 1995; Gregory, 1997). Desirable virtues and habits of mind were practiced through the inquiries themselves, social and intellectual engagements that demanded discipline, patience, discernment, and respect. (Wallace, 1978; Burbules & Rice, 1991).

Coherence on a practical level translated to coordination among instructors' agendas, school schedules, and students' needs. We agreed to meet weekly to shape the program as a team, and include student representatives who would bring concerns from the rest. CITE students would also meet weekly to discuss the program. This weekly collaboration has remained important to us; we have worked hard to construct evaluative criteria together, plan field experiences, share what is happening in all our classes to eliminate duplication, and coordinate assignments. We have also brought planning meetings to our partner schools so that teachers and administrators can help shape a coherent and well-grounded program.

Second, a reflective program supports examination of theory and practice (Calderhead & Shorrock, 1997). We ask the students to be critical of their own practices, and we try to be equally critical of our own. To that end, we are explicit about the processes we go through to plan and teach. Students have frequent opportunity to hear our deliberations about goals, content and methods of course delivery. We know students need time to reflect, along with rich experiences to prompt reflection, and that they need structured expectations from us. One component of the program is group inquiry. Inquiry groups of six students meet weekly (in a scheduled block) to discuss issues of professional development. This is the students' "generative space." Providing time and space in the program for independent research and reflection is one way to encourage taking responsibility for professional growth, a disposition we hope will be present throughout a teaching career. Several of our graduates have initiated "Inquiry Groups" in the elementary classrooms in which they work, demonstrating one powerful connection between classroom learning at all levels.

Evaluation of students' progress is based on our collective commitment to reflection as well. No course grades submitted to the registrar until April, allowing us to continue some courses over two terms, and giving us time to revisit themes. A portion of student learning is evaluated through individually created portfolios intended to reveal a narrative of each student's experiences, and analysis of those experiences. Because portfolios are becoming popular means for assessing children's academic progress, our CITE portfolios (now electronic) have been useful models to take to the classroom. Reflection is also evident in our research agenda. Documentation of our practices over the years, particularly research into the communicative

structures integral to the program, is ongoing. Our commitment to reflection is further demonstrated through the extended practicum. Pre-service and sponsor teachers join the CITE instructional team for CITE Community Days held in district centres. These are opportunities to share classroom expertise and discuss classroom dilemmas across our six partner schools and the university. Classroom teachers planned the agenda for several CITE Community Days, powerfully demonstrating to our students that reflection is a cornerstone for improving practice. (Erickson, 1991; Elliott, 1993).

Finally, a responsive program is attentive to the concerns of the communities it serves: students, faculty, school professionals, children and their families. Instructors try to model the dispositions and sensitivities that we want our students to express in their future classroom communities. Among these are the disposition to listen to others and solicit their views. Our students have opportunities to evaluate components of the program as they go along. Feedback from each year's cohort results in substantive changes to the program in the next year. For instance, the students' initial practicum came earlier the next year following student feedback, and each year we modify some assignments. Beginning in the 1998–1999 academic year, we have distributed semi-annual questionnaires on course content and delivery, school experiences, and various community activities. Based on responses and requests, we have developed workshops to supplement instruction or offer alternative perspectives, brought in speakers from the field, and created assignments that better match students' own aims.

To meet the demands of responsiveness outside the university setting, we continually try to strengthen ties with school personnel so we can respond to their concerns about student preparation. The faculty advisors who supervise students during practica work with only one or two schools, allowing increased contact with an entire staff. The advisors begin their visits in September so it is possible to address expectations and concerns immediately. A major focus is on building communicative structures that will support and enhance dialogue amongst all program participants on campus and in our partner schools. Early efforts to communicate using electronic tools were documented by one of our graduate research assistants who led weekly technology labs for students. In these two-hour blocks students were introduced to a variety of programs and software. Many created their own web sites, explored Internet resources, participated in on-line discussion groups, and communicated with educators as far away as Australia. Some of our sponsor teachers and even one school principal joined a fruitful on-line dialogue about the limits and possibilities for curricular integration. Over the years, we have expanded opportunities for dialogue on-line (see Section II).

### 3. CITE TAKES SHAPE

Following the formative discussions described here, we began our Community of Inquiry for Teacher Education (CITE) in the fall of 1997 as a cohort within the 12-month elementary teacher education program. Twenty-six women and eight men (all university graduates) enrolled in the new option within UBC's Bachelor of Education program. They ranged in age from 21–40 with a cluster of students in their mid-twenties and another group in their early thirties, preparing for a second career. Diversity was representative of preservice teachers in Vancouver: a majority of middle class students from Western European background, and a smaller number of middle class students from Chinese, Japanese and Indo-Canadian families. Subsequent cohorts have looked similar, though our students from Asian immigrant backgrounds, including Vietnamese, Cambodian, Korean and others, now represent closer to half of our numbers. In recent years, our students have tended to be younger, often right out of university.

Throughout the program, CITE students take their classes together, participate in a variety of community activities, and experience student teaching in small groups clustered at selected schools in one district. Direct school experience, in fact, accounts for 40% of the program, more if you include university courses that have been taught on school sites. Students join a campus team of ten instructors and graduate students from three departments in the Faculty of Education. In these ways, CITE looks like a number of other cohort models in teacher education and professional development. However, there are several features that distinguish CITE from other educational cohorts described in the literature (Sachs, 1997; Thomas et al., 1998).

- Instructors share the conception of a community of inquiry. We present it to the students as a possible model for classrooms as well as the program's foundation.
- Research into practice reflects our commitment to collaborative inquiry. Students carry out research in small Inquiry Groups and through on-line discussions. Faculty are engaged in a variety of research studies on the CITE project itself.
- Information and communicative technologies support learning and create opportunities for dialogue and planning on campus and in schools. This extends inquiries into teaching and learning by bringing other educators into the community and by keeping links strong across schools during student teaching.
- Pedagogical practices reflect our commitments to socio-cultural models of learning. Students share responsibilities for their curriculum. Team

teaching and regular group planning ensure that foundational and curricular subjects integrate with each other and with school experiences. (See Section II)

- Students share in aspects of program governance by electing representatives who attend weekly meetings and vote on policies. Students plan campus and school events, take part in research projects headed up by faculty and graduate assistants, and on occasion, present their work at teacher education conferences.

#### **4. OUR REPORT CARD**

In many ways, CITE has been a successful reform initiative throughout its ten year history. Importantly, CITE has brought practices in teacher education in line with a well-articulated vision of a community of inquiry, and developed these as models for elementary classrooms. It has brought like-minded faculty together in a shared endeavor where they can take the notion of team teaching and curricular integration seriously. CITE has also encouraged students to take responsibility for participating in their professional preparation with its emphasis on technological competence, independent inquiry groups, and collaborative planning sessions.

CITE has also democratized decision-making procedures by bringing students into the governance structure in unprecedented ways. They are community members who help set the agenda, work through problems, and communicate CITE initiatives to a wider educational audience through participation in symposia and regional conferences. In addition, CITE has found advocates in many of our supervising teachers. Many of these teachers welcome the opportunity to help shape pre-service teachers' university experiences. They have helped teach campus-based courses and collaborated with students on projects, especially those based on innovative applications of technology (See Section II). Last, but by no means least, CITE has helped to enrich the wider dialogue about reform that is taking place among teacher educators.

However, as a cohort, as a program model, and as a response to calls for reform, CITE is still far from the ideal we envisioned. Some problems have been resolved but others emerge in their place. We can claim to understand many of our problems because we have solicited feedback from students and school based educators in a number of ways. Weekly team meetings address concerns raised by students, instructors, and school staffs. Negotiations with all affected parties precede every major policy decision. Frequent and anonymous surveys let us know how participants view certain practices, and how they might embrace proposed changes. Progress interviews with

students in December solicit opinions on aspects of program delivery. External reviewers give us feedback on students' reactions to CITE practices. Because of documentation over ten years, we are in a unique position to see our weaknesses and challenges along with our strengths. In many cases, the feedback has allowed us to modify the program in positive ways. We have done this whenever we believed changes were warranted and workable.

Some problems students raise, as well as concerns instructors articulate (such as the considerable time commitment) may express the inevitable limitations of cohorts. If so, no amount of research will lead to resolution in some areas. It is possible that since cohorts are never the same twice; what is found to be successful in one setting, during one term, with one group of people, may not be successful again or anywhere else. Developing models for teaching teachers means working with lots of uncertainty. Other people's models, while helpful to examine, may not fit new circumstances. Knowledge claims we are able to make about CITE may not transfer easily to other teacher education contexts. As with research in other social sciences, conclusions about what works are often tentative or contingent (MacIntyre, 1981). Some persistent problems may just come with the territory, and there are times when we may end up finding ways to manage dilemmas within our community rather than solve them. Still, it is important to understand what the problems are and discover how widespread they might be.

## **5. PERENNIAL TENSIONS**

In 2000, I described three sorts of tensions that are worth revisiting six years later. I referred to them under the heading of "the shifting limits of negotiation, autonomy, and solidarity" (Farr Darling, 2000). The first one relates to our governance model. As described in the first part of this paper, one of the cornerstones of our community of inquiry has been responsiveness. We try to reach decisions on program policies through consultation with all affected parties: our students, the instructional team, and in certain matters sponsor teachers and administrators from our partner schools. We expected this to be time consuming, but we had faith in the ultimate benefits. Nevertheless, there are still unanswered questions about finding the appropriate boundaries for negotiation with our students and our partner schools. Sometimes our needs strongly conflict. Coming to a consensus on some aspects of practicum scheduling with our sponsor teachers has been a challenge for example. Negotiating and renegotiating assignment due dates with our students has been another. As instructors, we are often in a better position to know what is in our students' best interests in



terms of sequencing assignments, yet in the spirit of compromise we have let students decide, sometimes with disappointing results. Bringing everyone to the table for decisions means rounds of discussion and some frustration. It can even start to fragment a community rather than pull it together. We have decided that the remedy is not to give up on democratization, but to find better ways of communicating our interests and the reasons for our views, along with better preparing our students to constructively “dialogue across differences” (Burbules and Rice, 1991). In the case of our partner schools, we have viewed the challenge of scheduling as another opportunity to understand and appreciate the work of teachers in schools. They have learned to appreciate the nature of our work as well, and the result has been more constructive deliberations between us, even when we disagree.

The second tension relates to the development of intellectual autonomy. We want to nurture intellectual autonomy in our students because we believe this fosters the dispositions necessary for responsible, creative and stimulating teaching based on a continual quest for knowledge and understanding. Yet there are justifiable limits to autonomy that need to be drawn and redrawn through the course of a program. The balance between independent study, student-led collaborative inquiry, and more formal classroom instruction constantly shifts so that everyone can maximally benefit from the opportunities CITE offers. As an example, providing opportunities for independent inquiry is one way to support the growth of autonomous teachers. At the same time, we need to make sure that our students are sufficiently prepared to engage in independent inquiries. This means ensuring that they learn the necessary background information, research tools and communicative skills, all of which require some amount of direct instruction. On one occasion a small group of CITE students innocently embarked on independent inquiries into the classroom practices of their teachers and their peers without going through appropriate ethical reviews, and without informing the “subjects” of their study. Without sufficient awareness of the sensitivity of their context and the consequences of claims based on extremely limited data, these students caused emotional damage to the community when they pronounced that their research found colleagues were “gender-biased.”

A third tension in CITE is perhaps the most persistent and puzzling. As described earlier an important goal has been to build a healthy sense of solidarity within our community. Importantly, solidarity within a professional community dedicated to preparing teachers has necessary limits. Identifying those and keeping them in view is not always easy. On the first day of the annual orientation, a student observed astutely, “there’s no place to hide.” Unlike Sam’s prior university experience, where he could disappear into a faceless crowd in a lecture hall, a cohort of 36 students notices your

presence or absence. Further, a community like ours invites and expects an unusual degree of participation from its members, and not only in academic arenas. As examples, in our first year, one group of students took charge of a newsletter, another organized recreational events, and a third put together a theatrical revue. In our fourth year, one group started a food bank, another group began a book club and another planned hikes and ski trips. In our seventh year, students published a collection of stories and poetry, and in our ninth year, they worked with the Red Cross on educational packages for hurricane victims. The curricular and extra-curricular responsibilities associated with a cohort can be time-intensive, especially for those students who have family responsibilities or live at some distance from campus.

It is not only a practical matter. Cohorts are difficult social structures for students who are not “joiners,” or for those who shy away from organized activity. In our handbook, we stress that students need to find their own (authentic) ways to contribute to the life the community, but we are aware that the degree and kind of participation expected can exceed the comfort level of some. Even class meetings can be trying. There is a far higher degree of visibility when you are in the same classes with your peers all day everyday, and when your instructors notice if you are punctual, attentive, and responsive to instruction. There is the added responsibility of relating to your peers in positive ways even when the atmosphere is strained. An intense cohort experience is not everyone’s ideal professional program. In our second year, an external survey showed that 14 out of 34 students in CITE had not chosen to be part of our cohort. They enrolled because their first choices for program options (such as French immersion) were full. Eight students had talked to CITE instructors or participants from the previous year and liked what they heard. Twelve students (slightly less than one-third) chose CITE because they wanted to be part of a collegial community. In subsequent years, up to two-thirds of our students have chosen CITE for its long-standing relationship with Richmond School District. A smaller number (one third or less) of students have indicated they chose CITE because of opportunities for working with digital technologies. Each year a few students (10% or less) mention the benefits of a supportive peer group. Very few (1%) anticipate the benefits of collaborative inquiry into teaching and learning.

Nevertheless, many students have found the cohort structure to be both collegial and comforting. “We have bonded and built relationships with one another that wouldn’t be possible in a larger group setting,” noted one student. Survey comments about the community have included such descriptors as, “supportive,” “reassuring” and “welcoming.” In 1999, one student told interviewers, that, “establishing a community for support...has helped me feel confident in learning new things.” There is a “good feeling of

camaraderie,” wrote another student. A few have found the cohort structure to be “claustrophobic” or “confining.” “I didn’t think that it could get so annoying having to see the same people all day long.” “Being with the same students is sometimes wearing.” Others seem concerned that private matters were too readily disclosed and personal concerns were often made public. “I have been surprised at the high level of emotions in our group. I did not expect to see so many crying!” “I didn’t expect us to begin to disrobe too much personal stuff too fast.”

A few have wanted to escape the community, at least temporarily, and sometimes students walked away because of demands to act selflessly: “I decided to withdraw from the community for a while to better support myself,” wrote one student. Still others expressed disappointment in the community because it was not close enough. In January of 2000, one student wrote that, “...we haven’t developed as well as a group as I had hoped.” Another commented, “many people are not working with the group but rather competing with the group.... this is not the philosophy of building a community.” Still another noted, “I’m still bothered by negativity within the class...and the competitive atmosphere. Maybe this is just part of being in a group- and I need to learn to deal with it, or even transform it.” Still another believed that intimidation by some of the stronger personalities was a barrier to creating a positive sense of community.

Too much contact with a small group means the cohort experience can resemble “living in a family, and not a highly functional one” (Response to survey, 2002). Personal conflicts assume large proportions in such a close setting. We might well have anticipated this outcome, but another is more surprising. The solidarity that emerges among members has a potentially dangerous side in a program where the goal is to prepare the best, most responsible teachers possible. Students are reluctant or unwilling to criticize each other in class or discuss with faculty any inappropriate conduct they have witnessed or heard about. Most students believe that their foremost moral responsibilities within the program are in the areas of protecting friendships, maintaining trusting relationships with their student colleagues, and preserving group harmony. At a point in 1999 when morale was low, we asked students to suggest ways to revitalize the community. Many wrote about the need to support each other “against the pressures of an intense program.” They did not acknowledge any responsibilities to the instructional team or to a wider community that included classroom teachers, elementary aged children or their families. If they were aware of unprofessional or inappropriate conduct on the part of their cohort peers, they did not volunteer that information.

For the instructional team the problem of solidarity looks different. Establishing close and collegial bonds with students means it is difficult to

step back from particular relationships to assess student progress. The decision to continue to nurture a student who is not performing up to program standards or to counsel that student out of teaching is particularly painful in a close community. Most, if not all members feel they have special investment in the welfare and the success of their classmates. The group, including the instructional team, feels anyone's failure quite keenly. Juggling the evaluative role with the supportive, even protective one is rarely a simple task for teacher educators (Diller, 1993). In a cohort where building a sense of community is an explicit goal, the complexity of the task is magnified. Our commitment to creating and sustaining community in CITE forces us to deal with an unprecedented level of accountability when we deliberate about excluding a member who falls behind.

## 6. CONCLUSION

Though the particulars change with each cohort, the tensions related to negotiation, autonomy, and solidarity remain with us ten years later. The questions I raise are not new to teacher education or to other cohorts. When teacher educators discuss the limits and possibilities of programs, these same tensions come up. However, such limitations and contradictions appear less frequently in the literature about our work. Recent emphasis on self-study brings welcome change, and we are pleased to join those who are documenting and sharing their own learning. One perennial tension now looms larger than ever in an era of increased accountability: teacher educators committed to reform want to set high academic and teaching standards that they can maintain within programs that simultaneously encourage risk-taking and imaginative pedagogy. (See Section III for our 2006 discussion of teaching standards). At times, we all walk this tightrope. Conversing about the precarious nature of the enterprise may strengthen our collective resolve to keep going. Tensions and balancing acts may be inevitable elements of teacher education, but we can work together to make them creative tensions and graceful balancing acts. The rest of this book is a window onto some of our efforts to do just that.

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# Chapter Three

## LEARNING IN SYNCHRONY

Pamela Essex

*Richmond School District*

### 1. MY INTRODUCTION TO CITE: A COMMUNITY OF INQUIRY FOR TEACHER EDUCATION

My introduction to CITE was in the spring of 1997 as the CITE cohort was first taking shape and getting ready to commence as an option for teacher education. Heather Kelleher contacted the principal of the school asking if hosting six pre-service teachers would be a possibility. The question was put to us, the teachers, and six classrooms were offered.

Grouping student teachers together in clusters in schools and as an intact cohort at the university were new concepts for us. We had all been student teachers at one point and most of us had worked with student teachers in our classrooms. Our experience as a community of adult learners was limited. In fact, opening up practice to reflective and group inquiry was very unfamiliar to us. The CITE cohort places notions of community and inquiry as the fundamental basis of the teacher education process. Consequently, the student teachers were experienced in discussing issues and ideas together and had, in fact, met weekly at the university to consider various aspects of teaching practice and educational theory.

Practicum conversations about good teaching, good education, issues, problems, successes and concerns continued at our school and were an important part of the learning experience for the student teachers and for us, their school advisors. The conversations lasted longer than the specified “debriefing” sessions or meetings with the faculty advisor. Many times, groups of student teachers could be found discussing plans, sharing ideas and asking each other for advice. Significant for all of them was the support of their peers as they negotiated practicum requirements, observations and learning how to “wear” the role of teacher so that it was a comfortable fit for them.

Although we school advisors met regularly, we often discussed student teacher progress. The discussions were initially quite comparative in nature. Hard work, compliance and programs to “fix” problems were often talked about. “I made her do it all over. She doesn’t know anything. I have to give her all the materials.” “Do you have a management book my student can read? He doesn’t know how to control the children.” “My student has already planned three units. She’s doing all of the photocopying now.” “They shouldn’t be in here drinking coffee. They should be working in their rooms or helping in the school.” Our own efforts were compared as well: “This is the way you should write observation reports.” “I have already started to work on my student’s final report.” “I am observing my student more than once a week,” etc. The discussions involved working to given standards and working within structured timeframes. It seemed that these comments reflected a desire for our students to perform in a very similar, prescriptive way. As with any commitment to the production of goods, the “factory model” of success based on meeting or exceeding deadlines or making comparisons of this sort lead to issues of power and control. Was that our role as school advisors? Did we need to be good at controlling to be successful? We were learning how to labour. Dietz comments on Hannah Arendt’s notion of ‘labour’ as follows:

Labour takes place primarily in the private realm, the realm of the household, family and intimate relations. The objects of labour – the most natural and ephemeral of tangible things – are the most consumed and, therefore, the least worldly. They are the products of the cyclical, biological, life process itself, “where no beginning and no end exist and where all natural things swing in changeless, deathless, repetition. (Dietz, 1994, p. 234)

Hannah Arendt (1906–1975) was a political thinker, philosopher, professor, editor and writer. Born in Hanover, she fled Germany during the Nazi occupation in 1933 and relocated in the United States in 1941. Arendt studied with some of the most renowned German scholars of the day including Martin Heidegger and Karl Jaspers and received her Ph.D. from the University of Heidelberg at the age of 22. She analyzed the social and political structure of ancient Greece in an attempt to come to a better understanding of human nature and to try to make sense out of the atrocities that took place during the holocaust in Germany, where she and her Jewish family, resided. She divided human existence into three aspects, the home (or hearth), the marketplace (or *agora*) and the political forum (or the *polis*) and consolidated human endeavor into three corresponding categories: labor, work and action.



Labor (hence the concern for “life”) is a matter for the household; in the original Greek, “economics” refers to the household. Work (the concern for the production of permanence) is a matter of the public realm; it creates the common world. Action (the concern for freedom) is a matter of the political; it is the creation of plurality, of individual identity, before and with others in the space of appearances. (McGowan, 1998, p. 47)

I felt distinctly uncomfortable with this role of “labor”, as did many of my colleagues. We started to talk informally with one another, seeking advice, sharing ideas and developing ways to support our student teachers. The conversation gradually shifted to talking about our own teaching, our beliefs about education and how we, as individuals, connected with all of that. We were coming to understand what Arendt termed our “natality” through engaging in dialogue with one another. Natality is concerned with the unique characteristics, gifts or potential that each human being has.

The new beginning inherent in birth can make itself felt in the world only because the newcomer possesses the capacity of beginning something anew, that is of acting. In this sense of initiative, an element of action, and therefore of natality, is inherent in all human activities. (Arendt, 1958, p. 9)

We had moved from being part of “how to” discussions and the accompanying “need to be right” to sharing our hopes and worries, where we had succeeded and where we hadn’t. We dropped protective walls, and shared stories with one another about our student teaching days and talked about the selves we used to be when we were new teachers, filled with optimism and high ideals. We felt lucky to have time to talk about good teaching and good education with one another.

Meaningful conversations depend on our willingness to forget about neat thoughts, clear categories, narrow roles. Messiness has its place. We need it anytime we want better thinking or richer relationships. (Wheatley, 2002, p. 33)

## **2. CITE YEAR 2: CAMPUS, COHORTS AND THE CLASSROOM**

I joined the CITE cohort as a sessional instructor the following year and began my masters work. One professor termed my schedule an “interesting life,” and indeed it was. Monday and Tuesday were spent teaching at UBC; Tuesday night was the master’s cohort; Wednesday was at home with my

children (and the laundry!) and Thursday and Friday were back in the classroom teaching grade 2. My network of connections was vast and varied – I was a part of the CITE community at UBC, a masters cohort, the neighborhood and school community my family was involved in and the school community in New Westminster. The notion of community, per se, was taking on an almost lifelike quality of it's own. Membership, purpose, atmosphere and commitment were distinctly different in each case even though each community had a focus on learning.

The CITE cohort consisted of 39 students that first year. They ranged in age from their early 20's to mid 50's. All had bachelor degrees, some had Masters degrees and some had earned PhD's. I was intimidated! Intimidating, too, was being a part of a collegial group that were primarily professors. How could I contribute? What could I possibly offer this group?

The students were fascinated with my stories of elementary school life. They were also interested in how I wove my experience as a teacher into my role as a parent. What connections did I make between home and the classroom? How did I handle the learning situations my children were in if I disagreed with the method or premise? What were the keys to building relationships with children and their families? I, on the other hand, was doing all I could to deliver a first rate curriculum to our cohort and to hold up my end of the teaching load.

I discovered some real similarities between teaching at an elementary school and at the university and between learning to teach children and learning to teach adults. Relationships are key. Take time to make connections with your learners and be open to two-way learning possibilities. Preparation is important! Know what you will be presenting and have your materials ready. Allow your learners to have "voice" in many different ways in the class: whole group, small group, partner and written. Dialogue enables a richness of understanding of self and others that creates meaning in and of itself. Make sure you circulate. Especially to that quiet group in the middle and to the notables in the back row. Think, reflect, and be willing to share your "wonderings." Move from "knowing it all" to making inquiry a standard practice.

My confidence as an educational colleague at UBC took longer to develop. I tried to "look the part". I listened a lot. I was more comfortable talking with members of the instructional team one on one. I was, in fact, a lot like the nervous student teachers we see sitting alone or with one another in a staff room. The CITE cohort, however, had a component that helped me move more quickly into an active participant, a member of the group: a commitment to setting aside time to think together, to reflect and discuss, to make meaning together and then to act. So much of our time as teachers is spent trying to meet deadlines, racing the clock to accomplish the marking,

planning, preparation and meeting commitments that make up much of the weekly schedule in schools. It felt awkward at first to slow down the pace and to make time for thoughtfulness. Credibility in school is often associated with “knowing”, with being capable (on one’s own) and with “being correct.” Developing ease with “inquiry” took effort on my part and meant I had to reframe the mindset that “knowing” meant competence. I had to trust the group. It took courage!

I became more comfortable with my students and found ways to draw out their ideas. The atmosphere became open and collaborative and I found the conversations continued after our class time was over through WebCT and email. Our courses ended at the beginning of March and the student teachers were at their schools putting into play the ideas, techniques and beliefs that they had worked to develop. They would be beginning to move into the realm of “work”. . Dietz describes Arendt’s conception of work as follows:

Work is, literally, the working up of the world, the production of things-in-the-world. The objects of this activity, unlike those of labour, are relatively durable, permanent end products. They are not consumed, but rather used or enjoyed. The “fabrications” of homo faber have the function of “stabilizing” human life and they bear testimony to human productivity. (Dietz, 1994, p. 234)

The student teachers would have the opportunity to create something lasting from individual day plans to unit plans, from a set of class rules to the development of classroom democracy. I hoped they would share what they developed with one another and that they would think back to the ongoing discussions they had been a part of all year. The CITE year-end celebration gave an opportunity for all to reconnect and share experiences and questions once again as a community.

### **3. CITE YEAR 3: NAVIGATING AS A FACULTY ADVISOR**

My third role, that as a Faculty Advisor, began in August, 1999 and I accepted a secondment at UBC, began work as a research assistant and was in year two of my masters program. Sessions were held for faculty advisors, outlining our roles, practicum requirements and deadlines. The CITE cohort continued to evolve as community of inquiry, delving into areas of teacher education and practice that were outside of the norm. Communication in the field would prove to be a focus for the year.

Twelve student teachers and I would get to know each other quite well over the year ahead. Four were placed at a school that had worked with CITE since its onset, I'll refer to as Prince Elementary. Eight students were placed at a school I will call Brown Elementary, a school that was new to CITE and had become a CITE school after the spring start up sessions had already taken place. The degree of familiarity with the CITE program, with preparedness for the student teacher/CITE timeframe and the number of students at each school greatly impacted the way in which the teacher and student groups operated. Two different stages of the learning continuum that Arendt describes were enacted: labor and work. The student teachers, the teachers at Brown Elementary and I were all learning about the CITE Teacher Education program as we participated in it; we needed clear parameters and understandings of what to expect and what was expected of us. We were developing the groundwork understanding that we would need to succeed throughout the year: we were learning to labor. The teachers at Prince Elementary already knew what to expect, and were developing ways to work with students that would be effective. They were developing their expertise as "workers."

### **3.1 The CITE Community in Schools**

Our student teachers had had experience working with children as volunteers prior to their acceptance in the Teacher Education program at UBC. Some of them had volunteered at an elementary school, but for many students beginning to take part in classroom activities as a student teacher was the first time they had stepped back into an elementary school since they were pupils. We approached entry into the school as a whole group discussion and gave our students inquiry topics to investigate as they learned about their placement schools. Some of the questions are as follows:

- Where should you park?
- When should you arrive at school? How long should you plan to stay? What determines this?
- How do teachers dress? Why? What does that tell you about the values and expectations of the school community?
- Where do people sit in the staff room? How is the coffee fund managed? When do teachers clean the staffroom or go on recess supervision? How will you fit into these schedules?
- What is the protocol for using the photocopier machine? Will there be a fee?

- What is permissible in terms of noise? Language? How do teachers gain the attention of their classes? How do students address them? How will you be addressed by students?
- Where are the primary classrooms? Intermediate? Kindergarten? Are they segregated or mixed? What does this tell you about the values held?

Learning about the “survival level” procedures was an important first step for all of us as we entered the schools as guests and needed to come to understand what the acceptable and expected practices were. Our students began to think about the various perspectives represented by some of the routines followed at the schools. They were eager to make a good impression and were anxious to find a classroom that they could be a part of, to learn about teaching from an “expert,” and to put into play some of the ideas and plans they had developed at UBC.

I was interested in the questions they asked, what they noticed and what conclusions they came to. Having regular conversations about their initial reactions as well as their ongoing considerations about education, school and learning and what they thought was important helped me to see “schools” from their perspectives. The questions they didn’t ask and what wasn’t important to them was equally interesting to me (if not more!). The student teachers were revealing what they believed teaching was about as well as how confident they were in taking on that perceived role. In thinking this through, I realized that my student teachers were progressing along much the same continuum as had had when I was trying to succeed in my new role at the university. My learning during that first year at UBC proved to be very valuable in considering where my students were at and what opportunities I needed to make possible for them.

### **3.1.1 Relationships are key: Take time to make connections with your learners and be open to two-way learning possibilities**

My students enjoyed working together and some spent time together on weekends. They didn’t equate their relationships with continued learning. In many ways, their focus on labor (or survival) at this point made it unsafe to reveal areas in their beginning teaching practices that were difficult or disappointing for them. They needed to appear “to know” and, although I knew they were given many opportunities to discuss educational philosophy and critical issues, discussing how successful classroom teaching was turning out to be (or not) for them was a very different matter. It would take courage and they would need to trust one another before they would be able to talk about their classroom experiences genuinely from the heart. As Margaret Wheatley states: “Relationships are all there is. Everything in the universe only exists because it is in relationship to everything else. Nothing

exists in isolation. We have to stop pretending we are individuals who can go it alone (Wheatley, 2002, p. 19).

“Community” was moving to a different level; the CITE students were becoming a support system to one another as they navigated their way through classrooms, lesson planning, discipline issues, preparation and meeting the expectations of their school advisor and me (to name a few!). Taking time to talk with one another about their teaching, to share ideas and concerns and to think about the decisions they were making and whether or not they were acting in ways that helped student learning. The relationships they developed with their students were essential to coming to understand student needs and learning styles. The relationships they developed as colleagues could prove to be template for a teaching practice that would continue to evolve in community with other school based professionals.

### **3.1.2 Preparation is important! Know what you will be presenting and have your materials ready**

Our students, having reached this point in their university program, had been very successful in school! They had earned undergraduate degrees. They easily met the entrance grade level requirements. Preparation, understanding the requirements of an assignment and working to deadlines were all skills our students had had a great deal of experience with. They were comfortable with working towards a given, known end. In fact, this was such an area of comfort for some of our students, that finding any time for inquiry, reflection or dialogue was very difficult. They had become efficient, successful laborers and would be assured of completing their course and practicum requirements at a satisfactory level.

A few students went beyond the requirements. The “magic of teaching” became apparent to them. They began asking a lot of questions – not about deadlines or how long their practicum journal needed to be. They wondered about their students. They wondered how they could capture the imagination or the talents of their students. They wanted to leave a lasting impression; they wanted their students to love learning and to have a vested interest in the subject matter and the ideas that were presented. They began to design tools for their students to use: rubrics, writing frames, self-evaluations, etc. They had begun to move from “labor” to “work.” These beginning teachers were comfortable relating to their students: they knew a lot about the children in their classes and their pupils knew a lot about them. They had, in fact, found ways to create community in their own classrooms.

### **3.1.3 Allow your learners to have “voice” in many different ways in the class: whole group, small group, partner and written.**

Most instruction was direct teaching to the whole group of children, then the student teachers had the children complete assignments relating to the content given. Variation was offered for completing the assignments in some cases and in a few cases, the elementary children were given an opportunity to be a part of constructing rubrics describing how marks would be assigned. Some student teachers attempted to engage their classes in whole group discussions and asked content related questions with one correct answer. Questions that were open ended such as, “What do you think?” “Do you wonder about?” “What if?” were asked in a few cases towards the end of the long practicum. Elementary students were often given “sentence starters” for their individual journal writing and the student teachers responded to journals with corrections in punctuation, spelling and/or language initially. The student teachers moved to respond in each journal with a question or comment, leaving grammatical corrections for specific writing lessons.

The student teachers wanted to do a good, correct job of teaching. They were initially quite worried about making errors in marking and were worried about what their School Advisor and the parents would say or think. They developed lessons that were “safe”, could be interpreted in one way and could be responded to correctly. How similar this was to my first experiences at UBC! My cues to take risks came from my students. My work as a Faculty Advisor was to “disturb” the safe realm of assignments and lessons and to “provoke” inquiry regarding the depth of learning objectives that could be developed. The school based student group was to prove a great support for this venture: they had had so much experience in their UBC CITE courses investigating, thinking together and “wondering about”. Transferring these abilities to classroom practice was quite a sophisticated task for a beginning teacher.

Two examples stand out. One student teacher I’ll call Greg, decided to allow his students to have a great deal of “voice” in an upcoming project. He wanted all of his Grade 5 class members to be involved in writing, planning, developing and performing *Romeo and Juliet*. The class read *Romeo and Juliet*, rewrote it in “kid language”, and began to develop parts. They had rich discussions about the decisions they made with regards to stage setting, flow of the action, what to include and what not to as well as who would take on acting, lighting, stage roles. The day of the performance arrived and Greg invited parents, administrators, other classes and me to see the play. I will always remember the look of pride and joy on so many of the students’ faces: especially the “Production Manager”. The “Production

Manager” did a wonderful job of making sure the sets were changed on time, the lighting was correct and that actors were ready to come on “stage” when it was time. Greg knew this child wanted to have a leadership role, was sure he could handle it, and helped him work through some of the limitations he faced as a student with special needs.

Another student teacher, Beth, asked me to observe a special lesson and give constructive feedback. She was a bit nervous and was taking a big risk. The class had had a number of incidents involving bullying, racial slurs and fighting. She wanted to lead a class meeting, giving students an opportunity to share their anger, hurt, fear and to develop solutions for the issues. Although a solution wasn’t agreed to during the time she had set aside, all students were given an opportunity to speak. Beth worked hard to develop the framework within which her students would hold the discussion and to insist that all members were listened to with respect. The discussion would continue the following day and Beth and I talked about ways to draw out those quiet voices through writing or partner sharing. The tone in the class was decidedly improved when I came to observe the next week.

### **3.1.4 Dialogue enables a richness of understanding of self and others that creates meaning in and of itself**

It was so important for me to allow time for reflection, thoughts and questions during our debriefing time following an observation and during the weekly group meetings. I needed to facilitate the discussion rather than lead it. Important, too, was making sure that there were many ways open for communication. The number of emails and phone calls grew as we became more comfortable with one another. I realized that silence often meant issues had gone “underground”. The student teachers were in a vulnerable position, wanting to pass and to get a strong recommendation from me and from their School Advisors. As a classroom teacher, finding ways to show students what to do when they made a mistake or tried something that didn’t work out helped to build confidence and provide an opportunity to let them know that perfection wasn’t the goal: our goal was learning. As a Faculty Advisor, too, I needed to find ways to let the student teachers know that their learning and the learning they were making possible for the children in their classrooms was what mattered.

The School Advisors and I meet weekly as well. Initially, these meetings were set up to go over deadlines and expectations, to pass materials out and to check on scheduling and school wide events. The School Advisors wanted to know what I talked about with the student teachers. I explained that we used the time as an opportunity to reflect, to ask questions and consider various aspects of teaching practice. The teachers at Prince Elementary



wanted to have some time for this sort of discussion as well. They thought that sharing concerns and/or ideas regarding their student teachers could really enrich the experience. In many ways, they reminded me of the teachers in New Westminster; eager to find ways to have time for dialogue and comfortable beginning with a focus on their student teachers. By the end of the year, the dialogue lasted far longer than my time with them – they found ways to collaborate and to support one another as well as their student teachers. They, too, had become a community of learners.

The teachers at Brown Elementary had mixed feelings about meeting in a group. Many wanted to know what the student teachers said. Some felt uncomfortable discussing issues with such a large group. Some were very agreeable with the idea, thinking that issues would certainly come up through the year and this venue would provide a regular opportunity to discuss these. Some teachers wanted me to write a formal agenda for each week so they could prepare for the discussion and stressed the importance of preparation, punctuality and correctness. Some wondered if they had to attend. What a range of perceptions and understandings! We had had many of the same feelings in New Westminster when we were first faced with dialogue, CITE and inquiry. This group taught me a great deal about considering comfort levels, safety, trust, experience with inquiry and open-ended discussion.

As I continued my work in schools, I kept the dialogue sessions as a part of the weekly time for student teachers and for School Advisors. These sessions were important in many ways: developing relationships, clarifying understandings, learning from one another, reframing to new perspectives and fostering community as well as being a part of community. Each school community had its own unique character; built over the years by the customs, celebrations, relationships, level of support, range of acceptance and commitment to ongoing learning by all people within the school. I carefully watched how people interacted with one another: was there a warm greeting upon entering the building? Did status seem to play a part? Were children heard or silent? Were certain voices dominating? Was being correct important or was innovation celebrated? The tone of the school climate had an influence over the way the initial dialogue sessions took place. Key to my work was demonstrating my commitment to and passion for learning, my belief in the value of each individual and the importance regarding the notion of a community of learners that we were all a part of. I greatly valued membership in these school communities and was honored to have been trusted in the way I was.

### **3.1.5 Make sure you circulate: Especially to that quiet group in the middle and to the notables in the back row**

My student teachers, so focused on following their carefully developed lesson plans, were often “stuck” at the front of the class during those first observations. Reminding student teachers to move around, to use proximity and to check on how well their students were listening and understanding seems like a simple, obvious direction to give. It had some deeper implications for me that seemed to have a strong relationship to the strength of the classroom community. The students that sat at their desks or stayed in the front of the classroom were more distant from their learners. They weren’t aware of students who had quietly “tuned out” and were faced with solving discipline issues in a reactive, rather than proactive, manner. Their teaching style adapted to meet the surfacing classroom needs, moving from collaborative and inclusive to directive, excluding those who were not compliant.

A directive, punitive teaching style was not in alignment with most of the philosophies I read over the years or in the many discussions we had. Most student teachers valued teachers in their lives who truly cared about them. They valued teachers who loved teaching, loved being with them, knew their subject well and were passionate about learning. Working through discouragement, blame (it’s those kids!) and embarrassment about the way they interacted with their students happened when they moved from finding fault to asking questions. Inquiry with trusted others helped them reconnect with the image of teaching they wanted for themselves.

How many practicing teachers have found themselves in similar situations, embarrassed and guilty about a classroom incident? How many practicing teachers have the web of support that our student teachers in CITE did? How many practicing teachers talk with their colleagues on a regular basis about their own teaching and the goals and frustrations that they have? Do we, as educators, circulate to make connections or to come to new understandings? How can we help one another keep a broad focus, taking in other perspectives and truly “seeing” what is happening in our classrooms and in our schools?

## **4. CITE YEARS 4 AND 5: CONNECTING THEORY AND PRACTICE**

I continued working with groups of student teachers as a Faculty Advisor and taught Communications and Principles of Teaching as well. These years gave me the complete picture of CITE as a synchronized whole. The crucial

component to making these two years ones of belonging, of being a part of the ongoing dialogue in an authentic way was time: relationships take time to develop. I was finally ready to follow the understanding I gleaned from that first year at UBC.

#### **4.1 Think, Reflect, and Be Willing to Share Your “Wonderings.” Move from “Knowing It All” to Making Inquiry a Standard Practice**

My learning was truly one that impacted classroom practice from university lecture to schoolroom; from staff meeting to collegial sharing; from talking down to talking to no matter what your experiences or credentials might have been. It truly meant that learning can be reciprocal when we allow it to be; and the best learning comes from being open to what others have to share with us. Recently, this notion was brought home to me during an action research “Dinner Meeting” with a group of high school teachers from Delta. One teacher talked about getting lost when traveling in the United States, having car problems and somehow ending up in an Amish community. The notable thing for him was the mutual respect the young and the elders had for one another. They were not bound by ageism as we seem to be: the wisdom from one was valued by the other and they learned together in synchrony. This is, actually, the premise for the way CITE is based and was a huge influence on my practice then and in the years following.

And so: I was able to meet the learning community with the confidence and understanding I had gleaned at last. Life brings its own schedule to learning and this was to be no different for me, my student teachers, for our school associates and for my colleagues in CITE at UBC. All of the tapestry of human existence was in full play and we needed, by virtue of being open and of making inquiry, collaboration and dialogue an integral part of the learning process, to be aware, supportive and encouraging as we helped our students come to terms with what they would stand for as teachers.

## **5. A HIATUS AND A NEW VIEW**

After a bit of a hiatus, I am now entering year six with CITE and will be looking at the CITE endeavor from a new perspective. Following year 5, I began to work as a vice principal in Richmond. I was assigned to a school I will call Massey Elementary, one of the schools I was a faculty advisor in during year 5 with CITE. Although we didn't work with CITE students

during my three years at Massey Elementary, we did have student teachers in our school. The student teachers were in a different UBC program and we made a point of connecting together in weekly dialogue sessions. Several of those student teachers are now working in Richmond and it has been a pleasure to keep in touch with them as they become more experienced as teaching professionals.

This is my first year as a principal in Richmond. We are pleased to have four CITE students at our school. The faculty advisor, Jane, is a recently retired principal from one of the CITE schools that I had many student teachers placed in and I look forward to what I know will be stimulating and inspiring conversations with her. In many ways, the circle has begun again for me, for the teachers at my school and for our student teachers. I need to think again about that first piece, *Relationships are key*. Take time to make connections with your learners and be open to two-way learning possibilities, as our year gets underway and as our student teachers come to understand the learning community within which they will develop their teaching practice. I look forward to all that we will learn together, in synchrony.

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## Chapter Four

# SEEING THE COMPLEXITY OF THE PRACTICUM

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### 1. INTRODUCTION

Many teacher educators tend to focus on measurable qualities in the development of student teachers. They have confidence in the technical, concrete or quantifiable aspects observed in their teaching. However, teaching is much more complex. It is not easily measurable, and classroom events are often unpredictable. In actuality, teaching can be an untidy and unfathomable practice. Most faculty advisors and school advisors (sponsor teachers) recognize that we do not immerse student teachers in this murky place so they can impose their decontextualized technical knowledge onto this turbulent situation. Rather, it is so that students can learn to experience, in a holistic way, the overwhelming complexity of teaching and, hopefully, in the process develop ways to cope with it. In some exceptional cases they may thrive from the start.

Success in the practicum setting is a matter of making connections and exploring the process of developing relationships. It is about integrating teaching techniques in response to complexity rather than trying to use teaching techniques to master the classroom. As teacher educators, we tend to embrace the “technique” of teaching because it is something that can be taught and we can feel secure in our perceived ability to make an evaluation. The art of “real teaching”, including responding instinctively to those daily occurrences in the classroom that are unplanned and unexpected, cannot be taught. It emerges from within the student teacher as his or her personal identity and style co-evolves with the environment in which they are immersed. I believe the best we can do, in addition to supplying limited technical tools, is to provide a rich, active, and engaging learning environment. We must be guides and experienced counselors who are

intrinsically and empathetically connected to the experiences of student teachers, rather than acting as experts, authorities, or gurus.

This does not mean we are helpless in providing some elucidation of the swirling, vaporous world in which student teachers find themselves. We can draw on the growing number of thinkers from many disciplines that share a common understanding of dynamic, adaptive, “living” systems. Complexity Theory or Complexity Thinking, as it is often called, can provide a lens with which to better understand the nature of complex structures such as the classroom. It is a holistic perspective that focuses on processes and relationships rather than only on products and isolated parts.

## **2. ELEMENTS OF COMPLEXITY THINKING**

I have gathered seven tenets based on Fritjov Capra’s 1983 book *The Turning Point*. These concepts have been repeated in different contexts in later works such as *The Web of Life* (1996) and *The Hidden Connection* (2002). The seven concepts are overlapping perspectives of a single entity: a complex system, whether it is an organism, the market, a weather system, or a classroom. During my various observations of student teaching, it is impossible for me to enter a busy, bustling classroom without recognizing these ideas in the practical setting. It inspires me with the wonder of life as it is manifest in a class of energetic learners. This vision is what I have to offer Student Teachers on two levels. Firstly, Complexity Theory can serve as a lens for myself in understanding the professional growth of my Student Teachers and, hopefully, frame my advice appropriately. Secondly, I can share what I have learned from Capra to enable Student Teachers to understand their classrooms. These classrooms can be regarded as evolving and co-evolving living entities. The seven perspectives summarized from Capra’s work are disequilibrium, order and chaos, self-organization, emergent properties, ecology, co-evolution and shared consciousness. I will now define each concept and identify their helpfulness in Student Teacher supervision and in understanding a collective of learners in a classroom.

### **2.1 Disequilibrium**

The simple act of walking requires us to be off balance to move forward. In our classrooms, we do not ever want our students to complete their learning. It is a continuing “walk”, marked by celebrations and milestones, but always in disequilibrium so that learning and development progress. Students are constantly adapting to new knowledge and new relationships which, in turn, promote more questions and the need for further learning. As such, learning

is enacted in a fluid, often turbulent, social setting. It is this activity, this enacting of shared experiences and knowledge that constitute creative learning. There are products, markers, successes, and various measures and accounting of knowledge and achievements, but these are parts of the continuous evolution of learning rather than endings.

For student teachers, “managing” disequilibrium is very challenging. This is not something covered in university coursework. At least initially, they are expecting to implement sequential, detailed lesson plans. They expect students to respond predictably. They expect all students to learn in roughly the same way at the same time. They can conceive of the typical grade 2 student, and Bloom’s Taxonomy is carved in stone. Instead, they often find themselves overwhelmed with the frequency of unexpected events, the diversity of students, and the on-going state of change. At times a student teacher will lament “Why didn’t they teach us about this in class at the university?” The reason is that it is difficult, if not impossible, to teach what we do not know. Each classroom is unique and each child in each class is also unique. University courses are doomed to generalities to prepare as best we can from outside of the classroom context. So we resort to techniques of discrete measurement, tried and true global strategies, and “best guess” classroom routines. This is all intended to be helpful, which it is to an extent, but it is in no way enough to cope with what one finds in an actual classroom.

This is what the practicum is for. It contextualizes learning. It is the enactment of teaching where one must learn to make instant decisions, consider both individuals and the whole class simultaneously and expect that there will be unexpected situations. This cannot be taught in a university classroom. It is what a student teacher is taught through experience in a complex situation. It is the “art of teaching”. So as a faculty advisor I learned that my role is not so much direct instruction, passing on the wisdom gained my through own teaching experience, but rather, it is to serve as a mirror, encouraging student teachers to tell me what they are learning about teaching - to self-evaluate, pointing to areas that need improvement, areas of strength and how to extend those strengths. In effect, student teachers learn to adapt to this dynamic environment.

## **2.2 Order and Chaos**

Adaptive systems, such as effective classrooms, are said to exist at the edge of chaos, neither dissolving into disorder nor found in static balance. One can see in disequilibrium the tensions among extremes that, unconstrained by each other, would break these adaptive systems apart, resulting in chaos. On the other hand, too much rigid constraint would destroy the dynamic

aspects that allow for growth and evolution. This would result in stagnant order. If a classroom is at the edge of chaos, then neither total free choice nor rigid control dominate. Rather there is constant interplay between chaos and order. Students are developing their independence and skills at making reasonable decisions but autonomy cannot dominate. Clearly, if every student made self centered choices, the community would descend into chaos. Students are also developing their sense of community and care for the common interests of the group but a sense of extrinsic responsibility cannot dominate either. If the will of the community, manifested in stifling majority or authoritarian rule, is imposed in standardized ways, ownership, creativity and the “life” of the community is lost. That inflexible order denies the unique and varied contributions of individuals. The edge of chaos is in disequilibrium but it is stable.

Typically student teachers begin their teaching on practicum searching for order and control. This, of course, is a much more sensible approach than beginning with chaos. With experience and increased confidence, and with the encouragement and support of a School Advisor and Faculty Advisor, Student Teachers may begin to widen the boundaries of behavior and activity. They begin to realize that although clear boundaries for choices are essential for their students, that they can establish “activity frames” (Collins, 2004) within which much freedom, creativity, and responsible choice can take place. Davis, et al. (2000) refers to this concept in paradoxical terms as “liberating structures” (p. 86) or, more recently, “enabling constraints”. In each case, they refer to the on-going negotiation of navigating between order and chaos and trying to keep as close to the very creative learning space at “the edge of chaos”. An essential safe guard in this precarious venture, is something that we refer to as “lifelines” (from the popular game show) that must be firmly in place early in the practicum before we test those turbulent waters. Lifelines refer to quick habitual signals that children have learned to instantly attend to, stop what they are doing and to listen to the teacher. It could be a raised hand, a count down, a phrase (“1 2 3, look at me”) or simply a distinctive tone of voice. These are lifelines in the sense that they still work if students are beginning to slide over that slippery slope into chaos. With firm lifelines in place, teachers and students can test the limits of creativity and freedom without fear of disaster. Student teachers must be careful to think of this continuing monitoring and adjustment of activity constraints and enablement as keeping a balance. Rather it is an on-going process of disequilibrium. Tending to creative growth, or learning if you will, is work requiring constant reflection and response.



## 2.3 Self-Organization

Related to this process is the interplay of autonomy and responsibility in students. Classroom management is a much easier task when students internalize the structure of activity frames and begin to negotiate the structure of classroom events and expectations in a positive, productive manner. This process of self-organization is not static, but evolving. In simple terms, students discover that responsibility allows more autonomy, which when exercised in a community oriented setting requires more responsibility. This self-organizing process continues in much the same way as it does in a complex organic life form, evolving in unpredictable ways, adapting, and continuing to make creative interactions with its environment.

Allowing children to self-organize, let alone facilitate that process, is often problematic with student teachers since their first goal usually is to secure authority in the classroom, not share it. To be sure, a teacher is unavoidably in a position of authority. This is so due to safety requirements, the fact that the teacher has special knowledge both of instructional content and of professional procedures, and simply because the teacher is an adult which in our society endows them with authority relative to children. While Student Teachers' quest for authority is legitimate, it is equally important for them to realize that this does not mean authoritarianism. Certainly order is required but so is creative, critical thinking.

Somewhere between doing what you're told and thinking for yourself, workable activity frames must be negotiated. While maintaining the teacher's authority, opportunities for students to assume some authority can be arranged within the students' abilities to be responsible. Generally we wish students to be intrinsically responsible, that is, internally motivated to be concerned about their community rather than needing to be directed by external authority. This promotes critical thinking, responsible choices, and a proactive sense of community. An ideal that student teachers are encouraged to pursue is that of participatory democracy. This must not be confused with standard popular politics, which seem to instill apathy and cynicism, or representative democracy, such as the student council. It is also not about voting, which tends to divide a community into competing factions. Rather it has to do with an on-going process of promoting active inclusion of all individuals in classroom decision making. Clearly there is never an end to this process, no final product. However there are some tangible strategies that teachers use. Class meetings are a good place to start. There are many formats for class meetings but sustainable ones are the ones whose structure is negotiated by all, including the teacher, and flexible enough to evolve with changing circumstances. They must be authentic. That is, they must address issues that are real to the children. Children will more eagerly engage in

discussion about who is being mean to whom on the playground than which color of paper to use for a writing assignment.

There are many ways to enable self-organization in the classroom. Many teachers have special classroom jobs for students to do in taking care of the classroom and performing routines. Many incorporate choice into lesson activity, allowing for varying methods to express learning that may best suit individual students' style or preference, while still pursuing a common learning outcome. Given a chance to present learning through their own unique media, multiplies the number of avenues to learning for the whole class and in the process enhances a sense of ownership and belonging in the learning community. Teachers can gradually let students self-organize for various activities rather than meticulously managing every activity. One student teacher took her students to the library but realized she had forgotten vital resources. Time was of essence so she simply said, "Arrange yourselves into a circle on the carpet." Two minutes later, she returned to find a perfect circle, no squabbles, and a class of quiet attentive children. They had taken ownership of the task and performed it more efficiently than if the teacher had directed individuals into place.

Self-organizing complex structures are in disequilibrium. Their stability comes not from the juxtaposition of their parts as in machinery, but rather, in the quality of the links among the parts. Relationships are the important factors as opposed to individuals in isolation. Patterns and rhythms define the structures. In the classroom, it is the patterns of interaction that define it and make it unique. In a participatory democratic classroom, interactions are enhanced. Individuals have the potential to influence the structure of the class. The good of the class guides individual choice. A democratic classroom is, at least to some degree, a self-organizing classroom.

## **2.4 Ecology**

Davis et al. (1996) describe how learning is enacted. It is not separate from the environment or from others. It is not necessarily expressed in formal ways and may be tacit rather than formalized "... an understanding of the self is not abstracted from the world which contains it but, rather, is the world. Knowing, being, and doing are not three things. They are one" (p.154). For example, students in a participatory democracy learn not just about democracy but, rather, enact democracy. That is, they are given authentic opportunities to participate in the process of decision making regarding the structure of the classroom, what they learn, how they learn, and how they express their learning. The knowing cannot be separated from the doing or just being immersed in the actions of democracy. They are all aspects of the same thing. Davis et al. (1996) describe eight year old math students

engaged in an open ended search to create their own personalized conceptions of fractions, “How many ways can we show one-sixteenth?” “These students [are] participating in the creating or unfolding of the world, while at the same time effecting their own structures. In a phrase, they and their world [are] co-emerging” (p. 155).

The Enactivist approach respects the interconnectedness among the students, the classroom environment, the subject matter of study, the teacher’s style and everything else involved in the interactions of students. It is at odds with a reductionist school system in that it embraces connections instead of simplifying experiences into isolated categories. It is therefore quite a challenge for student teachers to think in this holistic way when there is so much emphasis on subjects with their attendant IRPs, grades, labels for students and separation between the classroom and the community outside its door. At the same time the engagement that students exhibit in activities that are meaningfully connected to the real world is something of great educational appeal to them. Fortunately in the CITE cohort, the practicum is regarded as a space for inquiry and experimentation. Many student teachers take on this challenge of guiding students in contextualized, naturally integrated, active and socially oriented learning. Their students become scientists investigating the nature of the insects found in their backyards. They do an archeological dig in the sandbox, uncovering ancient Egyptian artifacts and later engage in a debate regarding the ethics of acquiring the national treasures of an other country. They role play a session of parliament and participate in a mock vote during the provincial election. They recycle and become a community of environmentalists. In the process of implementing activities that approach an enactive way of learning, student teachers are often surprised at how many IRP goals are met across subjects and how much more meaningful that learning is when the connections are in place and when common patterns are recognized in many disciplines. Since learning is social and interaction is encouraged, a diverse and deep level of understanding is shared.

## **2.5 Evolution**

Relationships and interactions mediate the ecology of the classroom. What affects a single member affects the entire class. There is also a symbiotic exchange between the whole classroom and its environment. That environment includes the physical structure of the school, the administration, the character of the school community, parental involvement and the influence of the community at large. Individual students are interdependent with their classmates while all are interdependent with their environment. Capra (1983) claims that systems theory (complexity theory) can make it

possible to understand “biological, social, cultural, and cosmic evolution in terms of the same pattern of systems dynamics, even though the different kinds of evolution involve very different mechanisms” (p. 286). If this claim is true then complexity theory is a suitable metaphor for the classroom as a cultural entity. Evolution expresses itself in learning and development. It is creative and adaptive but it exists in a stable state that is far from equilibrium. It fluctuates, flows, and is always ready to transform itself, that is to evolve. But the environment in which the classroom exists is also a living dynamic system. We can not merely regard the evolution of the classroom or the individual in isolation as would a Darwinian metaphor of evolution. Rather, the classroom plus its environment co-evolve in a connected, continually changing process. The kind of classroom that is well suited to recognize this kind of complexity is one that embraces creativity and adaptation. It exists at the edge of chaos and order, and values both autonomy and a responsible regard for the whole.

The co-evolution of the classroom becomes explicit and accessible for students when they have some level of participation in the decisions that affect the classroom. Students who have a say in classroom activities and structure tend to internalize routines, behaviors and learning so that the classroom co-evolution is “owned” by the students rather than imposed on the students. This results in a measure of choice and responsibility that persists regardless of the teacher’s immediate presence. The care of the classroom becomes the authority. Many student teachers initiate class meetings to this end. The development of these meetings becomes a study in co-evolution itself because of its recursive nature. That is, decisions are continuously being made in class meetings about the structure of the meetings themselves. There are numerous formats for class meetings and educational texts describe various types for various purposes. Regardless of the starting format, if the student teacher is not too rigid in maintaining a certain prescribed structure, meetings will self-organize to meet the needs of the class if reflection on the meetings is part of the meetings. Of course changes produce new concerns which when addressed cause change again. For the meetings to remain “alive”, dynamic, and effective, on-going co-evolution will be part of the process.

Whether it develops from class meetings or from a personal teaching philosophy or from discovering the limits of an authoritarian approach to teaching, student teachers often begin to adopt this kind of participatory democratic, “growing” learning environment. However, it is quite typical for Student Teachers to start from the safe, ordered side of teaching structures to view the disequilibrium from a position of control. The traditional teacher-directed approach sometimes persists throughout the practicum rather than risking the search for the edge of chaos. This is not a disaster with caring

student-centered Student Teachers, and it meets accountability standards in clear and reasonable ways. But it does not necessarily address the issues that students are really passionate about and ready to enact research upon.

Another approach is student-directed learning. Student teachers tend to dabble in this area without the entitlement required to make a commitment to this kind of practice in an authentic way. In the world of public schooling, in which the student teacher plays a subordinate role in any case, there are external standards and accountability which may or may not allow the true interests of the child to direct their own learning. An inclusive curriculum is “constructed” on the basis of required content and student needs, rather than simply “delivered” in a standard way. From this perspective the notion of “lesson planning,” which either ignores or presupposes learner response, is replaced by “lesson preparation,” which provides a clear framework of intents but assumes that actual classroom activities must be adapted or even initiated on the fly according to student responses, both individual and collective (Beairsto, 2001).

This kind of approach to learning and teaching is both responsive to standard public curriculum and to the needs and interests of individuals and the whole class experience can be referred to as teacher-student negotiated learning. With this perspective on classroom activity, a co-evolving participatory democracy can be set in process. It respects teacher authority, student autonomy and responsibility, and care of the community. It respects the belief that all learning is social and, as such, students learn much more from each other, given the opportunity to interact, than from just the teacher. Again, this is not a set structure or a final product. Co-evolution is on-going, dynamic, and adaptive.

## **2.6 Emergent Properties**

A fascinating aspect of self-organizing, adaptive systems is the concept of emergent properties. The whole has characteristics or abilities that are not present in any of its individual parts. For example, individual notes contain no music but when combined with others in a timed sequence, then harmony, melody, and emotional expression are possible. There are infinite possibilities for emergent properties in a classroom community which would reflect the kinds of interactions that take place within the group. One would expect that the participatory democratic classroom just described would develop an overarching enactment of respect, inclusion, tolerance and critical thinking. It is quite useful for student teachers to assess the character of the class as well as individuals. We often hear such characterizations of classes such as “This is a nice class” or “This is an active group”. It is as if the class is a single living entity unto itself. These emergent properties are

very helpful in considering when student teachers plan motivating units and lessons. It gives them an edge in determining where the collective interests lie.

## **2.7 Shared Consciousness**

The mind is not contained in the brain but, rather, includes the entire body. It is the pattern of organization or the set of dynamic relationships that results in awareness. But Capra (2002) extends the concept of mind beyond the human individual by noting that collectives of human minds are embedded ecologically in social systems. In a social entity such as a classroom, shared consciousness is comprised of those common values that define a community. Shared consciousness is the community culture which continually evolves through coordinated behavior, which most commonly is language. To participate in the discourse of a classroom is to share in the construction of its consciousness or culture. If diversity and autonomy are valued within the desire to construct a community with responsible regard for all its members, then inclusion of all community members in the classroom discourse must be facilitated. It must be the first priority of a Student Teacher, or any new member of a classroom community, to participate and to ensure participation of all in its co-evolution. They each must develop and share in its collective consciousness.

## **3. ONGOING COMPLEXITY**

Dynamic, adapting learning communities are, in the words of Davis and Sumara (2004), “defined as self-transformative, recursively elaborative phenomena” (p. 5). They are creative places in a constant state of interactivity and change. This is learning. The university’s teacher education office provides student teachers, their school advisors and faculty advisors with a list of criteria that clearly isolates the most important qualities that a good student teacher should master. It has been developed over years of practicum debriefings and research. It is a reductionist tool, to be sure, but a valuable one. It reduces real experience to general technical measures of otherwise complex processes and events that are difficult to measure. A good student teacher can take some gratification in being able to address each of these measures successfully. For an outstanding teacher, it is not enough. It is possible to master each component in isolation but to be unable to teach effectively when realizing that these qualities often must be addressed simultaneously with an appreciation of the changing relationships among them. For an outstanding teacher, understanding the parts is

necessary but so is an understanding of the patterns, processes and connections that make up the whole. Outstanding teachers can teach by “feel”. They speak of the art of teaching. They work to perfect “the juggling act”. Teaching becomes a life long study of the complexity of human interactions.

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## Chapter Five

# ENJOYING THEIR OWN MARGINS:<sup>1</sup> NARRATIVES OF INNOVATION AND INQUIRY IN TEACHER EDUCATION

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### 1. INTRODUCTION

Year after year, “The Fireman” and “The Nurse” circulated among all of us students during practicum. Both lesson plans were thought to be samples of exquisite curriculum planning tried and tested by thousands of former “teachers-in-training”. Method course instructors and practicum supervisors disdained the plagiaristic use of those lessons plans while student teachers craved their neat predictability. “Matter” and “Method” outlined the content and approach to be used in each lesson, questions to be asked and answered, and tests to be proctored at the close of those exciting forays into learning!

Those lessons became emblematic of teacher education, as I lived it in that teachers’ college. Practice was seen as “merely an expression of embarrassment at the deplorable but soon overcome condition of incomplete theory” (Bubner, 1981, p. 204). Teaching was nothing more than an applied science—the application of generalizable knowledge, in the form of theory or methods, to practice. Just as “The Fireman” and “The Nurse” were disembedded from any sense of the idiosyncrasy of particular disciplines, teaching situations or children’s experiences, knowledge was largely disembedded from the immediacy of practice and the experience of teachers (Dunne & Pendlebury, 2002).

Through this disembedding it is supposed that what is essential in the knowledge and skill can be encapsulated in explicit, generalizable formulae, procedures, or rules. The latter then are to be applied to the various situations and circumstances that arise in the practice so as to meet

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<sup>1</sup>Britzman, D. & Gilbert, J. (2004). What will have been said about gayness in teacher education. *Teaching Education* 15(1), 81–96.



the problems that they present. These problems are supposed to have nothing in them that has not been anticipated in the analysis that yielded the general formulae, and hence to be soluble by a straightforward application of the latter, without need for insight or discernment in the actual situation itself. (Dunne & Pendlebury, 2002, p. 197)

As student teachers, we longed for a practice that might be “practitioner-proof” (Dunne & Pendlebury, 2002, p. 197)—the perfect lesson plan continued to evade us, however. In time I would learn that, despite my best efforts to master a knowledge base or to create idealized lessons as the route to excellence in teaching and children’s learning, I could not escape the concrete particulars of practice. As a teacher educator, then, I have long been preoccupied with this question: How do we educate teachers in light of the particulars of practice? This question has ushered me into several teacher education reform efforts. In this chapter I reflect on those reforms, their constituent narratives, their implications and entanglements. Put simply, I try to live on the margins of those narratives of reform and wonder: What are they up to and what do they make of teacher education?

## **2. PRACTICES OF REFORM**

Since 1990 I have been involved in three institutional efforts to answer the foregoing question. Beginning with John Goodlad’s National Network for Educational Renewal (NNER) in the United States, I participated in a two-year, field-based teacher education program, the Master of Education in Teaching (MET). The MET graduates 35 students annually. Drawing on the principles of inquiry, collaboration and self-critique, the intent was to combine teacher education with urban school renewal in the city of Honolulu, Hawai’i (1990–1994). My responsibility was that of faculty advisor to six student-teachers and twelve teachers at Moana Elementary School, Honolulu, a member of the school-university partnership program. I spent approximately three days per week, collaboratively planning and implementing a series of curriculum innovations, conducting weekly seminars and discussion groups (Phelan, 2005b; Phelan et al., 1996).

A move to Canada in 1994 provided the opportunity to coordinate the development of the Master of Teaching Program (MT) at the University of Calgary, Alberta (1994–2004). This integrated program is inquiry-based and field-oriented; its primary goal is to cultivate discernment or practical wisdom in aspiring teachers (Phelan, 2001; Phelan, 2005a; Phelan, 2005c). Four hundred students graduate annually. The program is integrated such that foundational, policy and curriculum studies were woven into a series of six thematic units: Learners and Learning, Teachers and Teaching, Curriculum Contexts, Curriculum Studies, Praxis and Integration. Field experience, case-based

inquiry, independent study, seminar and lecture were programmatic strands. Students moved between field and campus, spending two days per week at each site; the fifth day was devoted to independent study. My responsibilities in the program were both administrative and instructional. I taught Curriculum Inquiry in Elementary Humanities, a semester-long course in Year I of the program. I also taught Professional Seminar, a course focusing on principles of teaching, learning and curriculum. While my students came and went from the field weekly, I did not work in the field with them.

On my recent arrival at the University of British Columbia, Vancouver (2004), I was invited to join the Community of Inquiry for Teacher Education Cohort (CITE), an alternative within the Bachelor of Education elementary program for a cohort of 36 elementary route student teachers. This reform effort is largely focused on sustaining a community of inquiry among university-based instructors, school-based personnel, graduate students and pre-service teachers. The intent is to address fragmentation between courses: separation of course work and practical experiences; programmatic decisions that are driven more by scheduling than pedagogical imperatives; and, the seemingly solitary nature of teacher education programs for students. The CITE cohort is nested within the larger elementary program at UBC that graduates 600 beginning teachers each year. I currently co-teach a year long course entitled “Principles of Teaching and Communication”, attend weekly planning meetings and engage in collaborative self-study with other members of the team (Clarke et al., 2005; Phelan et al., 2005).

Each program or cohort has been in existence for approximately ten years and as such each represents a remarkable effort to sustain inquiry-based teacher education. Rather than ask, however, what has sustained these reforms over time, we might instead attend to the way in which reform operates in teacher education as a kind of “evocative object”—“a concept that is exemplary in terms of illustrating and performing key tensions that enliven and create new relations of self and other” (Britzman & Gilbert, 2004, p. 83). When I consider the anxiety and pleasure that reform tends to evoke, I am led to ask: *How does reform matter to teacher education?* Britzman and Gilbert (2004) caution us that it is the very difficulty of answering such a question that invites us to explore how teacher education narrates reform and how different narrations frame what can be said and what remains to be said about teacher education. In what follows, I explore two narratives of reform—innovation and inquiry—that co-exist, overlap and counter one another, with interesting and different consequences in each of the reforms with which I have been involved.

The circulation of stories of innovation and inquiry and their constituent metaphors and grammars, then, is a key mechanism in the perpetuation of a

discourse of reform. Circulation occurs through program documents, instructor meetings, student orientation, and research activities. An examination of grammars—who does what to whom—implicit in the narratives told about various events provides some insight into the workings of power in teacher education. The stories we tell, tell on us as well. At the root of my concern with narrative is the belief that we could have spoken otherwise, that “a range of choices is open to a writer/speaker and that any narrative could conceivably have been produced in a different way” (Footitt, 2002, p. 89). Choices are not predetermined but are conditioned by the patterns of meaning that are available to us at any given time. Yet, while the traces of certain meanings may persist, there is always the possibility of potential meanings yet to be unfolded within future narratives (Schrag, 1997). Teacher educators may find our selves having to seek out alternatives as old metaphors break down.

The horizon of narrativity thus suffers a temporal imprinting, emerging from a past and advancing into a future, recollective of stories that have become part of a tradition and anticipative of accounts, both fictive and factual, yet to be rendered. Narrative comprises the continuing context, the expanding horizon of retentional background and a protentional foreground, in which and against which our figures of discourse are called into being, play themselves out, and conspire in the making of sense. (Schrag, 1997, p. 19–20)

My explorations in this chapter are restricted to the CITE program. The text within which I ground my exploration is my past, present, and anticipated experience as a CITE team member. I am hopeful that the space between my experience thus far and my narration of it may be a fruitful place for future thought and practice.

### **3. A NARRATIVE OF INNOVATION**

When one thinks of innovative projects, words such as improvement, originality, and advance come to mind. As a new instructor, therefore, CITE puzzled me initially! While it’s language was that of innovation, its structure was typical of most applied science or “traditional” models of teacher education—campus-based coursework in curriculum methods and educational studies coupled with an extensive practicum experience—and so I wondered how it could depart in any substantial way from technically rational thought and practice. Moreover, in the context of earlier reforms I had grown accustomed to explicit critiques of the conceptual and structural drawbacks of “traditional” teacher education programs (MT) and to

disparaging characterizations of public education in need of redemption (MET). The status quo of teacher education in the faculty is not disparaged; nor is there any attempt to locate the problem of teacher education in public schools. There is no attempt to control outcomes or to achieve certainty, superiority of thought and or one correct form. Rather innovation is lived as an intellectually humble practice of ongoing exploration and negotiation of how we might live teacher education—a collective improvisation, as the title of this book would have it, rather than a singular effort at substantial reform.

### **3.1 Innovation as Collective Improvisation**

Positioned as the creative wing of the larger Bachelor of Education program, CITE garners permission to imagine and to try out varied approaches to teacher education that are consistent with its dual values of inquiry and community. The result has been a series of gradual alterations to the mainstream B.Ed. program: the introduction of weekly classroom observations; the shifting of a three-week practicum from Winter to Fall term; the integration of courses by means of team teaching; and, the teaching of portions of the program off campus at the school sites.

The opportunity to co-teach is an example of a slight program alteration that reaped significant reward. The integration of Principles of Teaching and Communication (known as PotCom) with Social Issues in Education is a subtle but powerful form of resistance to a largely technical introductory course in how one communicates and teaches. Typically, the list of topics in PotCom ranges from classroom management to generic teaching skills. By integrating the Social Issues course, we could situate teaching and learning in social, cultural and historical contexts. Witness our first unit of study—Visions of Children and Childhood—in which we traced historical understandings of children and explored their implied metaphors of teaching. Within the context of such discussion issues related to classroom management deepen and extend beyond remedial strategies.

Although CITE innovations may appear modest, requiring only minor changes in scheduling, they often constitute substantial changes in terms of students' learning experiences. To observe in classrooms one day each week, for example, means that students are able to engage in a play of thought between theoretical abstractions offered via course work and concrete particulars of practice; a play that is critical to the cultivation of perception and practical judgment. The introduction of an early three-week field experience is similar in its intent. While students engage in a modicum of teaching, the emphasis is on participant-observation and the student teacher as a cultural anthropologist familiarizing herself with the culture of teaching and learning at a particular school site. Such practices frame field experience

as an opportunity to educate students' perception of teaching and learning processes rather than opportunity to evaluate student teacher performance.

Living innovation as improvisation, with nothing other than inquiry and community as guiding values, requires a great deal of time in conversation for instructors. This became evident to me recently during a discussion of the three-week field experience. In an effort to ensure a reasonable and appropriate workload for students while in the field, instructors shared their field-based assignments. As instructors, we had to juxtapose our hopes for student learning with the purpose of the practicum. The inevitable question arose as to the overall intent of CITE: How does the value of inquiry shift instructor expectations of students during the practicum? How does the practicum become reconfigured as a result? As with all improvisation there is no set text to follow, no handbook or manual to determine the results of our deliberation. As such CITE instructors had no choice but figure out the answers to the questions for this year, in the context of this particular team membership. Rather than use "inquiry" as a rallying cry to some pre-given future, CITE invites team members to wonder out loud about what it might mean for us, in this moment, on this occasion. By comparing our judgments to other team members, (made up of graduates, seconded teachers, graduate students and tenure-stream faculty) we each learn to escape the illusion that arises when we mistake subjective conditions for objective ones.

On joining the CITE team an instructor soon learns that issues of teaching and learning belong to the collective. Bi-weekly team meetings provide ample opportunity to discuss issues, as does the annual two-day retreat. At our last retreat one instructor shared a concern that students were too preoccupied with the performance of teaching and little concerned with children as learners. In the moment, we decided to organize "The Learning Series". Twice a month all students and instructors attend a lecture and engage in discussion about children's learning. At the time of writing we have explored topics such as children's imagination, children's understanding of numeracy, and children's physical development. There is little doubt that at our next retreat we will have the chance to reflect on the series' value for students and ourselves and its viability for future years. So while *The Learning Series* may not redefine what has been taken-for-granted in teacher education—its teacher centeredness—it will allow us to begin to work out the implications of a potential redefinition.

### **3.2 Innovation as Slowly Strategic**

What is striking in this narrative of innovation is the manner in which practices become gradually woven into the institutional fabric. An innovation that begins largely within current program structure and by

means of small internal or external grants is sustained for a number of years until there is sufficient evidence within CITE to suggest that the new practice has had such excellent results that it would be foolish to suspend it and wise to extend it. This seems to have been the case with new approaches to technology education. First, CITE members imagined the notion of “Tech Coaches” whereby two to four student teachers in the cohort, identified as highly competent technology users, are compensated financially for hours spent working with their peers. This practice was so successful that the Teacher Education Office for the mainstream program adopted it. Second, time was found within a regular CITE course (PotCom) to create a continuous strand of digital technology learning experiences led by a seconded teacher who was also the course instructor. Funding already existed for the course so no additional resources are necessary. Finally, highly proficient program graduates are invited to return as digital learning technologies instructors to teach the learning strand. Funding is secured internally through in-house technology innovation grants. The practice of graduates becoming educators of teachers has become part and parcel of the CITE landscape and will undoubtedly continue to be so. Imaginative leadership is crucial in this particular instance as those faculty involved in digital technology not only created new images of practice but was also strategically effectively in enacting those practices, and aligning them with institutional priorities.

Innovations in CITE provoke the mainstream program structure into reconsideration of its premises and tenets. Over time the mainstream program has adopted some of the innovations or altered its structure accordingly. CITE provides an interesting case of new and old bump up against one another.

The narrative of innovation is of course a narrative of progress, for example. When we narrate CITE as an innovative project, we narrate its history, as I did in the opening paragraphs to this essay, through the metaphor of paradigms or competing worldviews—technical rational fragmentation versus interpretive integrity. CITE is thus positioned as coherent, discrete and corrective, belonging to a certain paradigm of practice. In effect what we are saying is that what CITE has sustained is its difference; any initial conflict and dissonance have been settled. Of course, technical rationality is alive and well within CITE. The manner in which teacher-led, discipline-based methods courses continue to predominate thus thwarting student-initiated, thematic inquiry is a case in point. We continue to live in the shadow of practice as incomplete theory.

The narrative of innovation functions effectively within universities because it reflects a sense of what such institutions wish to project: creative thought and cutting edge practice. But what if CITE functions as a

carnavalesque site in the Faculty of Education, a moment, as it were, of creative resistance to a still largely technical rational enterprise. One could say that inadvertently CITE sustains the status quo of traditional teacher education.

Finally, having succeeded in etching out a viable space for itself, CITE may be in danger of overlooking how that space is largely defined in terms of its relation to what it is not—the larger B.Ed. program. A great deal of time is spent navigating through timetable, hiring practices, and organizational structures of the larger program. This raises interesting questions about what it is possible for CITE to imagine in terms of policies and practices; also, whether it is even possible to re-imagine its boundaries and obligations outside given structures. Perhaps this is precisely where CITE's other narrative of reform as inquiry comes into play.

## **4. A NARRATIVE OF INQUIRY**

Inquiry is described as a key motivating value and practice in the CITE cohort, something that sets it apart. While inquiry, as a form of critical questioning of ideas and practices, is promoted in coursework and practicum, it is most present in the life of instructors.

### **4.1 Inquiry as Investigation of Practice**

Inquiry takes on two guises: first, as the direct investigation of the practice of teacher education, and second, as a form of relational analysis. A narrative of inquiry has led CITE members towards self-studies of teacher education. Self-studies try to give account of the living of teacher education and teacher educator knowledge in action, “rather than merely the verbal accounts of action” (Clandinin & Connelly, 2004, p. 582). Inquiries tend to lie close to practice, to be studies of practice: How do I teach student teachers to use a wide range of technologies purposefully and in ways that meaningfully enrich their teaching? What are the implications for my teaching of social issues in education when my course goes on line? What is the role of portfolios in my effort to have students explore their educational beliefs and commitments? Participants study themselves in relation to their practices (students, contexts, subject matter etc.) in order to learn about themselves and to change some element of those practices. Investigation of practice also extend beyond individual instructors' practices to a concern with CITE structure. Over time there have been inquiries conducted into the cohort structure, its social dynamic and learning potential. This book provides testimony to the way CITE members see ourselves in interaction in a

particular place at a particular time, the professional landscape within which we live and the unfolding story of who we are becoming as a cohort or community of teacher educators. Knowledge is relational and is seen as closely interwoven and connected to the participants in the original inquiry.

The narrative of inquiry creates a space for CITE members to engage in relational analysis, that is, to question what one thing (theory; complexity science; standards of teaching) might mean for another (practice; teacher education cohorts; professional judgment) (Britzman & Gilbert, 2004).

Some members have drawn on complexity science to explore the relationship between the sustainability of a teacher education program and the practice of cohort use. Two questions guided the inquiry: What is significant about cohorts in teacher education? How might complexity science inform our understanding of cohorts in particular, and teacher education in general?

The impulse to question and clarify relationship as a mode of inquiry was evident in CITE members' response to the arrival of the "standards for the education, professional responsibility and competence of its members" (British Columbia College of Teachers, 2004). The standards are an attempt to delineate the knowledge, skills and attitudes required of professional educators (BCCT, 2004). The Associate Dean of Teacher Education invited CITE, along with two other cohorts, to pilot the standards by devising an appropriate approach to evaluation. Our response to the invitation was to reject the invitation to pilot but to accept the opportunity to juxtapose the BCCT standards with our shared values of community and inquiry. What, we wondered, did the standards mean for our effort to live the values of community and inquiry in teacher education? We attempted to: 1) situate the BCCT standards historically, politically and socially; 2) explore the etymological roots of the term; 3) examine each standard in turn, asking questions about the conceptions of teacher, teaching and teacher education upon which each is premised; 4) evaluate the standards in light of CITE commitments to inquiry in teaching and teacher education; 5) engage student teachers in a range of discussions about the standards in the context of portfolio evaluation; and finally, 6) participate in a public seminar on the topic. In these ways, we worked with the concept of standards, attempting to understand it and to play with its practical and theoretical boundaries, re-interpreting the teaching standards in light of program values and practices.

In this instance, CITE seemed to foster a kind of limit attitude in which the critique of what we are is also the historical analysis of the limits that are imposed on us, and an experiment with the possibility of going beyond them. Approaching all givens as questions is the specific work of thought, what Foucault termed problematization (Healy, 2001). Foucault's limit attitude is situated, interpreted and prejudiced. Teacher educators in CITE learn to see



ourselves and our practice in terms of the systems of ideas and knowledge that are available to us as individuals but also in terms of those ideas brought by others. The collective inquiry can turn members back on ourselves in order to reflect upon the very ideas and values that ground the (im)possibility of our thought and action.

## 4.2 Inquiry as Communal Enactment of Difference

By narrating reform in terms of inquiry, the consensus that often motivates the creation of a coherent program, is unsettled rendering it hospitable to difference. What was striking about our initial attempts at discussion of the standards was the diversity of reading practices that was evident. Some took a strictly conceptual approach to the “problem” and asked: What is the etymological root of the term “standard”? Where did the term originate? Some interpreted the standards critically seeing them as yet another attempt to control and de-professionalize teaching. For them, the attempt to standardize practice in teaching and teacher education was both inappropriate and unacceptable. Others wished to read the standards historically in light of their origin in British Columbia and elsewhere in Canada. Still others wanted to read the standards as an opportunity for thoughtful action (praxis) in the CITE program. Questions emerged such as: How might we reconsider our assessment and evaluation practices in light of the standard? A tension seemed to exist between those who believed critique could have a productive role to play and those who feared that critique could simply be reduced to criticism/complaint barring the route toward thoughtful action. This is where diversity of ideas in and of themselves seemed not to be sufficient condition for faculty inquiry into the standards. There had to be some commonality that we shared that would allow us to live alongside our differences. It became necessary for some of us to suspend our disbelief in the potential benefits of the standards in order to proceed with the inquiry.

“Working difference” in CITE did not entail “working through difference”. Rather, “working difference,” suggested a constant kneading of categories and separations. Just like the kneading of bread starts a process of transformation of separate elements into something that gives those elements new meanings and uses, the manuscript that resulted from our deliberations about standards bore little resemblance to any one ideological position but represented a “continual motion that keeps breaking down the unitary aspect of each new paradigm (Anzaldúa, 1987, p. 80) of difference” (Ellsworth & Miller, 1997, p. 246).

CITE has sustained faculty research programs over a decade, successfully positioning teacher education as a viable ground of research and scholarship. The very reasonable desire that new professors find in teacher education a

place to teach and research has influenced CITE's emphasis on the scholarship of teacher education and its attempts to reconcile the two solitudes of research and teaching. However, the narrative of CITE inquiry has a double edge. The manner in which inquiry can be channeled to fit within the parameters of official mandates and funding allocations; since joining CITE I have heard a great deal more about digital learning technology than social justice, for example. Which inquiries will CITE pursue? Which questions will remain unasked and unexplored? In whose interests, at what cost, and to what end will CITE be sustained?

Moreover, while inquiry may be said to characterize professional work such as teaching, publication remains largely the mandate of the academic community. Generally, it is faculty who benefit materially from publication, not teachers in schools. In order to benefit, however, new faculty must remain cautious and refrain from extravagant gestures towards the field by way of the kind of time commitment that field-based teacher education or collaborative inquiry with school personnel requires. Ironically, perhaps, it may be that the same source of pressure prevents us as a team of instructors from moving beyond a course-based structure to student teacher-directed inquiry.

The approach to faculty inquiry within CITE is one that attempts to relate and juxtapose a range of ideas and positions and in so doing, resists stereotypical thought, reduction or dismissal of other ideas. If "controversy is a defense against relationships", as Britzman & Gilbert (2004) write, then it may help explain why CITE maintains an uncontroversial image in the Faculty of Education. Of course, there may be other reasons. At the outset our stance not to pilot but to inquire into the standards appeared radical in light of cohorts where standards were assigned to relevant course numbers, no questions asked. As our work continues on the standards, however, our collective effort to live alongside the standards appears immensely reasonable; this leads me to wonder whether any CITE inquiry has the potential to be radical.

## **5. CLOSING BY WAY OF RETURN**

Reform may matter in teacher education precisely because it invites the play of narratives that contain provocations for interpretation that call into being particular possibilities for the practice of teacher education and for being teacher educators. In CITE, there is a productive tension between a narrative of innovation that insists on "doing" and a narrative of inquiry that covets a contemplative space in which to develop a

practical conscience (Coulter & Wiens, 2002). As a result, CITE defines a way of living as a teacher educator.

No narrative of reform is innocent, as we have seen. Caution is in order as CITE members anticipate a narrative of sustainability wherein the present becomes prescient and past, present and future appear as stable entities (Foucault, 1997). CITE's wishes for coherence and causality in its past, present, and future may very well defend against the uncertainties of making commitments and living with uncertainty that have defined CITE from the outset (Britzman & Gilbert, 2004). Perhaps one answer lies in our willingness to "enjoy the margins of our narratives", seeking out their implications and entanglements (Britzman & Gilbert, 2004).

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## **SECTION II IMPROVISATIONS**

# Chapter Six

## IN OPEN SPACES

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### 1. INTRODUCTION

It was a cool and windy fall day as we met at the beach for our first art methods class of the term. Although I had met with the cohort a few times during the initial orientation week, this was our first actual art space together. On this September afternoon, surrounded by the sand, rocks, and sea, the smell of the ocean air, the soothing sounds of the waves lapping over the stones, and with shadows playing in the low afternoon sun, we gathered and began to explore ways of engaging with and learning about art.

The students divided into small groups, spread out along the shoreline and began to create collaborative earthworks sculptures, working with each other and with the natural materials and processes around them – with the sun, water, stones, wind, incoming tide, light, and elusive shadows. One group with bare feet and pant legs rolled up waded into the ocean to build a tower of stones. Another group climbed on the cluster of large boulders to lay rings of pebbles, while others traced the ridges and hollows of the logs with twigs and leaves, played with their shadows, drew in the sand, and wove together strands of green reeds and grasses. Each group was given a digital video camera so they could document their emerging artworks and attend to their artistic processes. Through this activity I had hoped to open a space for students to pause and notice the textures, details, and nuances of the day; to step outside of the expected; to let the acts of creating have a presence; and to begin to understand art as a way of engaging with the world and with each other.

Earlier we had discussed the artist Andy Goldsworthy's work and had watched clips of his documentary, *Rivers and Tides*. Goldsworthy, a contemporary British artist, creates in partnership with nature making sculptures such as a tower of stones, a ring of leaves, or icicles circling a tree. He works with natural materials creating sculptures out of what is there

at the moment, participating with the cycles and processes of change, decay, birthing and dying. His temporary outdoor artworks are there for a time, recorded in photographs, then the wind blows and the leaves are scattered, or the sun comes up and melts the ice and only its remnants remain. In the documentary we had followed a thin wandering line of green meandering vines that echoed the nearby river's rhythm, witnessed a row of brilliant yellow cascading dandelions as they became part of the water's current, and listened to how Goldsworthy was exploring concepts of growth, change, and flow. He spoke of how he knows himself as part of the world, connected to the rhythms of the seasons, and to the cycles of living and learning. Through art making he participates with the processes around him:

Movement, change, light, growth and decay are the life blood of nature, the energies that I try to tap through my work. When I work with a leaf, rock, stick, it is not just material in itself, it is an opening into the processes of life within and around it. When I leave it, these processes continue. (Goldsworthy in Grande, 1994, p. 90–91)

I return again and again to Goldsworthy's words and work. His work reminds me to attend to the ordinary things around me, to the processes of creating, and to the struggles, journeys, successes and failures inherent in each creative act. He describes his work as an instant or moment in the cycles of life – each artwork a moment that creates memory. I like to think of my art/teaching in similar ways: that I provide a space, an encounter, and an opportunity to participate in my student's processes of becoming teachers as they participate in my own. Each time I begin a class it is another entry into learning, discovery, and understanding. It is a moment of living and an active engagement. And as we explore art together it is not the things, objects, or art works we create that are meaningful in themselves, rather the openings and possibilities that are generated in the interactions.

Goldsworthy's work reminds me to stay expectant, attentive, and open to the moment, grounded in the earth and in the physicality of making, and receptive to visual and sensory engagements. As David Jardine (1998) writes, "as we sever our connections with the Earth, it ceases to be our abode...as the earth loses its *humus*, its living, generative character, the subject loses its humanity" (p. 9–10). Art teaches us to pay attention, to notice details so easily overlooked, to hear silence, explore difficulty, value mistakes and failures, enter uncertainty and ambiguity. But we need to approach it with openness and receptivity. I, along with my students, need to be constantly reminded of this.

## 2. WITH OPEN MINDS

The first thing I aim to do as we meet to learn about art is to disrupt and open up understandings of what art is and what art can be. Education students most often come with specific notions of what art in the elementary classroom is: teacher directed craft projects, turkey hands, cut out teddy bears, paper plate masks, collage, crayons, paints, and drawing. Many students also have learned to distrust their own artistic efforts and adamantly consider themselves “non artists”. Many students haven’t taken art since they were in elementary school themselves and likely wouldn’t have taken the course if it weren’t a requirement. Stepping outside beyond the classroom walls and working with materials in the environment helps students see art in the ordinary things around them and feel themselves part of the processes. Working at the beach with the stones, sand, and water, students return to memories of childhood play and re-discover freedom in artistic expression. And they enter a curriculum of not just of plans and projects, but also of connection, attention, and attentiveness. It is art making and art teaching/learning that embodies concern for the earth and each other (Hollis, 1997). Attention is given to the immediate things around us rather than “attending to the world *out there*, a world we can supposedly enter or leave at will, without a trace. Rather, it involves self-awareness of our existence *in* and *with* the world” (Lankford, 1997, p. 49). Together, as students and teacher, our actions create memories and leave traces like marks left in the sand; so that art is distanced in the images someone else creates and hangs on walls and in galleries. It is here, at the beach, in our movements, responses, and in the traces we leave.

## 3. WITH OPEN HEARTS

Throughout the term I provide varied art experiences in the hope that students will learn about and deepen their appreciation and understanding of art. We paint and draw indoors and outdoors. We stitch together, work in clay, collage, printmaking, and papier-mache. We make puppets, postcards, clay sculptures, appliqué quilts, and digital imovies. We explore the functions and purposes of art. We look at and talk about artists’ works and when time allows we visit galleries or museums. But I see art as the medium of learning not the subject or object of learning. Of course through it all students do learn a lot about art. And most often (in spite of themselves) learn to love art, take pleasure in their creations, and learn to appreciate the images and artworks of others. But I am primarily interested in what students learn *through* art and in helping them deepen their relationships with art so



they, in turn, can facilitate meaningful artistic relationships with their own students.

Part of developing relationships with art is learning its properties and possibilities, that is, learning skills and techniques as well as art's histories, purposes, contexts, and meanings. And of course content is important. The things students learn and the things I teach are vital in establishing and strengthening those relationships for without the content the connections would be tentative and uncertain. Equally important is the time spent and space given to exploring and learning the responsiveness, possibilities, and limitations of the art materials. Yet through it all my hope is that students will come to know art like a friend growing more familiar with each interaction and conversation. Jean Vanier (1991) writes that "we give value to people by the way we look at them, by the way we listen to them, by the way we touch them and care for them. We give value to them by the way we are present to them" (p. 12). These things are also true of how we cultivate relationships with art. It needs courageous and open hearts to explore, experiment, and move beyond fears and anxieties.

#### **4. WITH OPEN EYES**

Drawing is one activity that students approach with a great deal of anxiety. Many students think they are "terrible at art" as they can't create realistic looking images. They lament their lack of artistic ability and talent in drawing as if there were only one right way to see and represent the world. And so we explore memory, observation, and imagination as sources for imagery. We try drawing through acetate transparencies, viewfinders, and even cardboard telescopes. We turn drawings into wire sculptures and imaginary animals. We try drawing as process, gesture, and touch. So that we are not re-presenting the world as it is or rendering an accurate, objective view of an object, rather using pencils, pastels, paper, line and shading to notice the details, textures, and colours of the world, to appreciate the things that are growing around us, and the shapes and intricacies of our surroundings. On a walk to the Botanical Gardens, for example, we explore points of view and drawing as journey as we create maps that are narratives of experience with visual and textual representations. Through drawing we learn to see again and see anew. As Frederick Franck (1993) writes, "once we start to draw, all of a sudden we begin to see again" (p. xii).

## 5. WITH OPEN EARS

In spite of the focus on the visual, art is much more than just image and we engage with art in more ways than just through our vision. Learning to listen and respond to art is critical in attending to the stories and experiences that are told and constructed through art. For instance, during the term we talk about textiles as art and the stories of living, birthing, and dying that are told in and through fabric and the processes of mending, repairing, cutting, and undoing. I ask students to consider their own stories and create small appliqué quilts that talk about their histories. This activity echoes with the larger questions that I ask throughout the art methods course as I prompt students to consider how they speak, locate, and understand themselves as beginning teachers in this world. And I work with the assumption that I am implicated in what I ask of students and each question requires a personal/lived response. As I ask students to connect with tactile and textile expressions, and consider some of the difficult stories that they bring to teaching, I bring in parts of my own artistic inquiries. Sometimes I bring in a quilt I made as a response to my son's disabilities, other times a collection of collages and writing about my grandmother's death. Each time I offer fragments of my story so that my journey of continuing to learn to teach echoes with theirs. This helps create a receptive space of pedagogical openness so that we are sharing not only knowledge but also lives. David Smith (1999) acknowledges this as he describes how "the ability to attend to ourselves, to our students, to our collective lives depends first and foremost on a form of stopping, and the creation of a space in which we can truly listen and hear ourselves." (p. 98)

Listening beyond the expected and to things not easily expressed is also important. There are some things, often very deeply felt things that cannot ever be fully, or sometimes even partially articulated. In teacher education we ask students to write, image, and tell stories of their lives so they can see and construct meanings for their teaching practice and pedagogy. These stories, no matter how inarticulately they find their way through lives, still are expected to be shared in a mostly coherent manner. Art making opens *other* ways to let silences, woundings, deeply felt emotional encounters resonate and find their presence in teaching. Art opens spaces to listen and attend to our own and others' stories.

## 6. WITH OPEN HANDS

Creating open pedagogical spaces of learning means prompting students to move beyond perceptions that art should be beautifully rendered and perfect. I remember talking with one student about a clay vase she had made, which I

thought was lovely with its tall graceful shape and still visible clumsy indentations from her hands. The student hated it and I responded as I usually do by telling her how beautiful it was, how I liked the personal marks of her fingers and how its awkwardness gave it character and life. I'm not sure if my words had an effect, yet later as I asked them to sit in small groups and respond to each others sculptures by writing and placing messages inside each other's vessels she was able to see through others eyes and hear through others words. Through the generous offering of others she was able to be generous with herself and with her "imperfect" rendering.

Alain Toumayan (2004) describes artistic inspiration as a "consequence of failure, as an accomplishment which exceeds one's powers of conception, planning, and execution" (p. 93). Art relies on failures, mistakes, and disjunctures. Vulnerability, imperfection, and awkwardness have an important place in art. Part of students learning is to appreciate and see beauty in this – not in an idealized sense of beauty but in appreciating and being tender with their flawed and unpolished renderings so they can extend the same generosity of spirit to others. It is this generosity of spirit that makes engaging with art an openhearted, responsive, and generous dwelling place. Learning in these contexts is much more than methods or curricular content. It is a relational dwelling with each other and with/in the world. So that experience or knowledge not something that is possessed, rather endured, inhabited, and lived in (Jardine et al., 2003). It is a "deeply human enterprise" (p. 47) as it embraces the imperfect, vulnerable, awkward, tender and difficult. And there are moments of exhilaration – most often entered unexpectedly, like one student whose dog ate (yes really did eat and destroy) her puppet. She brought the remains to the end of term art show in shreds and fragments. She gently placed the pieces in a small box and displayed it alongside her classmates smiling puppets with a photo of her puppet in happier days and a poetically written epitaph eliciting surprise that even "failures" and accidents had a place.

## 7. LEAVING TRACES

At the end of the term we return to images of our first art class together as we watch students imovies of the initial beach sculpture activity. The cohort gathers for our closing art show and we watch images of stone towers falling and being rebuilt, leaves blowing away, and artworks taking unexpected turns. There is laughter and an attitude of celebration as students see their initial experiences reinterpreted, and brought into the present. In the room are other artworks created over the term and students' visual journals and art

binders are left open for others to view. The room is filled with traces of our learning and time together.

One scene in the documentary *Rivers and Tides* shows Goldsworthy silently lying on the ground face towards the lightly falling rain. He waits long enough for the rain to dampen and colour the ground around him. After a time he gets up and we can see the trace of his body left as a dry shadow on the wet red-brown earth. In the art methods class we don't have a long time together. I often wish our art encounters could last all year instead of one term. Nevertheless, we have long enough – long enough for new memories and experiences to be created, long enough for new understandings of art and art making to leave their mark, and long enough for traces of our time together to be taken up in other parts of the program. Working within a cohort, with others aware of what students are doing in art means the traces can be taken up in other ways so that learning moves beyond individual experience. As Carla Rinaldi (in Gandini, 2005) explains, artistic learning is an “interactive, relational, and social project” (p. 171) that requires a social context to become visible. And finally there has been enough time for our learning to be marked by openness of heart, mind, and spirit. Carl Leggo (2004) writes that “a curriculum of joy is a lived and living curriculum...always connected to the body, heart, imagination, and mind” (p. 32). These are traces that I hope are lasting and will find their way into students' own classrooms bringing joy and open pedagogical spaces to the students they will teach.

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## Chapter Seven

# PRACTICING WHAT WE PREACH: HELPING STUDENT TEACHERS TURN THEORY INTO PRACTICE

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### 1. THE PROBLEM OF USEFUL WORK

Student teachers often criticize the content of their classes as too theoretical to be useful for their practicum experience. This is particularly true of survey type courses that cover a wide range of subject matter to give students some insight into the breadth of the topic, and that student teachers are often required to take. The educational psychology course on developmental theories, which I teach and which CITE students are required to take is one such course.

Lack of teaching experience is often the reason that theory fails to inform students but it is not an unreasonable criticism given the considerable pressure of a one or two year preparation program for teaching. The purpose of my course is to expose students to theories of learning and cognitive development by reviewing the work of researchers like: Piaget, Vygotsky, Erickson, Skinner, Watson and Kohlberg. The thinking being, one assumes, that students will understand what, for example, constitutes a behaviorist approach to instruction as opposed to a developmental approach.

Although most students I have talked to find the information presented in the course intrinsically interesting, one senses a general restlessness in having to spend the time on what seems far removed from the daily concern of planning lessons and managing children; on topics that seem esoteric rather than useful. In the past, I have found that the words ‘not useful’ and ‘not meaningful’ come up frequently when students are asked to describe their experience with the course.

In preparing to teach the course in the fall of 2004, my choice was to present the course as in past years or to introduce an element that demanded

greater personal involvement on the part of student teachers. I was hoping for a more profound shift in their perception about human behaviour by making the work less abstract and by introducing hands-on activities in an effort to make the material seem more meaningful.

## **2. CHANGES IN ORDER TO INCREASE STUDENT TEACHER INVOLVEMENT**

Since I had a supportive teaching team in the CITE cohort, I decided to reduce the number of developmental theories that were surveyed and introduce activities that involved students in practical applications of the theories. In addition, I taught William Glasser's Choice Theory (Glasser, 1998). Choice Theory is a conception of human behavior that readily allows for application in classroom management as well as to relationships outside of the classroom and school. The result, I reasoned, would be inquiry into teaching practice guided by very practical considerations of which 'teaching behavior' was most useful in relating to students individually and which was most effective in classroom management.

I want to emphasize the need for a supportive team. Once student teachers started to learn Choice Theory and were required to practice their interventions in role-plays and in their practicum classes, my colleagues were frequently confronted with Choice Theory explanations for behaviour in the work students did for them and in their discussions. It was important to have the opportunity to explain what I was doing at our instructional meetings and to share what I was asking students to do in their practicum schools.

In planning the course, the notion of what was useful and what was meaningful to student teachers became a major determinant of what we did in class. How did I know what was useful? I asked the students teachers. Some of the strategies used were as follows:

1. Role-plays and role-play demonstrations that focused on student – teacher interactions. Training in Choice Theory requires extensive role-play to help participants internalize the various concepts as well as develop the skill of asking appropriate and productive questions.
2. A regular discussion and role-play, if appropriate, on questions that student teachers brought back from their first practicum experience. There were many questions and we dealt with those that were directly related to student and teacher behavior.
3. A response log for each class in which student teachers were encouraged to evaluate the usefulness of the work done in class. I read the logs three times during the term.

4. Student teachers were asked to teach elements of Choice Theory to another person not associated with the class. The purpose was to, in effect, extend the class time and help student teachers internalize the various Choice Theory concepts.

## **2.1 Hands-on Activities**

In order to give students some concrete referents for the theory, I provided hands-on activities that involved using more of their senses. For example:

1. We replicated some of Piaget's experiments in order to provide a hands-on experience for the stages in cognitive development.
2. Kohlberg's stages of moral development benefited from a puppet play in order to involve children in the idea of what constituted virtuous behavior.
3. Multiple Intelligence Theory benefited from interactive presentations by student teachers as did Montessori's Educational Philosophy.
4. There were also interactive presentations by students on integrating special needs children into regular classrooms and on interventions for attention deficit and hyper-active students.
5. Erikson's Eight Stages Of Life were to become autobiographical 'stepping stones' however, we ran out of time and did not finish this.

Clearly all of the above strategies require active involvement in the learning process and they required a great deal more time than I had formerly taken to deal with a topic. I did provide students with brief descriptions of other developmental theories and, of course, references.

## **3. THE MAJOR FOCUS**

The remainder of the chapter will focus on the main 'improvisation' in the course: namely the teaching of Choice Theory and the attendant effect on student teachers' perceptions about behaviour and their practice in dealing with behaviour in classrooms and on the playground. Applying Choice Theory principles became the main improvisation in part because it took more class time than all the others listed above but also it had the most effect on student teacher behavior as determined by their responses to the classes and to my questions.

Glasser formulated his theory in opposition to what he called 'External Control Psychology'. External control psychology is the predominant psychology operating in the world today (Glasser, 1998, p. 5). Three common beliefs that are the foundation of external control psychology are:



1. I do things like picking up a phone or answering the door because I am responding to a simple external signal.
2. I can control others and others can control how I think, act, and feel.
3. It is right to punish or reward others in order to get them to do what I want.

Choice Theory on the other hand describes an internal control psychology that stands in opposition to the above common beliefs. In other words I can control myself but no one else. I choose what I do. I answer the door because I want to and I choose how I will respond to what others do.

Students in the class generally accepted the notion that humans are internally motivated. However, they frequently did not act in accordance with that knowledge. I will return to this point later.

### **3.1 Three Concepts of Choice Theory**

The first concept we explored was that of basic needs. Choice Theory, as developed and explained by Glasser (1998), posits that all we do from birth to death is behave, that almost all behaviour is chosen and that we are driven by our genes to satisfy five basic needs, the need for: survival; love and belonging; power; freedom; and, fun. In other words we choose to behave in order to satisfy or meet our basic needs. Glasser (2000) believes that ‘to love and to belong’ is the primary need because we need people around us to satisfy the other needs.

Student teachers recognized the importance of creating classroom environments in which students were able to meet their five basic needs. Their growing knowledge of the basic needs changed their perceptions about classroom management. They recognized that students did not misbehave just to give them a bad time but because they, like everyone else, were behaving to meet their basic needs. Student teachers began to recognize that if students were defiant, uncooperative, unproductive, talkative, or used inappropriate language, it was their way of meeting their needs. In trying to meet basic needs we try various behaviors. Some work some don't. Those that are successful we retain and use again. In Choice Theory terms they become the ‘organized behaviors’ or the learned behaviors on which we come to rely to get us what we want.

Through our discussions and their observations in the classroom, student teachers came to understand that if, for example, they gave students responsibility, included them in making decisions, and planned their lessons to deal with meaningful and useful content, misbehavior began to diminish because students found it easier under those circumstances to meet their basic needs. Student teachers began to recognize what it means to create a positive classroom environment. Table 7.1 below gives examples of other

Table 7.1. Basic Needs, Teacher Behaviour and Classroom Management Strategies

<b>Choice theory Concept of Basic Needs</b>	<b>Teacher Behavior</b>	<b>Classroom Management</b>
Love & Belonging	The teacher is non-coercive, friendly, welcoming and makes time for each student	Three types of classroom meetings are held regularly for: Social problem solving, Discussing useful topics for learning Checking how well concepts are understood. Students decorate room with their work. The teacher engages the class in group-building exercises. Expected behavior is taught
Power	The teacher is non-coercive, fair, clear and ensures success for students. The teacher shares goals with students, helps students set their own goals and talks about quality and self-evaluation.	The students consider the classroom theirs. They are responsible for getting their own materials and keeping the room in good order. Their work is recognized. They are taught to self-evaluate all work that is turned in.
Freedom	The teacher is clear about limits, models responsibility and is willing to compromise.	The students can move around class purposefully, have choice in activities and in responses to assignments and are responsible for using class time purposefully on their own.
Fun	The teacher models enjoyment in learning, takes time to laugh with class and is willing to celebrate.	The teacher provides hands-on and a variety of activities, some things are done just for fun. Students learn what is useful and apply what has been learned.
Survival	The teacher models consideration for others and models safe behavior.	The teacher holds regular classroom meetings for social problem solving to deal with personal safety. Safety is taught as an ongoing concern. Sanctity of life is discussed and modeled

management strategies that help to create a positive and productive classroom environment based on an understanding of our basic needs.

A second important concept on which the class focused was “Total Behavior”. This concept in Choice Theory explains that our behavior is always made up of four components. These components are: thinking, doing, feeling and physiology. At any moment therefore our behavior is always made up of these four components. The components can be observed as distinct but they are always influenced by the other three components.

For example: a person may be talking, bouncing a ball, crying or sneezing. In each case what we see suggests one of the components: talking suggests thinking, bouncing a ball suggests doing, crying suggests feelings, and sneezing suggests physiology. It is important to understand that all of the components are in fact present regardless of what the “presenting behavior” looks like.

“Total Behavior” became important to student teachers when they realized that it is our thinking and our doing we have most and direct control over. Our feelings and our physiology we only have indirect control over. When intervening in students’ behavior student teachers saw that they had more desirable results when they focused on what students were doing and on what they were thinking.

If, for example, a student is crying because of a fall the student teacher who acknowledged the hurt and the emotions but focused on what the student was doing and what she was thinking found that the student calmed down more quickly and was empowered to deal more maturely with her emotions in the situation. Table 7.2 provides other examples of how an understanding of total behavior can assist the teacher.

The third concept we explored in class was that of our “Quality World”. Choice Theory explains that from shortly after birth until we die our brain keeps track of anything that feels particularly good. This knowledge is stored in memory and is called our Quality World. It is not big but contains people, things, and ideas (sometimes imaginary) that are particularly ‘needs-satisfying’ to us. Compared to anything else, we want what is in our Quality World because we know or imagine having it will be especially needs satisfying.

The Quality World then is at the center of our lives. If we could have what is in our Quality World it would satisfy our needs completely for a time. However, while our needs are quite general the content of our Quality World is very specific. Our needs therefore are satisfied indirectly by wanting those things that are in our quality world. People are almost always the most important part of the Quality World.

Student teachers found it hard to imagine teaching children who did not have school let alone the teacher in their Quality World. Creating a needs-satisfying classroom environment and establishing a good relationship with students takes on new importance when considered from a Choice Theory

Table 7.2. Total Behavior, Teacher Behavior and Classroom Management

<b>Choice Theory Concept of Total Behavior</b>	<b>Teacher Behavior</b>	<b>Classroom Management</b>
Thinking Doing Feeling Physiology	The teacher acknowledges students' feelings and physiology but focuses on doing and thinking. The teacher helps students to gain control in a situation by asking them about their doing and thinking.	Doing, thinking, feeling and physiology are used specifically in questions to help students in clarifying their behavior for themselves. For example: What are you doing now? When you are doing that what are you thinking? When you are doing that what are you feeling? What is your body telling you?

perspective. Understanding the quality world concept embodied in Choice Theory, caused us to reconsider the criteria for effective classroom management. Table 7.3 provides examples of teacher behavior and classroom management strategies that flow from an understanding of the quality world concept.

Table 7.3. The Quality World, Teacher Behavior and Classroom Management

<b>Choice Theory Concept of Quality World</b>	<b>Teacher Behavior</b>	<b>Classroom Management</b>
Quality World	Important people in our lives who we like and get along with tend to be in our quality world. The teacher, when dealing with a student, asks her or himself: <i>'Is what I am going to do now going to help the relationship or hinder it?'</i> , and then acts accordingly.	If the classroom environment and classroom activities are needs satisfying then the students will like coming to school. If students care for the teacher they will do things that are not easy, that challenge them intellectually, physically, emotionally and socially.

## 3.2 Student Teacher Responses

As I have already indicated, student teachers were asked to respond to the usefulness of what we did in class. Of the thirty-three participants thirty responded in their logs that all three aspects of Choice Theory described above were of great interest to them. The needs in particular were singled out as important for personal considerations by a number of student teachers.

Student teachers had observed and scripted behavior between students in their practicum schools. After I had edited the descriptions, we used them to role-play teacher interventions based on our knowledge of Total Behavior and the Quality World. Student teachers were amazed at how difficult it was to come up with appropriate questions. After some practice however, most of them agreed that it was excellent preparation for what they would inevitably face in their practicum.

In order to determine if my criteria of usefulness and meaningfulness with respect to course content had been achieved I asked student teachers for four responses prior to starting their long (thirteen week) practicum:

1. What did you think about behavior prior to this class?
2. What do you think about behavior after taking this class?
3. Be specific about something you will try to do/use in your own classroom.
4. What was the most useful thing you learned in this class?

An additional three questions were asked after student teachers completed most of their long practicum:

1. What have you used in your teaching and general interaction with students that was part of our term's work in class?
2. What in retrospect would have been useful for you to know and should it be part of the term's work in class?
3. What personal benefit, if any, has there been from the work we did in class?

### 3.2.1 Student teacher responses prior to the long practicum

Below are the results that were tabulated from student teachers' responses for the various questions. As well, I have included comments that represented a typical response. To the question "What did you think about behavior prior to this class?" there were 28 out of 33 codable responses which can be roughly categorized as follows. Student teachers thought that behavior was:

- Internally determined (5)
- What we do (11)
- Inherent – that is a biological response (3)
- Externally determined (6)
- Not something that I considered (3)

Typical responses were:

- It is a conscious or unconscious reaction or response to a stimuli.
- It is what a person does.
- Behavior is outward actions that are visible.
- Behavior is determined by upbringing and genetic make up.
- Behavior is linked to our external experience.
- I have no idea.

To the question “What do you think about behavior after taking this class?” there were 29 out of 33 codable responses which can be roughly categorized as follows:

- Information about Choice Theory has changed my thinking (24)
- Thinking about the same as before (3)
- Change was not clear from response (2)

Typical responses were:

- The idea of Total Behavior is useful.
- I accept that most behavior is chosen.
- The idea that we behave to meet our needs is an important consideration.
- I have not changed my way of thinking about behavior but have deepened my understanding of it.

To the request to “Be specific about something you will try to do/use in your own classroom” there were 28 out of 33 codable responses which can be roughly categorized as follows:

- I will use the questioning techniques (5)
- I will use ideas from the book (3)
- I will incorporate daily physical activity (4)
- I will teach aspects of ‘Choice Theory’ (11)
- I will make use of role plays (2)
- Other (3)

Typical responses were:

- Giving and sharing power in the classroom.
- Utilizing assessment as an on-going developmental process.
- Teaching Choice theory to children.

- Focus on Basic Needs.
- Use Questioning strategies when interacting with students.
- Be less coercive.

To the question “What was the most useful thing you learned in this class?” the responses can be roughly categorized as follows (there was often more than one response) :

- Aspects of Choice Theory (13)
- The classroom of choice (8)
- Role-plays and questioning (6)
- Usefulness of activities (3)
- Thinking differently about behaviours (2)
- Real life situations resolving conflicts (2)
- Answering practicum questions (1)
- Importance of taking time with each student (1)
- Stages of development (1)
- Studying one theory in depth (1)
- Presentations (1)

Typical responses were:

- That you can’t satisfy anyone else’s needs.
- Not to let the needs of others determine my own happiness.
- The usefulness i.e., the reality of the classroom activities.
- We can only control our own behavior.
- Class participation and role-plays
- Getting us to think differently about behavior.

### **3.2.2 Student responses after the long practicum**

To the question “What have you used in your teaching and general interaction with students that was part of our terms work in class?” all 25 responses were categorized as follows:

- Choice Theory related (15)
- Related to other aspects of the course (10)

Typical responses were:

- Not to be coercive.
- Sharing power with the class.
- Teaching students they are always making choices.
- Role-playing helped in talking to students. (this came up often)
- Questioning as opposed to telling.
- Understanding the need for physical movement and attention span.
- Separating dislike of the behavior from the person.

To the question “What in retrospect would have been useful for you to know and should have been part of the term’s work in class?” there were 12 codable responses categorized as follows:

- Choice Theory related (8)
- Related to other aspects of the course (4)

Typical responses were:

- Learn different strategies of behavior management for different age groups.
- How do I deal with different types of students? (i.e., shy, aggressive, withdrawn).
- The psychology of power struggles.
- How to help children who come from non-loving homes.
- How to give ‘needy’ kids attention.
- What to do when you meet defiance.

To the question “What personal benefit if any has there been from the work we did in class?” there were 15 codable responses categorized as follows:

- Choice Theory related (10)
- Related to other aspects of the course (5)

Typical responses were :

- I have a better understanding of why people behave the way they do.
- I realize that the student and teacher are a team.
- Knowing that all individuals make choices.
- The various theories helped in shaping my philosophy.
- Not to be coercive.

#### **4. SUMMARY COMMENTS**

There are some drawbacks to the course changes that have been described above. Perhaps the least serious is that student teachers were exposed to fewer developmental theories. Involving students more actively in any course takes much more time. I constantly had to resist the desire to ‘cover’ more material.

A more serious drawback is the fact that we took time only to look at three concepts in Choice Theory: Basic Needs, Total Behavior, and The Quality World. In this regard I mentioned earlier that student teachers did not act as though they were internally motivated. It takes considerably more time than was available to internalize the idea that we make decisions based



on our basic needs. For example, it was obvious from student teachers' interactions that they gave away control to others readily. A number of students chose silence rather than expressing a contradictory or challenging point of view. When I asked individual students why they withheld comments, the decision in each case was based on a judgment that the other person might not like him or her. Clearly love and belonging (acceptance) was more important than power (the satisfaction of having stated your own point of view). Some of the students I asked also assumed that the rest of the group would think less of them if they spoke out. Rather than attribute this to a strong need for love and belonging they thought of it as others making them do what they, in fact, chose to do.

This can, of course, be viewed as the natural social interaction of a cohesive group. Without it the group would probably function with less friendliness and consideration toward individuals. It does however point out how difficult it is to internalize the concepts we were learning in only thirty-six hours of class time.

I believe that the initiative to change the course on developmental theories to one that placed a greater emphasis on a few theories at the cost of reducing the number of theories surveyed was generally successful. This conclusion is generally supported by the student responses cited above. Keeping in mind the criteria of usefulness and meaningfulness, student teacher responses bear out the fact that they considered the course both useful in terms of applicability in their practicum as well as meaningful in terms of their own knowledge about behavior.

It is also clear from the responses that student teachers benefited from being taught Choice Theory concepts. Although it is possible to teach Choice Theory as a developmental theory, for the purposes of this course, the insights that the theory provides in dealing, hands-on, with behavior was more useful and more 'needs-satisfying'.

## REFERENCES

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# Chapter Eight

## SOCIAL STUDIES EDUCATION IN SCHOOL

Dot Clouston<sup>1</sup>, Lee Hunter<sup>1</sup> and Steve Collins<sup>2</sup>

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### 1. INTRODUCTION

There are three authors to this chapter. We are interconnected in this story because of our involvement with Social Studies Methods instruction (SSED) for the CITE Teacher Education Cohort at UBC. We are all involved in the practicum supervision as well. The seed from which SSED grew was collaboration on research for a doctoral dissertation (Collins, 2002). Dot was the teacher of a grade 1/2 classroom in search of a respectful, democratic approach to her primary classes. Steve was a graduate student with a 15-year history of exploring democracy in schools as a teacher and now as a researcher. In the course of qualitative action research, Complexity Theory emerged as an important lens in understanding the often cloudy and confusing school environment. We noticed the irony of hosting an unpredictable, dynamic, “living system” within a reductionist structure of grades, categories, labels, hierarchies, and other cube-shaped containers for small people. This reductionism is further evident when we educate new teachers at university. We physically separate their instruction in how to teach from the context in which teaching actually takes place. Clearly, we are not referring to the practicum which is an example of the necessity of context in learning, especially something as complex as teaching. Rather, we are referring to methods courses, and in this case, the instruction of social studies methods.

Steve successfully defended the dissertation that was born in Dot’s classroom. With an appreciation of the complex, living, adaptive, dynamic nature of the social system referred to as a primary classroom, he began to teach Social Studies Methods at the University of British Columbia as a part-time instructor. As stated, the first term of SSED is normally separate from the context in which the principles studied are applied. However, there is a rich social context for social studies exploration at the university. For

example, a favorite activity is *The Search for Democracy*. The *Search for Democracy* sends inquiring prospective teachers out on campus armed with notebooks, cameras, questions, cell phones – and returning with posters, interviews, role play, songs, artifacts – and unfortunately a generally cynical view of democracy on campus. It could be an example, with adaptations, translations, and modifications, of an activity to investigate many social constructs in the elementary program in schools. Imagining and doing are connected. What we create in our minds we test through actions and our actions lead us to new ideas. The traditional, perhaps mythical, separation of theory and practice is problematic in the teaching of social studies methods. At the very least, we thought we could move the physical location of SSED to an elementary school. The context would inspire relevant, meaningful social studies unit plans that connected with the social studies curriculum in the elementary classrooms. We also hoped that the environment would allow some experimentation with real students, real teachers, real administrators, and real school life.

Lee is a combination grade 3/4 teacher with a Master's Degree in Social Studies Education. Lee and Steve co-taught term 2 of SSED at Lee's school. Lee was a valuable liaison between the university course, including its instructor, and the school's staff, students, and administration. He coordinated physical space for unit development and practice teaching. He related his experiences in teaching intermediate social studies and he accessed a variety of resources for student teachers. In this way, social studies became contextualized, and immersed in the complexity of daily school life, and the way that teachers actually teach. The authenticity of this experience cannot be matched in a university classroom. The authors of this chapter intend to show the social aspects of learning in schools from several perspectives. The chapter therefore investigates learning to teach in three settings: a primary classroom; an intermediate classroom; and, a university classroom. The social context in each setting deepens the learning experience for student teachers. In each case, learners embrace complexity with all its varied interconnections, appreciate the significance of belonging to a community, and recognize the power of collaboration at all levels.

## **2. THE ESSENCE OF A PRIMARY CLASSROOM: ESTABLISHING COMMUNITY**

At the beginning of every school year, a new community of children and adults come together under the leadership of the classroom teacher. How the community grows and evolves is only partly dependent on the direction given by the teacher. It also depends on the personalities of the students,

their social maturity and the interconnected dynamics within the group. This highlights the complexity of a classroom community. When establishing the basic tenets of a new community, the teacher determines what type of community she wishes to promote. Based on the new group of children she receives, she decides how the classroom will operate for the coming year. With Dot's primary class, the hope is that the community she establishes is one where students are respected and are included in some decision making. She hopes to help create an environment where students can take some ownership of their learning, the classroom operation and the nature of their interactions. The degree of student involvement varies from one teacher to the next, resulting in classroom communities that look very different in terms of teacher and student authority, control and direction. It is Dot's belief that when students are consulted and included in the workings of the classroom, they become empowered and they develop social and leadership skills. For Dot, these skills are essential ingredients in developing productive social members of a community.

Creating a viable social system within the classroom is important for social, emotional and intellectual development. Dot addresses safety issues (both emotional and physical) as well as helping the students learn to be responsible for their actions, words, and property. Dot's students are encouraged to be autonomous and confident. The children, in turn, need to learn to respect others' autonomy. In addition, they must learn to cooperate, compromise and on occasion, reach consensus. In Dot's view, if the teacher is continually directing all the activities, then the students do not have an opportunity to practice and develop their own social skills. Consequently, in Dot's classroom, the teacher is a facilitator helping the community grow and become a successful learning environment. As the students grow socially, they can take on more leadership roles and the community continues to evolve.

### **3. ESTABLISHING A COMMUNITY ON CAMPUS**

When a student teacher arrives at an elementary school in the fall, as they do in the CITE program, she becomes part of the community through interactions with the children, staff and parents. When a student teacher enters this community, the community changes according to the expectations of the student teacher, the leadership role that she assumes, and the established structures and relationships. Joining an established community and taking on a leadership role can be challenging for the student teacher for a number of reasons. First, the students have already established attachments with the existing teacher. The student teacher needs to work hard to establish

her own connections with the children. CITE students spend significant time in the classroom prior to the long practicum. It is important that the student teacher uses this time to establish relationships with the children so that she becomes an integral part of the community. While it is important that the student teacher observes the children, she must also make a concerted effort to interact with the students on an individual basis, as someone sincerely interested in establishing relationships.

During their social studies methods class at UBC, CITE students explored the idea of using personal artifacts to determine the identity of a mystery person. (We describe this in detail later in the chapter.) A student teacher in Dot's classroom used a variation of this activity as a way to establish a relationship with the class at the start of her practicum. She filled a backpack with her own personal items. The student teacher showed the items to the group and told stories about herself. The students became more familiar with the student teacher and began to view her on a more personal level.

The student teacher ultimately has to decide on how she wishes the community to operate when she is in charge. Her expectations may be similar to the school advisors' expectations or may take on a new direction. This has a direct impact on the community and can be challenging for the student teacher, the school advisor and the children. This struggle within the student teacher is an important time as she begins to define herself as a teacher and to shape her own educational philosophy. It is important that a student teacher establishes her views about an ideal classroom community early in her teacher education. How much responsibility will she hand over to the students? What are the expectations of the community under her leadership? It is essential in the early days that self-reflection occur. A student teacher starts to create her own place in the community when she has developed her own teaching philosophy. Any change she brings to the existing classroom will depend in part on the social and emotional understandings of the students. CITE students were encouraged to write a weekly journal entry reflecting on happenings in the school, as well as their philosophy and their teaching practices. This helped them to define themselves as teachers. The reflections were often shared with the school advisor and/or the university faculty advisor, which led to thoughtful conversations.

School advisors and university faculty advisors often focus on the issue of classroom management when the student teacher increases her leadership role, but perhaps there is a bigger issue at play. It involves helping the established community to grow in order to include and take direction from a new leader. This may be more difficult and chaotic for some communities based on numerous factors. These factors include the role the teacher has played previously, the amount of student involvement there has been, the

students' attachment to the teacher and the similarities between the philosophy and the expectations of the student teacher and the teacher. Since the student teacher typically has little experience with establishing communities of children, this can be a very challenging part of the practicum. It is complicated by the fact that the community is already well-established. When student teachers are involved in the classroom activities early in the year with fall visits, the children become familiar with the student teachers but the student teachers do not have much input into how the classroom functions. When the thirteen week practicum begins in the spring, the student teacher takes on more leadership but the community has been up and running for months. This makes it more difficult to change direction. The amount of ownership the school advisor is willing to share with the student teacher is a significant factor. This changes from year to year depending on the group and the leader. A student teacher can quickly recognize that there is not just one way to create a community that is cohesive, supportive and focused on learning. Different groups have different challenges and will take varying amounts of time to reach a viable, cooperative community.

A school advisor can help support a student teacher in many ways to encourage the existing community to evolve under her leadership. Dot recommends that, as early as possible, the student teacher engages in deliberate activities that promote a sense of community as well as help the students to attach to this new community member. When a student teacher first starts to teach a class, she is often focused on disseminating information, giving directions and delivering a specific part of the curriculum. Students will be hesitant to accept this new leader, however, until they believe she belongs to the community. Establishing a presence in that community must be the first priority of the student teacher.

An example used by one student teacher to establish expectations was a classroom contract. The student teacher introduced an activity that addressed how the people in the classroom community would behave, treat each other, and work together. She elicited and discussed with the group some classroom expectations. The children wrote some of their own ideas and then the group collectively shared all the ideas. The children were told that the contract was like making a promise. The expectations were listed by the children on a large chart and they all signed their names and made a promise to follow the contract. The classroom contract then became a banner in the classroom that could be referred to when the student teacher or any teacher led the class. Since the students contributed to the list, they were likely to follow the expectations they promised they would.

When a student teacher arrives in a primary classroom, it is essential that a connection is made with the students. If the student teacher focuses more

on the curriculum rather than the people in the class then the lessons presented are less likely to succeed. Teaching in a primary classroom is more than promoting intellectual development. The essence of the primary classroom is establishing a working community where the development and well-being of a whole child is at the forefront of one's daily thoughts about teaching. Once the students feel safe and secure, they will learn. Therefore, a student teacher in a primary classroom must address the critical issue of creating a well-functioning community in order to have a rewarding and successful practicum.

#### **4. SOCIAL STUDIES METHODS AT THE UNIVERSITY**

CITE, as a community of inquiry, is always looking for progressive reforms in teacher education, and its faculty are constantly engaging in self-study. Reflection informs change and continual development sustains the cohort. A learning community is one in which members are committed to ongoing inquiry, critical reflection, and constructive engagement with others. This includes developing courses that seek to connect with university communities, school districts, and specific elementary schools. As such, many courses for the CITE Teacher Education Cohort are taught by CITE faculty who are also Faculty Advisors, supervising the students while on practicum. This is the case with the Social Studies Methods course. Steve is well aware of the relevance of the practicum and the school setting in general and tries to connect course work to this meaningful context. At the beginning of SSED, several traditional as well as post modern conceptions of Social Studies are offered. However, we eventually settle on a very broad based, perhaps obvious, definition. As a curricular area in schools, the subject social studies is the study of social systems. As such, it takes on an important position when relating the subject to school. Schools are social systems and many claim that learning is an inherently social process. From this perspective, social studies is core curriculum.

The research done by Dot and Steve highlighted the usefulness of *Complexity Theory* in understanding dynamic, adapting, social systems. It was introduced as a vital tool to SSED students for exploring the various social systems encountered in Social Studies curricula, whether it be the government recommended goals and objectives, the traditional disciplines of history, geography, government, etc. or the actual social activities that arise in daily life in school. Of course, these topics are not separate, but overlap and interact with one another, clearly exemplifying the need for a holistic rather than a reductionist approach to the study of social systems. The approach used for

instruction and as a model for teaching social studies and other subjects is Enactivism. Among several authors who are developing ideas about enactivism are Maturana and Varela (1992) and Davis, Sumara, and Luce-Kapler (2000). The 'Complexity and Education' website ([http://www.complexityandeducation.ualberta.ca/glossary/g\\_enac.htm](http://www.complexityandeducation.ualberta.ca/glossary/g_enac.htm)) has the following entry on "Enactivism": "[It] prompts educators to envision learning as an elaborately adaptive process wherein learners' knowledge and identity are constantly emerging as they interact with their environment".

For example, instead of studying the instruction of democracy, we immerse ourselves in campus democracy. Instead of learning how to construct lesson plans and unit plans by breaking them down into theoretical parts, we create 1 custom designed lessons and units for actual instruction of actual students during practicum. Instead of isolating the class on campus, we move to an elementary school to interact in the real teaching environment with all of its unpredictability and dynamic learning culture. Enactivism explains learning as contextualized, active, and integrated learning. It focuses on the social aspects of a learning environment, in which knowledge is shared amongst participants. Although at times we may wish to focus on a single element of learning for the purpose of clarity, we can never ignore its interconnectivity to the whole, and its inextricable attachment to the environment and culture. In Social Studies, this means history cannot be separated from geography or from government or from culture. Since there is always a connection to the activities and interactions of people, Social Studies connects to social responsibility, choice, and democracy (sometimes evidenced in class meetings). Learning becomes doing and vice versa.

Integration is at the heart of an *Enactivist* approach. However, integration is not something that is pre-planned or grafted onto a learning activity. Rather it is discovered since life itself is naturally integrated. Many educators have worked hard to separate knowledge into isolated subjects. *Enactivism* embraces the whole. Because of the structure of university classes it is not always possible to directly experience real events or hands-on activities with elementary students. It is often necessary to approximate an *Enactivist* undertaking. For example, Steve showed SSED students a video called "The Dig" (The National Film Board of Canada, 1989) at the beginning of the course. In this documentary, "Mr. Ed," an award winning Social Studies teacher inspires in his students enthusiasm for studying ancient civilizations. His main emphasis is not on standard teaching methods that include memorizing historical facts and recalling information for quizzes (though he does test children's knowledge). Instead, he teaches his students to become (archeologists and discover for themselves relationships between theoretical understandings, previously known facts, and evidence they find. In what might be termed a pseudo-enactivist approach, the Grade



7 students excavate a dig site beside their school and through the discovery of artifacts, exuberantly put together a coherent story from ancient Greek history. (The artifacts were created and placed at the site by Mr. Ed and a group of his former students.) For the Grade 7 students, the dig feels authentic even though they realize the artifice. As Mr. Ed says, “The students suspend their disbelief.” In fact, the engagement in this activity provides a context that makes other more traditional learning methods associated with it more meaningful. The text and lecture-based information, the quizzes, even the culminating final exam all make sense to the students because they become connected to the reality of an archeological dig.

Expanding on the archeology paradigm, the SSED class then explored the metaphor of artifacts as a contextualized way of examining culture, social values, and even historical figures. An artifact was loosely determined to be an object or representation with concrete or symbolic connections to people, places, or things. For example, the class participated, in groups, to discover who might own a backpack filled with a variety of artifacts. These artifacts represented significant aspects of the owner’s life, such as gender, age, occupation, or place of residence. SSED students critically reviewed the activity to see how they could modify, or translate, to their own upcoming practicum. For example, their own students might “pack the pack” of some historical figure or character in a novel. They may bring in artifacts that represent an important aspect of themselves in order to begin a dialogue about individuals’ roles in a community. In the process, they could address the ideas of respect, responsibility and making reasonable choices.

Another activity that took place in SSED was the UN Debate Activity. This activity allowed us to enact methodologies for the learning of history, geography, current events, government, community, and social responsibility, along with research skills, presentation skills, and collaboration, in a radically compressed time period. In groups of four, students researched conditions in a country in response to a contentious (but fictional) UN resolution introduced for debate by the instructor. The resolution might read: “Be it resolved that the United States of America must immediately withdraw its military presence from Iraq”. The affected countries, such as Iraq, the USA, Canada, Britain, Israel, etc. would then have one hour to research what their response should be. They could use the internet, news broadcasts, newspapers, library, or experts on campus. One student used her “phone-a-friend option” and spent the hour with a knowledgeable acquaintance on her cell. One hour is a short period of time and students tend to respond with some urgency. However, within this short period, they could acquire at least cursory knowledge of a particular country’s orientation to the issue, the pertinent history, geographical relationships, form of governance and position on trade issues. During the

debate period, they shared this knowledge in a “jigsaw” structure. Drama was an essential ingredient along with a sense of humor. The British and French accents were entertaining. The arrogance of certain countries was overplayed and the Canadians desperately tried not to offend anyone. At one point, a faction of the Iraqi group seceded and went to sit with the Americans in order to illustrate the multiplicity of cultures and political allegiances within the country.

One of the most important aspects of this exercise, which did depend on the suspension of disbelief, was that of perspective taking. Participants did not necessarily agree with the arguments that they were making, and the instructor actually tried to ensure this was so. The risky part of this kind of activity is the willingness of the class to tolerate other points of view on potentially emotional and divisive topics. A prerequisite sense of community is essential. In transferring elements of this activity to the SSED student’s practicum classroom, the social aspects of debate and an overarching sense of community as well as regard for the well being of others, was considered equal to, if not more important than, the academic content of the lesson.

Students discussed a variety of modifications for different content in social studies and other subject areas. Some wondered about the difficulty of structuring such a sophisticated activity in a primary classroom. However, most student teachers readily acknowledged that given some direction, young children are the finest actors of all. Certainly, the social lessons learned through the process can be enacted in a contextualized way at any age.

#### **4.1 Student Teachers in the Intermediate Classroom**

Lee’s role in the social studies methods course comes into play midway through the course after the students have worked on foundational aspects of instruction. He provides a link between the theoretical and practical. For student teachers who lack the experience of planning and implementing a social studies program, making this link is a challenge. Locating the methods course in Quilchena Elementary School offers an opportunity to establish a meaningful relationship between theory and practice. Lee introduces the university students to methods he uses in his classroom. He is a mentor who guides them through the planning process.

In more traditional methods courses, students learn theories on social studies instruction through textbooks and direct instruction. Practical application of these theories rarely occurs. Steve and Lee offer an opportunity for students to investigate and experience the application of theory and practice together in elementary classrooms. The goal is to provide an environment that inspires student teachers to create useful, relevant Social

Studies unit plans based on classroom experience. In addition, the physical environment of the school allows them to explore, experiment and reflect on social studies curriculum with their fellow student teachers. Steve and Dot's work revolved around *Complexity Theory*. Watching university students experience a school environment highlights the usefulness of this theory. Schools are communities of learning, but there is much more to it. They are vibrant, changing, complex communities that are multifaceted. One cannot consider it as a single community. There are, in fact, a series of interrelated communities. It is important for the student teachers to experience this community and to relate it to their own understanding of the complexity in the daily life of schools. As Capra (2002) explains in *Hidden Connections*.

Within every organization, there is a cluster of interconnected communities of practice. The more people are engaged in these informal networks, and the more developed and sophisticated the networks are, the better will the organization be able to learn, respond creatively to unexpected new circumstances, change, and evolve. In other words, the organization's aliveness resides in its communities of practice. (p. 109)

How does one apply Capra's notion to the practices evident in schools where we are faced with norm-referenced assessments, standardized curriculum requirements and expectations imposed by an external bureaucracies? Prospective teachers cannot fully understand the complexity of a school culture unless they experience the dynamism and vibrancy of a school community in action. The Quilchena school experience offers student teachers the chance to see the complexity of the school community. One of the first activities student teachers performed this year at Quilchena was a brainstorming activity to determine the contents of a good social studies unit plan. This activity highlighted the disconnect between the university and school environment in learning how to teach. The group came up with suggestions about what should be in a cohesive set of lesson plans. Key words such as "meaningful, fun, engaging and thoughtful" were some of their terms. As well, they brought up related ideas such as multiple intelligences, critical thinking and pedagogical orientations such as social constructivism.. Lee noticed that these student teachers gleaned insights about good teaching from their methods courses at university. However, specific and detailed approaches to effective instruction were absent or abstract. How could student teachers create lessons that reflected the qualities they discussed in the brainstorming session? How could they fully appreciate the qualities of good planning and teaching without access to a real school environment, with experienced teachers, and actual classrooms of students with diverse backgrounds and needs? The student teachers had minimal experience with the planning process. Typically, planning is not a

linear process in which teachers carefully organize a lesson, plan for each stage of instruction, teach as planned and evaluating students on what they have learned. Planning and teaching are both more organic and responsive to students. An appreciation of the complex nature of a school community is required to complete what is learned in the confines of the university classroom. The opportunity to work in a school environment, such as the Quilchena experience, is critical for student teachers to fully comprehend the intricacies of the teaching experience and the school culture. Planning is an evolutionary journey that adapts to the dynamic school environment. Some vignettes are provided here to reflect the experience of some student teachers while at Quilchena.

Student teachers planned a Social Studies unit they would use in their extended practicum. They needed to complete a lesson to carry out in a class within the school. One group of student teachers at Quilchena planned a mini-lesson for a Grade 4/5 class. They were somewhat perplexed by the fact that the lesson they would prepare was not exactly what they would teach on the long term practicum at their home school. Surely it would have to be revised while on practicum. An invigorating discussion ensued about the fact they were creating a somewhat hypothetical plan. Nevertheless, they managed to redirect their interaction to the task. They also discussed what it must be like for practicing teachers who constantly adapt their own plans to address changing circumstances, the variety of student needs, and their own on-going self-assessment. The student teachers presented the lesson they had constructed on various aspects of Canada's history (mining and resource extraction). The lesson was successful. In their reflection afterwards, the student teachers again expressed their concern about the fact that they would need to revise the lesson for their long practicum. However, they found the experience of trying it out helped them understand the complexities of teaching. In addition, they found planning with colleagues, as teachers often do at school, proved very useful. The interactions between the group members who planned together were valuable in creating a successful lesson. They all placed emphasis on the fact that they would not have understood this had they not had the opportunity to work in a real school environment.

In his own social studies teaching, Lee utilizes a resource-based approach with learning stations. He introduced his approaches to the CITE student teachers with an example from his unit on Japan. One activity deliberately and formally addressed critical thinking. Lee provided the children with various resources on the internment of Japanese Canadians during the Second World War. He collected and posted these in one learning station. The materials did not attempt to offer an opinion about the internment, but included factual and historical documentation students could use to build

their own understandings. The task for children was to write a report expressing their own opinion about internment using the resources provided or any other pertinent material students found. Students who were not accustomed to completing a task where there is no right or wrong answer found the activity daunting. Lee informed them there is not necessarily a correct answer. He told them he would be evaluating their thinking. Did they have rational reasons for their opinions? Were their arguments well considered? Did they enlist appropriate and accurate information to justify their opinion? For Lee, the value in this assignment was the way the children interacted with each other, discussed opinions, provided advice to each other and engaged in serious dialogue. The vitality of the discourse was a snapshot of what actually went on throughout the classroom community. Lee's approach to teaching fostered both intellectual autonomy and interdependence with fellow learners. The children learned the value of interconnectedness. Lee hoped to pass this lesson on to the student teachers.

One group of student teachers planned a unit on Ancient Greece. They had excellent ideas about what to include based on their own interests. One had an interest in art, one in history and one was a physical education enthusiast. Each had a singular view of how to teach a lesson based on these topics. However, they were each quite entrenched in what they wanted to teach and were struggling with how to present all the disparate ideas in their assigned mini-lesson. At this point in the planning, it was clearly a case of working in isolation. In order to help the student teachers focus on the larger purpose rather than concentrating on their individual interests, Lee asked how they would teach the lesson if one member of the group was absent. This tactic helped the student teachers to realize they should each have an understanding of the whole lesson. The student teachers decided to plan their own parts of the lesson, then teach their parts to each other. They planned the resulting stations in thorough, thoughtful ways that still reflected individual interests, but harmonized. Through a more collaborative process, this group of student teachers demonstrated a real appreciation for each other's contribution and remarked they had each learned something significant. They were ready to teach their lesson. There were three stations; one on ancient Greek art and architecture focusing on different styles, one on Greek military history discussing the phalanx defense system invented by Philip of Macedonia, and a physical education lesson based on the Greek Olympics. The children in the class divided into three groups that circulated throughout the three stations. The instruction and flow of the lesson was very successful, with the students ably presenting their parts. As the children progressed through each station, Lee observed that they were telling their classmates about their last station as they were transitioning. By the third and last rotation, the children had some knowledge of what to expect at the next

station. In retrospect, the student teachers remarked at how smoothly the lesson went and how attentive and enthusiastic the students were.

The student teachers believed that the lesson would not have been successful without the ability to collaborate as a group of planners. The opportunity to share ideas and benefit from others' expertise in certain areas helped them realize the significance of a community of educators. They strongly felt this would be difficult had they had to plan the lesson in the absence of a classroom context. Had they planned the lesson as a regular assignment in university isolated from the interaction of others, they would not have grasped the complexities of planning for a real classroom. They expanded their discussion on interaction when discussing the children. They were pleasantly surprised at their elementary students' knowledge of the next station before they began. Lee asked them to determine how the students acquired this previous knowledge. The student teachers realized that rich conversation took place during the transitions between stations. Students were not just socializing with friends but sharing their experiences of the stations. The students in the class were learning from each other. As with the planning process for the student teachers, the elementary students were not learning in isolation. In this lesson, Capra's notion that informal networks can work together to improve the organization or the environment was evident. The student teachers and children were able to learn together as a network of learners that made the whole learning experience more powerful.

## **5. CONCLUSION**

The university provides useful fundamentals in pedagogical theory, but a complete appreciation and understanding of teaching comes through immersion in the school culture. Student teachers cannot possibly understand the various social factors that contribute to learning or hinder it, unless they see them first hand. As mentioned in the example of the lesson on Ancient Greece, a lively community of practice exists even among elementary students. And, the networking between interrelated communities within a school is just one element within a complex system. The Quilchena experience offers a glimpse into the complexity of working in a school culture. Ideally, student teachers will use the experience to improve their own practices in their practica and beyond. The goal of all methods courses is to prepare student teachers for a variety of future experiences throughout their careers in schools. As a first step, student teachers can learn to directly participate in the constant co-evolution of schools. To maintain the dynamism and vibrancy of a school community, they, like all educators must constantly reflect on their own abilities to enrich the organization and

improve the learning environment. If our students leave Quilchena believing that schools are indeed interconnected communities of practice, they might begin to see how they might contribute to their evolution and growth.

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## Chapter Nine

# LEARNING BY DESIGN: A MULTIMEDIA MATHEMATICS PROJECT IN A TEACHER EDUCATION PROGRAM

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### 1. INTRODUCTION

In pre-service teacher education the demand to equip students with information and skills related to communication technology (ICT) is great, and has been developing rapidly over the last two decades. Those involved in teacher education programs – student teachers and teacher educators – are at the intersection of two sets of expectations. First, universities, for a variety of both educational and economic reasons, are promoting the use of digital technologies as pedagogical tools. Those teaching in universities are increasingly expected to integrate various digital technologies into their teaching and learning practices. Second, schools are considered sites where students learn with and about computers. Those entering the teaching profession are expected to use computers to ‘enhance’ the pedagogical practice in their classrooms and, more broadly, to introduce students to new patterns of communication associated with web-based and multimedia technologies.

While these expectations to use ICT are strong in educational settings, there remains considerable uncertainty concerning how these technologies can be purposefully integrated into teaching practice, and there is much debate over the pedagogical effects associated with their use. Since its inception the CITE program has sought to participate in the debates about technologies in teacher education through experimentation and evaluation of a range of technological tools. More specifically this has been underpinned by three main concerns: first, to explore whether and how ICT can be used to extend student teachers’ learning; second, to introduce student teachers to ways in which technology can be used in school settings; and third, to



provide student teachers with opportunities to both create and critique ways of using ICT for educational purposes.

The purpose of this chapter is to report on one project within the CITE program that was a response to the issues raised above. The Multimedia Math Project was one part of a three-year study that sought to integrate and evaluate the uses of digital technologies in an elementary teacher education program. In this project student teachers created a multimedia mathematics resource for elementary students using the software program Hyperstudio. The purpose of the research associated with this project was to consider whether and how a tool for multimedia design could be used to extend student teachers' understanding of mathematics, of teaching and learning mathematics in schools, and of using ICT in elementary school contexts.

## **2. MULTIMEDIA DESIGN AND TECHNOLOGY INTEGRATION**

The project described in this chapter is based on three related assumptions about technologies and learning. The first is that multimedia technology can be drawn on to provide a set of conditions useful for learning when conceived as a medium for design (Kress, 1998). The second is that the use of any digital technologies should not exist in isolation from other curricular practices, be it in a teacher education program or in school settings. The third assumption is that the use of ICT and associated design processes are inherently social, which for educational research poses questions concerning whether and how these social processes can and should be used for pedagogical purposes. Below we elaborate on these assumptions and their implications for our research focus.

### **2.1 Design**

Kress (1998) and the New London Group (1996) talk about 'design' as the principle of meaning making in those contexts where there is a multiplicity of communication channels. Kress argues that the changing patterns of communication over the last thirty years associated with communications technology have resulted in new ways of creating and representing meaning. He suggests that in using new technologies, people are not simply 'users' of a stable system of language, but are 'remakers' and 'transformers' and thus designers of new representational resources and new systems of meaning. The following points demonstrate key aspects of this change. First, written text is part of a visual unit in which considerable attention is paid to layout, spacing, size, colour and shape of letters. The use of 'text blocks', and their

location on the screen, is part of the visual meaning. Second, images are increasingly used to carry meaning, and not simply illustrate the meaning of written text. Third, written language is moving closer to speech (Kress, 1998, pp. 57–60).

Design in a multimedia context typically involves integrating sound, text, graphics and animation in order to represent ideas. Technical skills are required, for example, to insert backgrounds, import graphics, copy images, and position text on the screen. It is of note that editors and copyreaders previously held this knowledge and skill (Kapitzke, 2000). However, as Kapitzke goes on to suggest, the process of design also assumes knowledge of a ‘new’ language that enables the designer to understand and make decisions about the communicative effects and construction of meaning associated with integrating the different forms of literacy available through multimedia technologies. *The New London Group* (1996) refer to these as ‘multiliteracies’. They link the process of design associated with multiliteracies to knowledge and social relations in the following way: “Designing transforms knowledge in producing new constructions and representations of reality. Through the co-engagement in designing, people transform their relations with each other and so transform themselves” (p. 76). This has implications for pedagogy in terms of the processes through which ideas can be communicated and constructed, and the teaching and learning relations that might support those processes. Our concern is to describe this process in relation to teacher education and mathematics.

## 2.2 Integrating Technology

There is a growing body of literature concerned with technology and teacher education that advocates that digital technologies should be integrated into teaching practices across courses, rather than exist as “tools” to be utilized within a separate course (Clift, Mullen, Levin, & Larson, 2001; Robertson, 1997; Thomas, Larson, Clift, & Levin, 1996). The reasons advocated in the literature stem from the view that these technologies provide a medium for thinking and learning about a particular topic or problem, and for communicating pedagogical purposes. In theory then, an integrated approach to any technology use in a teacher education program should provide student teachers with a model for how the particular technology can be used in various curricular practices in schools, as well as provide student teachers with the media for extending their own learning in various courses within a teacher education program.

In this chapter we are concerned with two aspects of technology integration: with ways of using multimedia to think and learn about mathematics, and with the transfer of technical and design skills from the

campus context to the school setting. Lemke (1998) argues that representing and explaining certain mathematical ideas such as geometric shapes necessarily requires bringing together graphic and text, and that this process is well served by new forms of multimedia technology. The nature of different mathematical representations, and ways of using different representations to enhance learning have been areas of on-going research in mathematics education (Lowrie, 1996). It is of note that there is various educational software that employ multiple representations in order to assist students to understand mathematical concepts (Ainsworth, Bibby, & Wood, 1997). Yet there is little in the teacher education literature that actually explores what the process of multimedia design might mean for teaching and learning mathematical concepts.

A second aspect of integration, and an on-going problem in teacher education, concerns the connections, or lack thereof, that student teachers are able to make between their campus and school-based learning (Gore, 2001; Tom, 1997). Some studies have shown that the transferability of technology skills and knowledge from the campus to school context has been problematic. Various reasons are posited for this: student teachers are typically not working with teachers who integrate technology into their own teaching practice; students do not have a model for technology integration because many teacher educators do not have technological expertise; and technology use on campus is often skills-based and not linked to a theory of pedagogy (Robertson, 1997; Wild, 1996). Our concern in this research was to identify the factors that enabled and constrained this transfer of knowledge in our own context.

### **2.3 Pedagogical Interactions Through the Design Process**

In a study of a technology and multimedia course in a pre-service teacher education program, Kapitzke (2000) argued that the process of designing a multimedia presentation and working with web-based tools, encouraged “cognitive and social interactivity, collaborative authorship and problem-based learning” (p. 223). In her study she considers ways in which groups of students worked together to design a webpage. Kapitzke’s example is illustrative of a more general set of theories related to language and learning which contend that the media for communication and the nature and type of social exchange are central to establishing meaning and coming to know (Halliday & Hasan, 1989; Wells, 1999). As Wells argues:

Knowing is not an activity that can be undertaken in isolation, either from other people or from the culturally produced artifacts that provide the mediational means. (1999, p. 76)

His comment suggests that the relationship between people through the use of various media is crucial to learning and developing knowledge. These views are consistent with those developed by researchers investigating ways in which communications technology can be used to support 'knowledge building' in school and teacher education contexts (Laferriere, 2000; Scardamalia & Bereiter, 1996). What these studies focus on are the ways in which ideas can be constructed through the social exchange that is part of online discussion. This study examines one aspect of the social exchange taking place through the multimedia design process, and considers whether and how this exchange contributes to the development of new understandings, in this case of mathematics and mathematics instruction.

### **3. THE CASE STUDY**

We describe our research as a form of action-based case study. A case study approach enables an examination of a technology in its context of use. This is important given the assumption that any technology cannot be understood outside of the individual beliefs, pedagogical practices and institutional discourses that make up the context of use (Bruce, 1997). Further, an understanding of a context is a necessary precondition for developing new practices (Kemmis & McTaggart, 2000). A second part of the research method is an action component that sought to develop and evaluate new pedagogical practices using ICT. Our concern here was to not simply critique technology practices, but to take responsibility for creating new practices and examining their value in a teacher education program.

Each of the authors of this chapter had a particular role in the teacher education program and in this project. Heather Kelleher was the instructor for the Mathematics Education course. Carole Saundry was an elementary teacher who specialised in educational technology and introduced the student teachers to ways of using multimedia technology. Jane Mitchell was a research assistant responsible for working with instructors to evaluate technology use within the teacher education program. We worked together to design and evaluate the project described in this chapter.

#### **3.1 Participants, Technology and Context**

The multimedia project was set in the CITE cohort which consisted that year of 39 student teachers, eight instructors and associated teachers in six elementary schools. Among the student teachers there were varying levels of skill and confidence with computers and multimedia. Four students had considerable experience with multimedia and webpage design. Most of the

students had little experience with multimedia prior to starting the course. Yet it was noticeable that all students were interested in learning about educational technology, primarily because of its value for employment prospects. All students in the cohort also provided their consent for the work they created, and any evaluative comments they made, to be used for research purposes.

Integral to the Mathematics Education course in which this project was located were activities that assisted student teachers to develop an understanding of methods for teaching and learning mathematics in elementary schools. In this project student teachers used the multimedia software program Hyperstudio to design a presentation that had as its purpose explaining a set of mathematical concepts to school students.

Hyperstudio is a multimedia design tool that provides the means to communicate and represent ideas using text, graphics, sound and animation. The literacy practices associated with using Hyperstudio are not dissimilar to those of the World Wide Web. Both integrate a variety of modes for communicating. A Hyperstudio 'stack' is a collection of linked 'pages' or 'screen slides'. The choice of this software was made for reasons both educational and pragmatic. Hyperstudio has been created for use in schools and thus has a structure and fixed set of design options that make it relatively easy to learn. Hyperstudio is also relatively cheap, ubiquitous and has broad appeal to a range of users. Carole had considerable knowledge of this program through her work in schools. The software was also available in the university lab. One problem with this choice was that not all of the practicum schools had this software. Two schools had the software, the other four schools had different graphics programs that were not available in the university lab. This variation in type of software across different sites is not surprising or uncommon, but it raises questions regarding the transferability of design skills from one software program to another. These questions will be responded to later in the chapter.

### **3.2 The Task for Student Teachers**

Below is the task set for student teachers:

*Your task is to design a multimedia stack that explains your choice of mathematical content to the audience of your choice. The important thing is to focus on the purpose of the stack – the math teaching, and using technology for instructional purposes and as a communicative tool.*

Students were asked to incorporate the following into their stack: a real life context; a flow from simple to complex, and from concrete to symbolic representations; and, an interactive component. Students were to create no

more than ten slides. A final part of the assignment was to write a commentary explaining the learning processes associated with designing the stack.

Key aspects of the multimedia activity included: developing an understanding of how school students might learn a mathematical concept; researching a math concept; developing the technical competence to communicate ideas using a multimedia tool; working with a partner; transforming ideas to suit an audience; and, reflecting on the process and purpose of this task. Students had already spent some time in schools and knew the class and topic areas they would be teaching during their practicum. In designing their stack, most students chose a mathematical concept and method of presentation relevant to their future practicum experience. Students were provided with two forty-minute sessions by way of introduction to the software. They also had five two-hour blocks of lab time built into their timetable to enable them to work on the project.

### **3.3 Data Collection and Analysis**

The analytical purpose of this chapter is to elucidate the key features of the design process in relation to: 1) ways of communicating mathematical ideas; 2) teaching and learning practices and relationships; and, 3) the transferability of the design processes and technological knowledge to other contexts. These foci for analysis are based on the three assumptions about technology and learning discussed earlier. Data drawn on to inform the analysis include: the Hyperstudio stacks produced by student teachers; student teachers' written commentaries on their learning processes; tape-recorded interviews with six of the 39 students; field notes recorded by Jane; and, a tape-recorded conversation between the three authors conducted at the conclusion of the activity.

Part 1 of the analysis examines examples of Hyperstudio stacks, and student commentary on the stacks, to consider the ways in which the multimedia software was used to represent and explain a set of mathematical ideas. In this section we identify key design features associated with the stacks and their production. We also consider the value that student teachers attached to the design process in relation to their understanding of the mathematical ideas and mathematics education. The second part of the analysis examines the social interactions that took place through the design process and considers the degree to which they provided conditions that would support learning through opportunities for collaboration and exchange, and the creation, extension and negotiation of ideas. The third focus examines the degree to which student teachers were able to connect and integrate the campus-based learning associated with the multimedia project to their school context during the practicum, and the factors that enabled and constrained these connections.

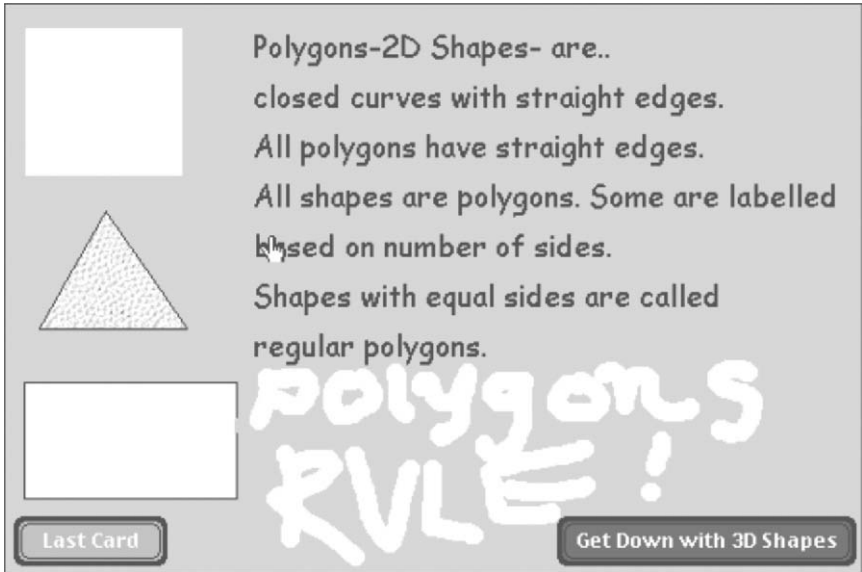


Figure 9.1. Example card from a Hyperstudio stack

### 3.4 A Design Tool for Communicating Mathematical Ideas

The sample of student work below provides a starting point for considering the relationship between the design process and the communication and representation of mathematical ideas (see Figure 9.1). The intent of this project was to describe and explain polygons. While sound and movement are lost when presented on paper, this slide, from a set of ten, demonstrate how one group of students used text and graphics to communicate their ideas. In this case the communicative purpose of the stack was to explain a mathematical concept (polygons) to an audience of grade 5 students. Explaining ideas using text and graphics is not new (Kress, 1998), particularly when the audience is under 12 years old, and when the topic is geometric shapes. Yet the use of a program like Hyperstudio enables text and graphics to be easily linked. Likewise, these examples are illustrative of the effects associated with the move to screen-based communications discussed by Kress earlier in the chapter. In the above example, written text is stripped to a minimum and does not make sense without the pictures; the text is part of the visual effect through the use of, for example, colour and the graffiti style lettering. As well, the text is conversational in tone with deliberate appeal to young people. Short sentences, the use of colloquialisms such as ‘cool,’ and the juxtaposition of technical language and ‘youth speak’ through, for instance, ‘polygons rule’ and ‘livin on the edge’ are examples of ways of using the multimedia capabilities in order to appeal to the target audience.

Several students made the comment that their own understanding of mathematics developed through designing the multimedia presentation. A student, Samantha, whose stack explained geometrical shape, pattern and motion made the following comment.

I also believe that I learned more about the subject because of the way I had to illustrate the concept. For example, Meg and I wanted to import a graphic of a 3-D object that would be animated and rotate, so that the viewer could see how shapes could be flipped and turned to produce different patterns. But because we weren't able to do this, it forced us to do everything by hand, and thus forced us to actually think the flips and turns through rather than have a graphic do it for us. (Samantha)

In this case creating a step-by-step visual representation of ways in which shapes could be flipped and turned, proved to be helpful in understanding the concept. This student's work partner, Meg, made a similar comment:

I have a lot of problems with spatial geometry. What I found helpful was to manipulate the graphics so that a picture could tell how it was manipulated without so many words ... If I was going to be teaching slides I would have to learn it myself first. I now don't think I will ever forget what a slide or a flip is. (Meg)

As the above comment indicates, the process of visually representing a concept enabled Meg to better understand the concept. Figure 9.2 shows some of the ways that these two student teachers manipulated their illustrations, particularly the sequence associated with the changing patterns.

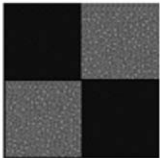

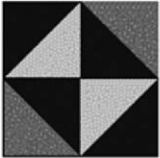

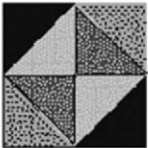
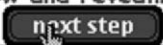
<b>Block # 1</b>	<b>Block #2</b>	<b>Block # 3</b>
		
<b>Imagine sliding Block 2 over top of Block 1. What would it look like?</b>		
	<b>Right! Now pretend that the block is made of paper. Fold (flip) the top right (blue) corner into the middle, and fold the bottom left (blue) corner into the middle.</b>	
<b>Will the colours change?</b>		<b>Great! The blue corners flipped into the middle, covering the yellow and revealing the pink pattern.</b>
		

Figure 9-2. A geometry Hyperstudio card



The use of graphics to explain concepts provided student teachers with first hand experience of the ways in which visualisation can support learning mathematics (Lemke, 1998; Lowrie, 1996). As Lemke (1998) states: “Many mathematical concepts that are confusing or resist easy explanation and learning in natural language alone become far clearer with visual representations and manipulatives combined with natural language” (1998, p. 292). In the above examples, students created and manipulated text and graphics to explain a concept.

In our discussions as a research team we also commented on the connection between the sequential and spatial representation of ideas integral to the creation of a ‘stack’ and learning mathematical concepts:

I certainly didn’t appreciate until I saw them do it, the potential of the cards in terms of sequencing in order to explain a concept, and the potential for student teachers to think about the visual impact when teaching math. I thought that was really powerful. (Heather)

During class time Heather was able to draw on the student teachers’ experiences in creating the Hyperstudio stacks to make these ideas explicit and relevant to ways of teaching and learning mathematics in schools.

### **3.5 Key Elements of the Design Process**

Heather made the following observation at the conclusion of the project:

I think there was variation in the degree to which people attacked the mathematics and thinking about what is appropriate for school students - what they need to learn and the depth they need to learn. If you looked at it just for the math part, for some of them you would be unimpressed – because it is either at a superficial level or it is not really engaging.

This comment prompted us to think about the range of skills that student teachers brought to the design process and the relationship between these skills and the clarity of the mathematical and educative intent of the stack. Student teachers’ levels of technical proficiency developed through the course of the project, yet we were concerned that at times the focus on the technical aspects of the design overshadowed, or in fact undermined, the mathematical purpose of the stacks. Some degree of technical know-how was an essential part of the design process. This technical know-how included creating and manipulating graphics, inserting text, downloading images, linking slides and adding colour backgrounds. How this technical know-how aligned with the mathematical and explanatory intent of the stack became a key question.

In some cases, as in the two examples discussed above, technical effects and the uses of varied modes of communication supported the mathematical and instructional purpose of the stack. In these two cases there was an alignment between the topic, the instructional purpose and the media used to communicate the ideas. This indicates that students brought to the design process not just technical skill, but also mathematical and pedagogical skills and knowledge. These different sets of skills and knowledge were central and complementary parts of the design process in these cases.

In other cases the degree of alignment between the mathematical intent and the technical effects was not as strong or appeared forced or unnecessary. For example, one student, who did her assignment on money, admitted at the conclusion of the project that the topic that she chose did not lend itself to this type of presentation. Further, she spent a large part of the project time working out how to scan images of coins. When she put these scanned images into her Hyperstudio stack she was disappointed with how they looked. Her finished product contained a number of slides with different combinations of coins and little explanation of the mathematics associated with the coins. The student further acknowledged that she spent too much time on one technical problem, rather than focusing on the mathematical ideas. In another case, two students spent considerable time downloading images of supermarket items. Their mathematical focus was addition and a monetary figure was attached to each supermarket item so that those using the stack could add up the figures. The students paid close attention to technical aspects of their stack, and while the stack 'looked good', as a final product it represented little more than a series of simple additions, with little explanatory or instructional text. In other cases student teachers incorporated a range of 'special effects' into their stacks. Flashing animations, objects that moved across the screen, and an array of sounds, were built into presentations, yet they did not necessarily enhance the mathematical purpose. In these cases, the focus on technical aspects of the presentation dominated the design process in ways that overshadowed the mathematical and instructional purpose of the stack.

Among a group of 39 student teachers one would expect variation in levels of knowledge, skill and confidence related to technology, mathematics, instruction and design, and that over the course of the project these levels of knowledge and skill would emerge at different rates. It is also not surprising that the focus for about a quarter of the groups was primarily on technical skills and effects, given that for many, this was their first experience with multimedia design. Our observations of some groups as they worked on the projects demonstrated, as Bruce (1997) suggests, that as technical proficiency increases, the technology itself becomes a more taken for granted part of the process. This meant that conversation between

students became less focused on technical skills per se, and more focused on the communicative and pedagogical skills required explain a mathematical concept. The integration of skills associated with the design process has important implications for our own pedagogy, primarily for thinking about how we can make explicit ways in which different skills can be developed and integrated into the design process order to learn about and communicate an idea.

### **3.6 Teaching and Learning Relationship Through the Design Process**

As mentioned previously, most students worked in pairs to design and develop their Hyperstudio presentation. While working in pairs was pragmatic, there were only 20 computers in the lab, this way of working became a central element of the teaching and learning practices within the design process. Computers are often considered to be tools that serve to cut people off from communicating with each other. Yet in this case they provided the working space for joint action by many students.

Not all students chose to work in pairs; two students worked on their own. Furthermore, the ways of working in a partnership varied. Some pairs divided up the task, did their own piece of the presentation and then joined these at the end. However, for most of the paired groupings, one computer provided not only the construction space for their project, but also the opportunity to, in a very literal way, jointly design the stack. It was quite common to see one person using the keyboard and the other the mouse, and to see students alternate their use of the keyboard and mouse. In observing pairs at work we were reminded of the Cyborg image that Haraway (1991) has talked about. The difference in this case was that two people were connected not just to the computer, but also to each other through the use of the screen as a shared design space and the keyboard and mouse as shared design tools. In our observations we noted that the design space of the screen, its flexibility and speed, enabled students to work together in different, and in some cases in much more productive ways, than if they were planning a unit on paper.

The following comments illustrate the ways in which students described the process of working with a peer:

We got in the zone working together and we didn't do anything on paper, no preparation on paper. All our writing was on the computer. We didn't know what the next card was going to look like until we had finished the card. And to have the support there too. Everytime we ran into problems – aahhh – I would lose patience and Julia [peer] would come in and go OK, or vice versa. (Dyan)

We were swapping back and forth (using keyboard and mouse) and we found that it went faster too, because we spent like the one day in the lab – we were there 8 hours... But anyway it is funny how fast time flies when you are doing that kind of thing. We were into it and not even minding being there. (Claire)

Instead of discouraging interpersonal communication, our tech work actually seems to facilitate it because we needed to come together to share ideas to do the assignment. (Rick)

Here the process of working in pairs coupled with the nature of the software enhanced communication, experimentation and creativity. The collaborative action went beyond just the pairs, as the following comment by one student demonstrates:

The other fun thing was looking at other people's, saying – oh – did you see what they have done. We would have a look and they would say, oh I just got that from the desktop or clip art or whatever. And then they would tell you and you would go back and try something like that. We had a progression like that. At the beginning quite plain and at the end more advanced and it was all because of the ideas we got from others. (Angela)

There was considerable exchange of ideas amongst those in the class, particularly pertaining to technical skills. The experimental action worked in two ways, students would have a sense of what they wanted to produce and then experiment with tools to try and work out a way of doing this, or they would experiment with the tools and on the basis of knowing their capabilities apply them to suit the content and purpose. It is also of note that in the above comment the student saw this in terms of progression, in other words the exchange process and the experimentation extended students' understanding of the design capabilities of the software. In some cases we would argue that the collaborative exchange and extension of technical skills enabled students to experiment with the ways in which they could represent mathematical ideas. In other cases the collaboration did not necessarily lead to extensions of students' understanding of mathematical or instructional concepts, nevertheless, the ways in which students worked together as part of the design process became an important part of the ways in which they understood learning with and about technology and the nature and value of collaboration to a design process.

#### **4. TRANSFER TO OTHER CONTEXTS**

It is worth keeping in mind that the Multimedia Math Project served a number of purposes. One purpose was to extend student teachers'

understanding of ways of teaching mathematics and ways in which school students learn mathematics. A second purpose was to extend student teachers' understanding of the ways in which technology can be used as a tool for learning and how it can be integrated into teaching practice in schools. The task, in this respect, had a practical bent, both mathematically and technologically. It was designed to be relevant to the school context: the math content was related to student teachers' future practicum and multimedia software such as Hyperstudio are available in schools. Given the focus on technology in this chapter, we will discuss ways in which student teachers were able to make connections between technology use and their practicum experience.

Many of the students were excited about the possibilities of using this software during their practicum. As mentioned previously, only two of the six practicum schools had Hyperstudio on school computers. We had indicated to students that this may be the case and hoped that they would be able to transfer the general design skills they had accrued to other graphics or multimedia programs that may be available in their schools. The naiveté of this became apparent when we talked to students and realised their expectations.

I sometimes wondered about the practicality of this assignment. My practicum school does not have Hyperstudio and so I will not be able to use this stack with my students. (Georgia)

I think Hyperstudio could be a real asset in teaching mathematics. I feel sad that I will not be able to use this program on my practicum since our school does not have Hyperstudio. It may be an idea for next year's students to have them use the program that they have in their practicum schools. (Peter)

The above comments raise questions about the ways in which software, and curricula practices that are part of campus-based work, can be or should be, aligned with the curricula practices and software in schools. They also raise questions about the specificity of software knowledge. While the Multimedia Math Project did enable students to develop confidence in using the technology, there appeared little opportunity to capitalise on this during the practicum. In those schools that had graphics or multimedia software other than Hyperstudio, student teachers either did not have the time to learn how to use this software during the practicum and/or they did not perceive that their skills were in some ways generic and transferable.

The above point poses a difficult challenge in relation to encouraging student teachers to build technology into their own teaching practices. If the technology skills learnt on campus are not to some degree generic then the efforts to link campus-based technology with school-based

technology are doomed to fail. It is highly likely that there will be considerable variety in the type of software and hardware available across school and university sites. This is not to suggest that the process of teaching technology skills in a generic way is easy, nor is it simple to transfer skills from one program to another. Yet one of the areas for future research stemming from this project could be to examine ways of building a generic set of skills and making clear the link between these skills and teaching practices. This might include, for example, an opportunity to learn a second type of multimedia program with less instruction than provided for the first program. An additional part of this would be developing ways of making more explicit the nature of the generic skills, the features of the design process, and their potential relationship to learning in classrooms and theories of pedagogy.

In the cases where students were able to use Hyperstudio during the practicum some interesting transformations took place. In one school two student teachers designed units of work in which students constructed Hyperstudio stacks. One student teacher commented on what she saw as the value of learning associated with using Hyperstudio:

The students are enjoying the opportunity to explore this software. I have noticed them taking the time to make exceptional final products, they are exceeding all the project's criteria. The most beneficial aspect of Hyperstudio is when the students communicate their knowledge of what is going on in class with graphics, animation, text and sound to create their own multimedia presentation. Through this process is where the real learning takes place. (Ellie)

As the final sentence makes clear, the experience assisted this student teacher to articulate a link between the design process and student learning. As the following comment indicates, this student teacher was also able to draw on the experience to understand her own position as a teacher working with communications technology:

One thing I learned is that I don't need to claim to be an expert to teach a lesson in the computer lab. I can share what I know with my students and they will also share their knowledge with each other, which is the truest sense of a community of learners. (Greg)

Wild (1996) notes that one of the reasons why student teachers do not typically integrate technology into their teaching practice in schools is because many of the teachers with whom they are working do not use ICT in their own teaching practice in a consistent or integrated fashion. This was not the case for these two students who were both working with sponsor teachers who did not have particular expertise with computers.

These two student teachers therefore had to develop their own ideas and take some risks, which had some important repercussions for their position within the school. These student teachers' technological skills were a valued commodity and they were asked to share their skills with other members of staff at the school. They demonstrated ways of using Hyperstudio to other teachers at a staff meeting and to individual teachers. The student teachers' expertise was recognised, their campus-based learning was validated and they were able to contribute to the professional learning of the teachers in the school. In the Teleapprenticeship study concerned with technology and teacher education, Clift et al. (2001) also noted that there were occasions in which student teachers taught teachers how to use certain technological tools during their practicum experience. Clift et al. advocate that opportunities for this form of exchange be built more explicitly into teacher education curriculum and practicum expectations. This is an important suggestion given that many elementary teachers, for a variety of reasons, do not have access to the pedagogical and technical knowledge to integrate technology into their own practices.<sup>1</sup> Student teachers' knowledge and practice provides one form of access.

The connections that students were able to make between the campus and schoolwork were not only based on the presence or absence of software in a school. Other students made connections based on their understanding of ways in which children learn. For instance, one student made the following comment:

We wouldn't present this project to students as a way of learning about pattern, but if we used Hyperstudio and said come up with a card stack that shows patterns and they invented a stack themselves, then that would be a useful way to learn about pattern. (Chris)

In saying this, the student Chris was able to connect the value of the design process to ways of learning, in this case, something about patterns in mathematics.

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<sup>1</sup> We suggest two possible reasons for this lack of access to technical knowledge. First, the median age of teachers in elementary schools in 1996/7 Canada was 45 and 75% of teachers were age 40 years and above (Council of Ministers of Education Canada, 1999). This study reported in this chapter was conducted in 2001 and the median age is likely to have risen. Teachers in the >45 age group, unlike the majority of student teachers who in this cohort were in their twenties, would not have not had the same exposure to computer technology through their own education. Second, the vast majority of teachers in elementary schools are female, and numerous studies have shown that gender can be a factor that excludes female participation in many computer related activities (Bryson & de Castell, 1998).

## 5. CONCLUSION

In thinking about the extent to which the form of technology use in this case study served to extend student teachers' learning and engagement with the subject matter, three points stand out. First, the multi-media design tool enabled students to work with and extend the ways in which they could represent mathematical concepts, especially combining graphic, symbolic and text-based representations of concepts. The focus on this form of multimedia representation was important by way of assisting student teachers to understand and explain mathematical concepts. However, this was undercut in those instances where the focus on technology overshadowed the mathematical purpose. Second, the computer provided a space in which students could work collaboratively to design their presentation. This joint work proved to be of major importance in supporting a process of experimentation and extending students' understanding of the design capabilities of the software. Third, the links that this project afforded between campus and school, particularly in terms of technology integration, proved to be bitter/sweet. Where students were able to draw on their knowledge of Hyperstudio during the practicum there were significant benefits in terms of their understanding of educational technology and their status in the school. However in most cases students were unable to use Hyperstudio in their school setting and the chance to develop greater clarity regarding the procedures and concepts pertaining to technology integration and multimedia design were lost. Making the generic skills associated with different multimedia software more explicit may be an important key to addressing this problem.

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# Chapter Ten

## TEACHER EDUCATORS USING TECHNOLOGY: FUNCTIONAL, PARTICIPATIVE, AND GENERATIVE COMPETENCIES

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### 1. INTRODUCTION

The use of digital technologies has become a central theme in virtually all discourses on teaching and learning, to the extent that there is an expectation that technology be an integral part of educational practices in elementary, secondary, and post-secondary institutions. In association with this theme, there has been a resounding call for classroom practitioners to teach both with and about digital technologies (Russell & Russell, 1997; Ramsey, 1998). Not surprisingly these expectations raise questions about the place of technology in initial teacher education and the capacity of teacher educators to model and integrate new technologies within teacher education courses. In faculties of education, this expectation is keenly felt by instructors who find there is little information to guide their own use of these technologies within teacher education (Clift et al., 2001) and scant knowledge about whether and how such practices enhance learning (Laferrriere, 2000). This paper explores these issues against a backdrop of a program-wide imperative calling for the integration of new technologies within and across the Bachelor of Education degree (B.Ed.) program at the University of British Columbia (UBC).

A new Dean of Education was appointed at UBC in 2000. Early in his tenure, he announced a number of initiatives, one of which was that graduates of the B.Ed. program should not only be cognizant of new technologies that enhance student learning, but also proficient practitioners in the use of those technologies. This initiative assumed that teacher educators themselves were active users of new technologies in their daily practice and able to model for students the use of information and

communicative technologies (ICT) as an integral part of teaching practice. The Dean's technology initiative was of particular interest to us. At the time of his announcement, we had worked in CITE for 4 years and been involved in various projects that had grappled with issues of ICT. We did not regard ourselves as ICT experts. However, our own struggles with technology as well as those of our colleagues and CITE's emphasis on exploring ICT within the B.Ed. program uniquely positioned CITE as an object lesson in teacher educators using technology.

## **2. CITE: A CONTEXT FOR EXPLORING TEACHER EDUCATORS USING TECHNOLOGY**

CITE was established in response to widespread criticism that Bachelor of Education program were fragmented and disconnected at a number of levels; for example, a lack of integration between the various courses on-campus (in many instances instructors from different courses did not even interact with each other) and a lack of connection between the on-campus courses and the students' practica experiences (Gore, 1995; Tom, 1997). Although UBC had made a number of changes to its Bachelor of Education program in recent years, these alterations amounted to little more than 'tinkering around the edges' and had not substantively addressed the issues of fragmentation and disconnection in the program. At the outset, CITE instructors determined that the concept of program-wide coherence would be central to the cohort's organization. The potential offered by new technologies was seen as one way of enhancing this goal, and it was for this reason that experimental work with technology was embedded into the cohort at the outset. Our initial use of ICT in CITE attempted to:

1. provide students with easy access to all course and program information;
2. enhance the integration of program elements for the students; and,
3. support student inquiry during course work and while on practicum.

## **3. UNDERSTANDING CHANGE: INNOVATION AND RESISTANCE**

Fullan and Stiegelbauer (1991) provide a comprehensive account of the factors that enhance or inhibit change in educational practice. They note that central to the success of any change effort is an understanding of the concept of 'resistance.' Latham's (1988) analysis of change suggests that failure to attend to the issue of resistance result in a four-year rise, decline, and

eventual failure of most innovations. He observes that many innovations begin with great enthusiasm but that this enthusiasm peaks at about 18 months. This peak is followed by an declining interest in and increasing resistance to the innovation over the next two years. Finally, at the end of the fourth year there is little evidence of the initial change effort and an almost complete return to the status quo. In an attempt to understand the dynamic relationship between innovation and resistance, and also to attend to Latham's caution, many change advocates draw on the work of Rogers (1995).

Roger's outlines five stages that characterize successful innovations:

1. knowledge (providing accurate and detailed information to participants);
2. persuasion (demonstrating the value of the innovation by presenting arguments for and against the innovation);
3. decision (garnering support for a pilot test of the innovation);
4. implementation (moving from the pilot stage to widespread use of the innovation); and
5. confirmation (the point at which the innovation become regular practice).

Rogers (1995) also notes that when change is successful, adopters can be categorized as follows: Innovators (2.5% of the target population), Early Adopters (13.5%), Early Majority (34%), Late Majority (34%), and Laggards (16%). While this categorization has a commonsense ring to it, the pejorative connotation of 'laggards' and the positive connotation of 'innovators' have been challenged in the context of change associated with educational technology (Bryson & de Castell, 1998; Burbules & Callister, 2000). One challenge presupposes that change associated with use of educational technology can have multiple effects which can be both positive and negative, and that to resist technological change is not necessarily a negative thing, particularly when the educational value of many technological innovations are poorly documented or unknown. Further, it is important to understand the range of factors that enable and constrain technology use in the context of teacher education, both to facilitate possible change, as well as to assess the costs and benefits of such change.

There is considerable research in the field of education documenting some of the difficulties associated with the introduction of technology (Bryson & de Castell, 1998; Cuban, 2001). The work of these researchers, and others, shows that a key factor in enabling ICT innovation and simultaneously addressing Roger's five stages lies in the nature and substance of the professional development programs offered to the participants engaged in the change. However, in the context of teacher education, Chang (1998), following Parisot (1997) and Russell and Russell

(1997), notes that: “little research has been done to understand faculty member adaptation to technology ... and associated professional development efforts” (p. 2). While innovations in technology are constantly encouraged within Faculties and Schools of Education, there is a lack of understanding of how teacher educators respond to these initiatives. This paper is one attempt to address this issue.

#### **4. TEACHER EDUCATORS USING TECHNOLOGY: TWO NARRATIVES**

In this section we provide two narratives that trace the authors’ attempts to use technology in teacher education. We do not provide the entire catalogue of events surrounding our use of ICT but rather focus on critical incidents and lessons learned from our attempts. The two narratives represent our efforts to: (a) provide authentic renderings of our practices as teacher educators; (b) carefully walk the line between self-study and the ICT practices that we were engaged in; and, (c) examine some of the contextual factors that enabled or constrained our use of technology within the CITE program.

##### **4.1 Jane’s Narrative As A Teacher Educator and Technology Support Consultant in CITE**

My principal responsibility in CITE had been to coordinate and evaluate the use of technology in the program. Initially I was the technology support consultant for the instructors and later I was the technology workshop instructor for the students. My initial goal was to consider whether and how particular uses of technology could be used to address communication problems in teacher education programs, particularly making connections between the often disparate parts of the teacher education program - theory and practice, campus and practicum, research and experience, people and ideas. In taking account of the ideas of Bruce (1999) and Willinsky (1999), my concern was to develop uses of technology that addressed practical problems and that supported program goals, rather than using technology gratuitously or simply as an end in itself. It is also of note that the initial intent of technology use was deliberately focused on pedagogical practices in teacher education programs and not necessarily on ways of teaching students how to use technology in school classrooms.

Numerous problems were encountered in working to achieve these goals. Some were minor technical irritations, while others were more deeply-seated problems associated with developing a close alignment between technical

knowledge and interest on the one hand and pedagogical and disciplinary dispositions on the other. I was on a steep learning curve as I worked to build my technical knowledge, find software that would suit the program goals, ensure that there was adequate access to the software, and sufficient opportunities for program participants to learn to use the technology. Further I had to negotiate with instructors different ways of incorporating the technology into their teaching and learning practices. While aligning my own technical knowledge with pedagogical knowledge was difficult to achieve, more difficult was developing systemic uses of technology within and across courses.

A component of the above problem was the varying degrees of interest and knowledge that instructors had of ICT. Of the eight instructors, two were very keen to use technology in a range of ways in their teaching; the other six were less keen, typically because they rejected the often over-blown rhetoric about the value of ICT, and/or because they did not have the skills or interest in using the technology as part of their pedagogy. Amongst the instructional team as a whole there an on-going tension between an acceptance that ‘something’ needed to be done with technology within teacher education, and a pervasive skepticism or uncertainty regarding what educational purposes it might serve. Thus, the first problem was creating an argument and a set of conditions that would encourage the instructional team to commit to experimenting with the technology. Below I elaborate on some of the ways in which this problem was played out in practice.

#### **4.1.1 Technology – Optional extra or essential part of program?**

Initial use of the technology was optional for students in the first year of CITE. Prior to a commitment about using technology in the program, most instructors had planned their courses and so it was difficult to incorporate an ICT component, also there were strongly held views that ICT use must only be optional when not all students had access to computers or the internet. Somewhat tentatively, we established email lists and bulletin boards to communicate program information and to provide forums for discussions (primarily through WebCT<sup>1</sup>). When first introduced, about one third of students used the electronic sites regularly and participated in discussions and contributed items and their views. Also two of the eight instructors used the electronic sites regularly. While the views of those who used the discussion lists were positive, my concern was that if the technology use remained optional, then it would never be an integral part of program

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<sup>1</sup> WebCT (Web Course Tool) is one of an increasingly ubiquitous set of web-based course delivery tools used in universities and other educational institutions.

communication. It was therefore important to tackle the factors that constrained technology use. To address the issue of access, time was allocated in the program for weekly lab sessions so that students could access the university computer labs that had high-speed internet connections and during times when technical support was available.

While creating this dedicated ICT lab session addressed one problem it also created another. On the one hand technology became a legitimate part of the CITE curriculum to the point where it almost became a subject in its own right. Also, despite the fact that it was an optional part of the program, many students attended the lab sessions because it provided them with a chance to learn new skills that they saw as crucial to their future employment. On the other hand, and ironically, the elevation of technology to quasi-course status undercut its purpose as a tool for programmatic and course communication. Thus, despite the instructors' initial commitment to ICT, technology's new status (as judged by the dedicated lab session for supporting ICT) meant that a number of course instructors felt that students could learn with and about new technologies in the dedicated lab sessions without the instructors actually having to invest time within their own courses to integrate and model the use of ICT. A further irony was that students showed more interest in using the technology than many of the instructors. While student interest in technology in some ways vindicated the introduction of technology, I became increasingly aware that any systematic use of technology in the program would require a substantial change in attitude and interest amongst the instructors regarding their perceptions of technology and its relationship to pedagogy.

Two key turning points in the use of technology came through activities developed with the Language Arts instructor who had a keen interest in the relationship between technology and literacy. The first activity was a structured on-line discussion on the topic of curriculum integration in elementary schools. This became an assigned and assessed task for the Language Arts course. In small groups, and over four weeks, the student teachers, five teachers from their practicum schools, the instructor and myself considered a number of issues related to the discussion topic. This on-line discussion was a starting point for the students to complete an extended piece of writing on curriculum integration and it was also linked with an integrated unit that students were planning for their practicum.

Central to the design of this on-line discussion was a research component in which the Language Arts instructor and I analyzed and evaluated features of the online discussion (Mitchell & Wakefield, 2001). One consequence of the research was that other instructors in the CITE program were able to read it and in so doing acquired a greater sense of the pedagogical potential, as well as problems, associated with this medium. The research demonstrated

ways in which online writing provided a forum for public inquiry and addressed the criticism held by some instructors that the writing served little purpose compared to face-to-face discussions. It was one working example of how technology could be integrated into classroom practice and was to some degree a vindication of our experimental work with ICT in CITE.

A second activity in the Language Arts course demonstrated ways in which the technology could be used to publish student work so that it could be read and used as a resource by a wider audience. The first effort at this proved to be an unmitigated disaster as students simply converted word documents to hypertext mark-up language (HTML) and then passed a disk to me for uploading onto a website. The fact that students did not upload their own documents to the web meant that they did not engage in a vital part of the publication process and consequently had little interest in actually going to the website or reading their own or other's reviews.

As a result in the following year we changed the methods of designing and posting work on the web. Students were required to design their teaching resource as a web page and then upload this page to a public site. Most of us were surprised by how simple it was to design a basic web page and this proved to be very liberating for both the students' sense of multimedia and for building into our course requirements for publishing student work on the web. Another outcome was that the Language Arts instructor and I developed a much stronger set of links between our technological knowledge and our pedagogical goals. In particular, our success enabled us to realize how the technology could be used to broaden an audience for student writing and how a public audience could be used to broaden the purpose of student assignments beyond the achievement of a grade. The Language Arts instructor was also able to demonstrate to students how their own work was part of an emerging set of literacy practices associated with new technologies and to link this to theories of literacy learning, and technology in school classrooms. A final outcome of this project was that all instructors were able to view this work and it provided another example of what was pedagogically possible with ICT, and again served to motivate some interest among the instructors.

In short, my ability to understand some of the potential uses of the technology as a pedagogical tool and to build its use more effectively and purposefully into my practice stemmed from the simultaneous development of my technical knowledge (my understanding of how to use various software programs) alongside my evolving sense of what was pedagogically possible with the technology. My own understanding and interest in the relationship between technology and pedagogy developed when the Language Arts instructor and I had enough technical expertise to take



pedagogical risks, and through the research that we undertook to evaluate the teaching and learning practices we established.

## **4.2 Tony's Narrative as a Practicum Supervisor and Instructor in CITE**

When I joined the CITE team in 1997 I saw myself as being reasonably competent in the use of digital technologies. In the early days of CITE I used email and occasionally the Internet (although I did not have access to either from home). I dabbled with a couple of list-serve programs in two graduate courses but these were optional elements and not fully integrated into the work requirements of the courses.

### **4.2.1 Critical friend or fraud**

In the first year of CITE, all the instructors agreed on the general concept of experimenting with the use of digital technologies to enhance student teacher learning and communication within the cohort. My instructional commitments to CITE in Year One were for the supervision of 6 student teachers on practicum and acting as the practicum coordinator for the CITE cohort of 36 student teachers. I listened to the conversations about the use of technology among the CITE instructors but was a reluctant participant as I did not see technology as having any immediate relevance to my practicum work within CITE. I embraced the role of 'critical friend' and argued that some of the exploratory uses of technology, while good in and of themselves, placed an extra burden on student teachers who did not have easy access to these technologies at home or school.

In an attempt to overcome the intermittent and dispersed use of technology by instructors, in Year Two of the program, I along with the other instructors decided to incorporate WebCT into our practices to bring some consistency to the use of ICT across CITE. We used WebCT throughout the year for discussion forums, an information calendar (that tracked due dates for assignments, etc.), course information (e.g., instructors posted their course outlines online), and personal web pages (mostly a single page for each person). Simultaneously, direct technology support for students and instructors was available. However, I did not avail myself of the support offered. Nor did I appreciate that the technical skills required for WebCT far outpaced my understanding of new digital technologies. At the time *I did not recognize what I did not know* and remained blissfully ignorant for much of the year.

In Year Two, my role continued as CITE's ICT 'critical friend' and I again argued that limited student access to technology was potentially a form

of discrimination (those with easy access could sign-on regularly and appear to be actively engaged in the ICT components of CITE while those with limited access might appear to be uninvolved and disinterested through no fault of their own). In truth, while I claimed to be a 'critical friend,' I really used this role to avoid direct engagement with the technology. In retrospect, it was easier to sit back and criticize than actually devote the time necessary to gain a fuller understanding of the technology and its potential use in the program. My duplicity was uncovered one day in the second term when the WebCT controller (a member of the instructional team) discovered an option deep within the WebCT system that contained 'User Statistics.' This file showed that I had never signed onto WebCT despite my stated commitment to doing so at the beginning of the year. I had convinced myself that my 'critical friend' status represented legitimate engagement with the technology. However, without actually engaging in the technology itself (other than at a theoretical level), this stance was little more than a façade and I was using it to avoid the exploratory work necessary for understanding the potential uses of ICT within the program. As the second year of CITE drew to a close, the apparent discrepancy between the community's commitment to technology and the instructors use of technology (in my case, being exposed as a fraud) resulted in a renewed commitment in the third year by all instructors to post critical course information on WebCT.

#### **4.2.2 WebCT and Richnet: Trying to please everyone and failing to please anyone**

In the third year of CITE I was again responsible for supervising a cluster of student teachers on practicum and was the practicum coordinator for CITE. In addition to these tasks I was responsible for teaching a physical education methods course within the CITE program. As all the CITE instructors had committed themselves to an agreed upon level of engagement with technology, I placed information on the WebCT site that was relevant to both my practicum and the physical education responsibilities. I regularly visited the WebCT forum and followed the discussions taking place about the practicum and PE. Having largely ignored the instructors attempts to integrate technology in Years One and Two, my entry into CITE's WebCT world amazed me as I witnessed first hand the results of instructor and student efforts. What was particularly interesting to me was the apparent ease of access that students now reported. Many, if not all, had regular and easy access (e.g., from home) to WebCT.

In Year Three I invited all the practicum cooperating teachers to sign up on WebCT and issued passwords so each could visit the site and interact with the student teachers during and in between practicum visits (CITE has

three separate practicum blocks). Unfortunately, although most cooperating teachers regularly accessed their local area network (i.e., the school district network) they rarely visited our WebCT site that was located on the UBC network. Contributing to the lukewarm response by the teachers was the static nature of the information that I and others posted about the practicum and PE on WebCT. As a result, there was little incentive for the cooperating teachers to learn and use WebCT. This lack of interest was personally disappointing considering the effort I had put into learning WebCT, converting pages to HTML, etc. I decided to try a different approach in the latter half of the year and signed the student teachers on to the district's local area network (RichNet) in the hope that some online interaction might result between the students and the teachers. Unfortunately, RichNet was yet another new system which the students had to learn. In short, I faced the same problem overcoming the technology 'inertia' with the cooperating teachers' use of WebCT as I did in the students' use of Richnet. As a result, my interest in technology waned, once again.

### **4.2.3 Taking the leap: Creating a web site**

A critical incident that occurred toward the end of Year Three in the practicum was a turning point in my use of technology as a teacher educator. Two new practicum schools had joined CITE at the beginning of the year. Although I had sent each school all the relevant information concerning CITE (in my role as the practicum coordinator) as the year came to a close I was confronted with a major communication breakdown with one of the new schools. Some important pieces of information about the practicum had not made their way to all the new cooperating teachers and there was considerable anger and frustration with the CITE program and in particular my role as practicum coordinator. The problem required a number of special visits to the school and meetings with the teachers and administrators to sort out the issues. Although we eventually overcame the difficulties encountered, we lost the teachers' confidence and damaged our reputation within the school. After exploring several options to avoid a repeat of similar issues in the coming year I decided that one way to overcome some of these types of difficulties was to develop an extensive practicum website linked to our current CITE website (directly accessible through the internet). This would, at the very least, overcome one of the more serious charges articulated following the school meetings about the communication breakdown, namely that I had failed to provide the teachers with sufficient information about the program throughout the course of the year. The new site would hold all the relevant documents related to the practicum including expectations for the various practica, a detailed calendar of practicum events,

a full record of the minutes from the CITE school coordinators' meetings, a regular CITE bulletin outlining key features of the program at different times throughout the year, etc. The result of these efforts, four years on, can be viewed at [www.educ.ubc.ca/courses/cite](http://www.educ.ubc.ca/courses/cite) under the 'Practicum' link. One beauty of the practicum web site was that required no new passwords or software applications for the students and the teachers to learn (other than standard browser skills). Although, the effort required on my part to learn the web-based skills was considerable (designing and generating web pages, uploading files to a server, etc.), the outcome was my first authentic engagement as a teacher educator in using technology in direct response to a clearly defined need I had as an instructor within CITE.

My journey over the past four years with CITE and my use of technology was quite instructive and has subsequently led to numerous developments with technology in other areas of my professional work (e.g., development of research and conference web sites, the use of web technologies in other courses, etc.). Interestingly, I was not an active resistor in the early days nor an avid advocate in latter days but a nascent user who required more than an external expectation to commit myself to seriously using technology as a teacher educator.

## **5.        RETHINKING THE USE OF TECHNOLOGY           IN CITE**

The sense of efficacy that we developed in working with technology in CITE was not uniform across the group of instructors. This was brought home forcefully when a few instructors asked for assistance in navigating some desktop functions on their respective computers during the fourth year of the program. These were functions that the authors had assumed all the instructors were familiar with in Year One (e.g., using the 'Find' function, etc.). These requests began to explain why some skill sets necessary for application programs, like WebCT, Hyperstudio, and Netscape Composer, vanished over the summer and required re-teaching each Fall. If the functional skills were not present, then it was difficult for deep learning about technology to occur. This problem is now understood in terms of mistakenly assuming general technology competencies levels within the instructional group. Asking our instructors to be involved in innovative uses of technology seemed quite unfair given that some of us had not had the chance to gain comfort with some key functions of the laptop or desktop machines we were using. The problems associated with sustaining technology practices in CITE from year to year, combined with the issues highlighted in our own narratives, forced us to rethink the ways in which

teacher educators engage with technology (and continues to be a challenge within the program five years on).

Fortunately, we avoided Latham's (1988) four-year cycle of doom by intuitively attending to the three of Rogers' (1995) five stages for successful innovations: knowledge, persuasion, and decision. Our shortcoming was in failing to attend more dutifully to the details of Rogers' fourth stage, implementation. Rogers' (1995) categorization of adopters also helps to explain this shortcoming as we did not differentiate nor recognize the importance of distinguishing between early and late majority adopters, either in terms of our own use of ICT or that of the other instructors. Our review of the literature enabled us to recognize what occurred as we incorporated innovative uses of ICT within CITE. More importantly, understanding what occurred forced us to think more deeply about why the events unfolded as they did. It is the 'why' question to which we now turn by drawing upon our analysis of the narratives above to identify different dimensions of competency to explain the varied responses to the use of ICT within CITE.

## **5.1 Functional, Participative, and Generative Competencies**

We have identified at least three distinct competencies that represent our, and our colleagues, engagement with and use of ICT with CITE during the first four years: functional, participative, and generative. The distinctions we draw upon here are similar to Zhao's (2003) theoretical rendering of "teacher's technical knowledge," however, absent from this rendering is the situated context upon which we were able to draw. Following Brown et al., (1989) we believe the competencies described below better reflect the situated nature of teacher educators using technology. We acknowledge the limitations of this three-part categorization and do not claim that our characterization fully accounts for the range of individual, institutional, and social factors at play. However, for us, this particular characterization provides an analytic frame for thinking about the ways in which we, as teacher educators, responded to the use of technology in our professional practice. The first of the competencies captures our commonsense understanding of competence with respect to particular skill sets. The second and third competencies, move beyond mere skill sets to a deeper understanding of the 'why' dimension of our engagement with ICT and are particularly helpful in our current efforts to reconceptualize our approach to ICT within CITE.

### 5.1.1 Functional competence

In its simplest form, functional competence can be defined as the ability to ‘navigate the desktop’ of a computer easily and readily on one’s own, and to employ the functions that are available at that level across a range of activities, for example:

- the ability to scroll, click, and select actions from screen menus or directly from the desktop;
- an appreciation of keyboard shortcuts that facilitate navigation (e.g., use of function, option, and command keys); and,
- a conceptual understanding of menu and sub-menu organization.

Functional competence for those working in academic institutions involves some facility with word processing, email, and the use of internet search engines. This knowledge is an essential requirement for the communicative work demanded of faculty members today. Functional competence does not assume an interest in or knowledge of ways in which technology can be used as part of teaching and learning practices. This statement is not a criticism of faculty interest in technology but rather it acknowledges that there are an array of factors constraining interest, access, and knowledge that people have in relation to ICT. For example, studies have shown that competing research priorities constrain the amount of time that some faculty has to learn about technology for teaching purposes (Shields, 1995).

### 5.1.2 Participative competence

We define participative competence as an ability to engage in the program-wide information and communication technologies, for example:

- the ability to use the world wide web (to access program web sites, model current on-line searching and communication practices for students, engage in on-line forums, etc.); and,
- the ability to use program-wide tools with some start-up assistance provided (e.g., WebCT, Hyperstudio, Netscape Composer, etc.).

Participative competence allows one to be an active member within the community using a range of media including new digital technologies. Participative competence assumes a willingness by instructors to incorporate technology into their daily professional lives (teaching, research, and service). Participative competence can be gained by carefully following a

series of steps but a full appreciation of why or how these steps actually allow participation is not required. When operating at this level, teacher educators are able to successfully participate with other members of the community through ICT and to replicate strategies and practices that have been successfully used by others.

### 5.1.3 Generative competence

Generative competence is the ability to use technology in ways that move beyond functional or participative competencies, for example:

- using technology to address a specific programmatic challenge (e.g., using an interactive forum to extend student teacher interactions beyond the immediate community); and,

- using technology to address a specific pedagogical challenge (e.g., using the wireless laptops to expand the parameters of a critical thinking challenge).

When operating at a generative level, participants are able to draw upon ICT to help identify problems and generate ideas that employ technology in creative and unique ways. Operating at this level allows educators to move beyond the standard uses of technology as enacted at a participative level in order to integrate technology in novel ways in their practice. At this level, the available technologies are implicitly part of the pedagogical theories and practices employed by teacher educators.

One utility of the above three-part characterization is that it allows us to map our engagement with technology within CITE over time. For example, Jane's journey, as shown in Fig. 10.1, revealed a zigzag pattern, one that oscillated repeatedly between functional and participative in the early years.

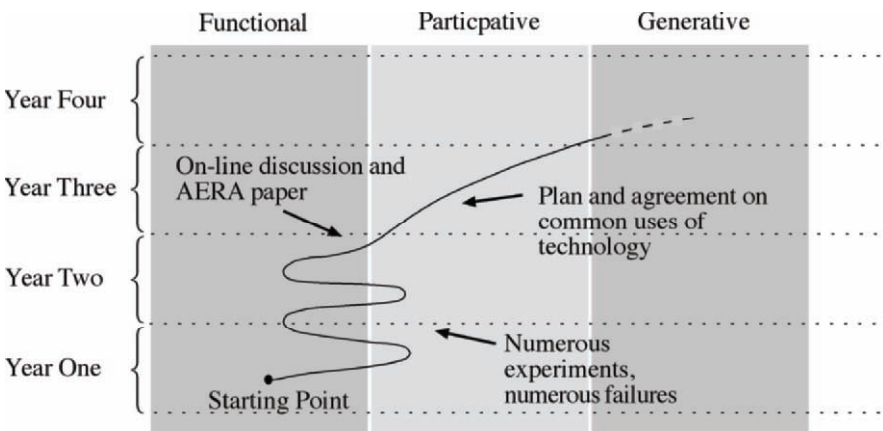


Figure 10-1. Jane's Journey

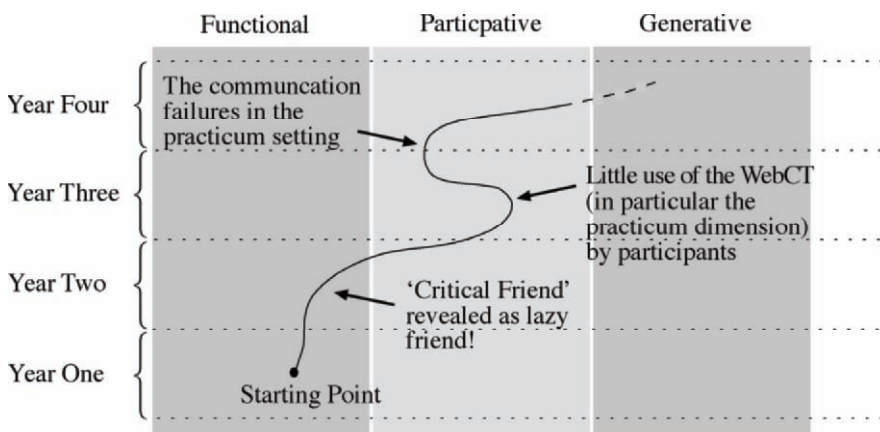


Figure 10-2. Tony's Journey

Whereas Tony's engagement with technology in CITE began at a functional level, wavered between participative and functional for a couple of years, and then moved beyond the participative level during the fourth year (See Fig. 10.2).

## 5.2 Critical Points: Distinctly Personal Junctures

Critical points along our respective paths represent distinctly personal junctures in our use of technology. One might expect that our critical points would arise after workshops, seminars, or conferences on the use of ICT in higher education. While such sessions contributed to our engagement with technology such events, in and of themselves, seemed insufficient to prompt the significant changes that we now recognized as altering the way in which we thought about and used technology in CITE. Change resulted from direct confrontation with the personal challenges emerging from our professional practice and for which technology presented some potential solutions. While similar to 'critical incidents' in the professional development literature (Tripp, 1993), the turning points described here differ in that they are dependent almost entirely upon the personal dimension as the impetus for generating substantive changes to our practice.

An examination of our accounts reveals that particularly personal incidents reshaped the pedagogical possibilities for our practice. For example, the turning point following Tony's revelation of his fraud in the guise of a 'critical friend' was sufficient motivation to seriously address his commitment to ICT within CITE that he had made at the beginning of Year Two. The communication disaster with the one of the practicum schools served as another turning point for Tony to review his responsibilities as



Practicum Coordinator resulting in the development of a practicum web-site. In a similar fashion, the turning points that led to Jane's increased engagement with ICT were directly related to her personal commitment to researching her practice with the Language Education instructor in the first instance, and to the students in the second instance, each requiring her to actively engage in the use of WebCT and HTML. The issue of motivation and its relationship with ICT in teaching, raised by Baker et al., (1992) and explored more fully by researchers such as Smith (1997) and Lynch and Collins (2001), lies at the heart of our attempts to substantively engage in the use of technology as teacher educators. While there are numerous factors that inhibit ICT innovation in the academy, not the least of which is the security and familiarity of the printed text (Chou et al., 1993), the authors found new digital media possibilities to be liberating and, as our narratives reveal, generative.

The mappings of our narratives enable us to appreciate both the struggle with technology and the search for pedagogical possibilities within our practice as teacher educators. In examining our practice we have come to better understand the challenges that the teacher educators face that were not readily apparent in the early years of our work within the CITE cohort. Importantly, there were constant shifts both forwards and backwards between the our various competency levels as we learned new skills, articulated new goals, and sought to address the challenges we faced in our professional practice as teacher educators.

## **6. CONCLUDING WORD**

As we reflect on our use of technology in CITE, we realize that most of the resources have been expended on engaging instructors at the participative level (e.g., using WebCT, Hyperstudio, Netscape Composer workshops). Each year we have been struck by the fact that many of us had to go back and re-learn the various functional elements of these application programs. Unfortunately, CITE has been unable to maintain, across its group of instructors, a level of participative competence from year to year. The wavering between the three competencies demonstrated in our own narratives over the first four years within CITE point to a potential error made in the first year and repeated in successive years: we focused on participative competence assuming a level of functional competence. Moreover, and perhaps more importantly, we did not specifically or explicitly create bridges between levels of competence nor did we understand the importance of personal motivation in the engagement and use of innovative practices such as ICT within CITE. As a result, each year we

created anxiety and tension by engaging ourselves and other members of CITE in various ICT tasks without ensuring functional competence and acknowledging the importance of personal motivation. In hindsight, attention to functional competence concurrent with other competencies across the whole community may have enabled the use of technology in CITE to be sustained and more rigorously developed in successive years. Our articulation of the three competencies—functional, participative, and generative—provides a means for us to understand our engagement, and at time disengagement, with technology as teacher educators.

What is also important about our own learning with technology is that through the process of understanding our own competencies we have developed a far greater sense of the problems and possibilities associated with the use of ICT. Making these problems and possibilities explicit has been essential for developing a more detailed educational rationale, for understanding how the three competencies relate to our professional development as teacher educators, and for responding to the ‘technology imperative’ at our institution. Also, we have increasingly recognized the benefits that accrue from taking responsibility for simultaneously designing and critiquing technology practices (Kress, 1998)—a process that examining our own practices highlights. Design assumes responsibility for shaping ICT practices rather than being shaped by them. It is now incumbent upon us to make these two elements of our work explicit across the CITE community to facilitate engagement with and development of functional, participative, and generative competencies in our work as teacher educators using technology.

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## Chapter Eleven

# VIRTUALLY AESTHETIC: THE CITE COHORT'S EXPERIENCE OF ONLINE LEARNING

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### 1. INTRODUCTION

This chapter presents a case study of the CITE cohort's experience of online learning in a required course, Analysis of Educational Concepts. Twenty-one pre-service elementary teachers contributed their reflections about the course, and in their responses, students demonstrated a level of awareness and sensitivity to the process of engaging with peers that suggests virtual learning was a transformative learning experience. CITE students revealed a number of aesthetic qualities in their written responses. They focused on relationships created between colleagues, their particular levels of personal satisfaction, and how aspects of this experience influenced their teaching practice. Learners expressed appreciation for how they "interact with people, things, the world," how they reflect and evaluate "perceptual pleasures and dislikes," and how they "interpret every experience ... from the familiar to the new" (McNiff, as cited in Diaz & McKenna, 2004, p. ix). To develop this case study, we adopt an aesthetic lens, and borrow from Grumet, who suggests "aesthetic experience as a metaphor for education" is concerned with "form: its relation to the fluidity of experience and to the community of persons who create, perceive, and respond to it" (1988, p. 80). As the conceptual skeleton" for this chapter, aesthetics offers "an alternate theory of learning and instruction" that "reorganizes experience so it is perceived freshly" (Grumet, 1988, pp. 80–81). Extending aesthetics to online learning offers a new educational perspective, for as Eisner (2002) suggests:

Aesthetic qualities are not restricted to the arts; their presence depends upon how we choose to experience the world...virtually every form that can

be experienced...can yield aesthetic forms of experience if we learn how to attend to them through an aesthetic frame of reference. (p. 231)

Three key themes emerged from learner responses: (1) CITE students participated in the construction of a virtual learning community as a creative act of doing; (2) CITE students developed their ways of knowing through meditative qualities adopted within the virtual realm; and (3) CITE students critically analyzed the value of being in a virtual learning experience. Bringing forward the meaning and interpretation of these defining events and circumstances recognizes CITE students as partners in the process of evaluating their lived-learning experiences. By participating in this research, CITE students provided unique perspectives and insights which generated epistemological and ontological links and have implications for curriculum development. As Greene states, "Aesthetic experience...involves us as existing beings in pursuit of meaning [as] we make possible a multiplicity of realities" and in this case, CITE students shared their multi-dimensional understandings of virtual learning by freely expressing their experiences in their own words (Greene, as cited in Pinar et al., 2000, p. 568).

## 2. METHODS

The purpose of this case study is to document the CITE cohort as a community of inquiry in their first online learning experience. This case is unique because questions of aesthetics in the virtual realm are only just beginning to emerge in academic literature (Birringer, 2004; Davies, 1998; Marti, 2004; Merritt, 2001; Page, 2004; van de Vall, 2002; White, 2002). With few intersecting studies in the field of education related to an examination of students' virtual learning from the perspective of aesthetic experience (Stroupe, 2003), we are interpreting responses and engaging with a deliberative intent in ways that have not been investigated thus far. A case study approach to this research allows for the exploration of situational understandings of subject matter experts – CITE students – within the boundaries of events that took place during a core course held online between September and February 2003. The CITE cohort is an intrinsic case in which personal narratives "rich in context" facilitate the development of "layers of analysis" that form broader interpretations of the meaning of the case (Creswell, 1998, pp. 61 & 77).

The context of this case is situated in a virtual learning environment in which CITE students were introduced to issues concerning the educational opportunities that are available in Canada's pluralistic society. Students engaged in questions about the nature of institutional practices, curriculum creation, and the ideal of equality through the actual policies, curriculum,

and teaching practices in our schools. Questions guiding this course included: What are the purposes of schooling? What is the reality (or the realities) in Canadian schools? What communicative virtues can be developed in classrooms that will help us achieve our purposes and realize our ideals with regard to equality of educational opportunity?

After the first week of face-to-face classes, discussions and assignments moved online to facilitate the involvement of a wider critical community. All students received instruction and agreed to rules that were intended to ensure ethical communication online. Students were introduced to virtual learning through a cooperative learning approach that defined in detail student roles and responsibilities. Between September and February, there were structured discussions on six different topics. These forums addressed conceptions of social justice, including multiculturalism and anti-racist education, language, poverty and class, aboriginal education, disabilities, and gender and sexual orientation. Groups of six students (Inquiry Groups) each took the lead on one of the six topics in the course, and each group critiqued one article from the course readings, posting the critique online along with two questions relating to a classroom application. Students in the other groups responded to one of the questions. Invited guests (school administrators, former CITE students, and a doctoral student) also took part in threaded online discussions during the course.

Evaluations of students were based on their online participation. At the end of the course, each student completed an individual summary of reflections on the course, course topics, and how the course influenced his or her thinking as a novice teacher. The summaries were required in order to pass the course. Twenty-one students agreed to share the reflections that formed the data for this research study and represent purposeful sampling in this case. Data analysis consisted of interpreting detailed descriptions, which were sorted into categories and charted to show the relationships between the experiences of participants. Patterns were identified from corresponding categories in student summaries (Creswell, 1998, p. 154). Themes emerged from generalizations in analyzing the data, which Creswell suggests, enable “people [to] learn from the case either for themselves or for applying it to a population of cases” (Creswell, 1998, p. 154).

### **3. ANALYSIS OF THE CITE COHORT EXPERIENCE OF VIRTUAL LEARNING**

Themes concerning this virtual learning experience were derived from the “wide awakesness” evident in student summaries (Greene, 1988). Wide awakesness is part of “a vision of education” in which “human

consciousness...is always situated; and the situated person, inevitably engaged with others, reaches out and grasps the phenomena surrounding him/her from a particular vantage point and against a particular background consciousness" (Greene, 1988, pp. 22–21). The wide awakesness of members of the CITE cohort emerged as three key themes of doing, knowing, and being. These themes are responses to the comfort, quality, satisfaction and motivation students felt in a specific time and place that shaped their virtual learning experience. Students characterized these themes in ways that were both aesthetic and anaesthetic. As Eisner suggests, "what is aesthetic is pervaded by an emotional tone made possible by the process of being engaged," while an anaesthetic experience "renders you numb to feeling" (2002, p. 81). In the CITE cohort, many students described a given experience in ways that reflected both aesthetic and anaesthetic elements in content and form. Having an experience that reflected both qualities simultaneously suggests online learning was a contentious and challenging experience to negotiate within a community of inquiry. Students developed a more complex and reflective stance by experiencing aesthetic and anaesthetic qualities in virtual learning that both contributed to their growth.

### **3.1 Doing: The Creative Act of Being Virtual**

Doing was the creative act of engaging with, and in, the CITE cohort's virtual community. The students expressed their perspectives both on the aesthetic experience of authentic engagement online, and the anaesthetic experience of "othering" when online. In this way, students referred to both the "product created" and the "process of creating it" to define the aesthetics of doing (Eisner, 2002, p. 81).

### **3.2 Aesthetics of Authentic Engagement**

Authentic engagement of self emerged in descriptions of student participation. The level and degree of online participation determined how individuals made meaning and how they perceived their connectedness within their cohort and inquiry groups (Blumenfeld-Jones, 1997).

Online learning enhanced the technical skills of many students. Jan felt the accessibility and flexibility of participation was "extremely more convenient for varying schedules and moods." Sandra enjoyed the act of posting when she felt inspired and connecting with guests from around the globe made her feel "cutting edge" and on the "frontier of knowledge." As a quick typist, Charles was very comfortable using computers and had no difficulty typing responses. He highlighted a sense of empowerment he

felt having the freedom to visit forums whenever he wished and for any length of time.

A number of students stated online learning offered an attractive alternative for independent learners, giving every individual an equal opportunity to participate. Dorsey stated the forums were an excellent way to engage in dialogue and to state personal views on the topic being discussed. Georgia felt online learning was a productive method of communication for peers who were not comfortable expressing themselves in a large group of people, and she was “especially interested to read what classmates who do not contribute regularly in class have to say about the various issues.” Online learning was viewed as an invaluable tool for students who may feel overwhelmed or intimidated in class, or who need to feel safe to express their beliefs. Marnie, for example, wrote that “many students do not feel comfortable sharing in a large group setting (me being one of them).” The online learning experience encouraged students to voice and listen, making the debate for Marnie, “much more interesting and much more informative as many of the usually silent students often have really great ideas that are well worth sharing.” Because of the possibility of authentic engagement, CITE students identified virtual learning as an opening, an inclusive space that invites learners to participate.

### **3.3 Anaesthetics of Othering**

CITE students also described entering virtual space as an othering, or anaesthetic experience. The absence of embodied conventions, such as the rhythm of everyday conversation, created emptiness in the virtual world that many cohort members struggled to negotiate in an attempt to establish belonging and connectivity over social and physical distance (Manifold, as cited in Diaz & McKenna, 2004). Students observed that online discussion failed to develop lively, productive, or effective generative qualities, and without a sense of the conversation progressing naturally, students became “non-participants” in their learning experience (Paul). The othering of online learning was summarized by Paul:

When I was typing my response, I would imagine myself talking to someone standing still, with my face covered, and my voice in monotone mode. I felt that the online discussion did not resemble my speech and I feel I am more fluent in expressing my ideas through speech. The lack of expression in our online discussion was not the only feature that seemed unnatural.

Discussion proceeded on “some very interesting topics in a very impersonal sort of way” (Jan). The method of communication and the



technological difficulties experienced by some students was also a source of frustration. Georgia added that the comments had “a tendency to take on a bit of a showcase feel,” and as a result, she did not believe online discussions were comparable to verbal communication, despite the constructive coaching of instructors.

Christina was unsure about aspects of the technology and Internet, making the idea of in-depth and substantial discussions through computers unappealing. She admitted, “I wasn’t incredibly enthusiastic about the whole online process but I do acknowledge that my reasons come from my lack of skill and comfort with computers.” Christina did not feel she had an adequate opportunity to talk about the issues of the course because of the limitations of the online format. Lea’s response focused on the disconnect she felt because the text was too small and postings too long, resulting in her “not fully taking in what was being said.” In several cases, online learning presented difficulties because students did not like reading from the screen for long periods of time.

Students reported it was difficult to engage in the debates and conversations for various reasons. Jan preferred to read, and then post her comments, but rarely did she return to the threaded conversation, noting “it seemed more like homework than something enjoyable to participate in.” Paul’s experience of doing was “one-dimensional” in the virtual realm, where “words lay flat on a screen and tell you little more than their literal meaning.” Others also described computers as one-dimensional, resulting in the belief that they missed important discussions and learning. Sandra highlighted different time schedules and curricular requirements as a key “glitch” in the online course, making it difficult to communicate with guests from around the world in a timely way. Some pointed out the lack of momentum was due to the inconsistent contributions, and for students like Ellen, navigating through the online course was very difficult and contributed to her failure to participate consistently in the forums. Ellen admitted she sometimes found herself “forced to post something even if I was feeling really uninspired at the time” because she felt “the course forced me to get something posted, so that I could pass.” She described virtual learning as “boring...no spark...[it] didn’t capture my attention so I basically just posted to get my name on the list.” Sally stressed the demand of writing dialogue “in a reasonable, coherent, and well supported manner” was very different than a traditional learning environment, where she expressed herself with “less semantic preparation,” speaking “not only from my head but from my heart, with feeling.” The anaesthetic quality of “othering” suggests that for some students, virtual learning lacked the ambiance and cohesion of the classroom.

### **3.4 Knowing: The Meditative Quality of Being Virtual**

Students took pleasure in ideas by slowing down and adopting a meditative quality of being in the virtual world, where speed, access, and the compression of time usually tend to dominate. A meditative approach brought “qualitative intelligence” to the learning environment, where students were able to dwell and in time make “effective judgements about the creation and organization of qualities in the service of feeling and imagination” (Eisner, 2002, p. 232). As van de Vall suggests, “self-reflexivity ... only works because it is experienced as an aesthetic feeling” and “aesthetic feeling may be mobilized as a sensuous form of contemplation” (2002, p. 152).

### **3.5 Aesthetics of Virtual Presence**

CITE students indicated their understanding of presence in the virtual environment was continually in flux, shifting “away from feeling located in a virtual experience to being aware of the physical world” (Marti, 2004, p. 1). Presence requires context and “context implies a space, physical or virtual” (Marti, 2004, p. 1). Virtual learning provided Sandra with the opportunity to prepare quality responses to questions, as well as the space to express her thoughts in ways which would not have come forward, she wrote, in a “competitive, traditional classroom setting dominated by a few students.” Mandeep noted that, “several of my views were changed based on points of view or personal experiences that I had never thought of.” The flexibility of online discussion offered students like Jan the opportunity to create a sense of presence online that was responsive to her state of mind and body: “I found that there were times when I felt more like discussing than others and the online discussion facilitated this well.” Dorsey felt the “forums were an excellent way for the majority of us to engage in dialogue with each other, or to simply state our views on the topic being discussed at the time,” and the “benefit of being able to truly mull over our position on a topic, without feeling the pressure of having to answer before our thoughts were fully formed.” This added a meditative layer to the learning experience and gave Dorsey a sense of presence online, making online learning a constructive space for her. Kate’s understanding of presence was encapsulated as slowing down, and becoming self aware:

During the process of reading various articles and web sites and talking to others, my position concerning many of the issues addressed during this course was deepened, strengthened and at times even altered ... I have now become more aware of the various perspectives.

Marnie “really enjoyed experiencing this different form of communication” and she “found it very interesting to be part of a forum.” Theresa “learned a great deal” about herself “as a communicator.” Jennifer shared that her presence online affected her attitude, beliefs and future actions. Sally described presence as “another dimension of the technological forum” expressed in the “degree of activity” of students participating in the learning process. When compared to classrooms, which can facilitate passive reception of information, the presence required in online learning favoured, according to Sally, “the active learner who eagerly seeks and absorbs knowledge.” The aesthetic experience of presence in the CITE cohort brought forth values of caring, inclusion, and community-building in learner responses.

### **3.6 Aesthetics of Virtual Interactivity**

According to Birringer, “concepts of interactivity...point to a new understanding of environments of relations and a relational aesthetic based on interhuman exchange or physical interaction” (2004, pp. 165 & 167). CITE students also described virtual learning as a provocative space of “physical estrangement” (Norman, 2003, p. 170). The “immateriality” of virtual space was an ongoing source of frustration for students, and the failure of online interactions to develop more fully left many students feeling disengaged (Davies, 1998, p. 71). Interactivity online was further affected by the “expectations, lack of familiarity, limited prior experience and limited cognitive schemas” of students (Marti, 2004, p. 2).

Georgia described interactions as “stilted and artificial,” due in part to “procrastination” which does not “operate well for electronic conversations.” At least one felt the problem with discussion forums was not the technology, but student idleness. Some students were simply not willing to participate in the online forums, or they posted isolated responses, disconnected from the flow of conversation. Several speculated this lack of participation was due to the exhaustive and time consuming task of reading and responding to postings. Lucinda shared her own sense of uncertainty:

Many times others within my forum had typed exactly how I felt about the topic, but I felt as though I couldn't just post a message saying how much I agree with the person. Instead I felt as though my message should always include something original and insightful, and I just didn't always have that in me.

Carol felt the lack of guidance and camaraderie in the virtual learning environment contributed to the failure of the cohort to achieve unity of space, time and interaction. Sally reiterated these concerns, describing the

course as fragmented, with greater distance between students and faculty. As her relationships with peers and instructors diminished, she described her separation from the group in the virtual environment:

The inability to assess one's demeanour or the tone in their voice ensures that the majority of statements are going to be interpreted literally. Once an individual had posted their views they had little control over how their responses would be interpreted by the reader. Void of laughter, sarcasm, fervour, and tears, the written word may never capture the true essence of a refreshing laugh, a pounding heart, or a fiery debate.

Sally's "feelings of memberships and belonging had been replaced with sentiments of remoteness," and "instead of looking into the eyes of instructors and friends, face to face interactions had now been replaced with a computer screen (staring back with that same blank look)." Her dislocation within the virtual community was profound, as the online community had not only taken the place of her classroom community, but "along with it had stripped me of my support system."

Written postings did not hold some students' interests in any way, in fact, for at least one, the "impersonal nature of the posting took away all the passion and excitement about ideas that group discussions allow for." The preparation and planning of comments detracted from the authenticity of cohort members, because the comments "came from the brain and not the heart." Pavinder felt that the "genuine caring that enables teachers" was lost in the virtual format because the cohort became more focused on how their comments sounded, letting their passion slip away on issues such as poverty and inclusion. Several students extended this view, stating communications were "censored" through the act of writing online responses, and while students were "politically correct," they did not believe everything they said. Jennifer wrote:

There is something about having your thoughts put into writing and published that intimidates many. Sometimes people want to conform to their peers' responses and write what we can consider 'socially appropriate responses.' Writing things down and having it read by anyone and everyone holds you more accountable for your actions, thoughts and words. What happens if you end up changing your position after reading other responses? Those that do not read any further will judge you based upon your personal reflection. In a real discussion (in a class) you would have the opportunity to be challenged immediately ... having someone there to challenge you brings the conversation to a deeper level of reasoning and judgement.

The lack of immediacy in interactions made the process of learning online more challenging because “peers contributed less and less” over time and it was very disappointing to have little activity. Sally commented:

Every posting I read inspired personal thought and deliberation [but] due to the preparation involved in replying ... I was often reluctant to respond ... once I was able to compose my thoughts, the focus of inquiry had often shifted to a different aspect of the issue at hand ... this ultimately resulted in an awkward flow to many of the initial discussions.

When “nobody” responded to their postings, the “pitfalls” of virtual learning became apparent. The experience of being a virtual learner was isolating, and the lack of conversational flow was a further limitation. Mandeep suggested the “delay of days at a time to get a response to your opinion” made it hard to engage in a given topic. Waiting for responses limited the learning experience for some. The process of reading postings was tedious and frustrating, and the delays in responses meant waiting “hours or days or sometimes forever!” (Charles). Students felt that gaps in response times created the impression that others were not reading and/or were not interested in what was written. At least one student remarked that she did not feel she was “heard.” Paul described it this way:

When I would write a response, it did not feel like I was engaging in dialogue ... the time lag between posting and receiving a response sometimes took several days. How often does one make a remark or ask someone a question and then wait days for a response? You start thinking to yourself, “Does anyone actually have any interest in what I have to say?” With the delay factor, and out of frustration, my interest in what others had to say eventually dwindled. There did not seem to be any flow or continuity between responses.

Despite efforts in the cohort community to post thoughts, there was “little in the way of interaction among us...[we] made as few comments as possible about each others posting...at this point, I was feeling that the online class left something to be desired.” (Liz). Tom often “rethought” and “re-gathered” his ideas, so when he returned to forums his view had shifted from his original posting. Due to delays in responses, discussions were not synchronized.

Students frequently highlighted how time consuming online interactions were. “Making responses has been very difficult, which is such a shame, because I know that there were interesting things being discussed” (Mia). Alice found that after reading the many postings to know what other people had to say on the issues, she had little time or motivation to then write her own responses. Despite being very excited about participating in an online

course, looking back, some students felt online learning “has many things missing.” While postings were “very interesting and thought provoking,” wrote Lucinda, “it was easy to spend a whole thirty minutes reading responses and end up not posting any...thoughts or opinions.”

Carol believed that her “sense of community was lost due to the use of cyberspace.” Being virtual was “linear and dehumanizing as I could not interact with my colleagues in live time.” Others regarded virtual interactions more like individual comments than ongoing deep discussion, and because the forums did not become too serious, “it was easy to make one comment and feel like I had done my part for the week.” One student’s approach was “to wait until there was already a discussion happening in order to add to it,” but Alice observed, “Many people did the same, waiting till the end of the forum to add their opinions, resulting in little time for back and forth discussion.” Alice also found it difficult to be motivated since she “didn’t know if people would bother to read it or to respond.” She confided:

I was worried about saying something that might offend someone because I didn’t know the background of the other people in the forum ... I was much more worried about putting up my response than I would have been just sharing my ideas with our class.

It was noted that “emails...can be interpreted in many different ways” and that this is a negative aspect of online courses. Theresa reported that it was hard not knowing the precise intention behind individual comments. Several “held back a bit” because of concern with how postings were judged by peers. Since “written words are taken so literally and can often be misinterpreted, I found I needed to spend quite a bit of time responding to other people’s thoughts” (Christina). There was also concern that postings might be taken the wrong way. Ellen feared what she wrote might be misconstrued, and when she finally did post “permanently out in cyberspace,” the lack of response left her feeling her ideas were “irrelevant or worse.” The uncertainties of peer reactions, coupled with the time delay in responses, inhibited CITE students and limited their online interactivity.

### **3.7 Being: Critiquing the Value of Virtual Learning**

The process of engaging in virtual learning generated “intrinsic rewards” (Eisner, 2002, p. 202) for CITE students. In this case study, intrinsic rewards involved both individual satisfaction and dissatisfaction with the form and content of the experience. Intrinsic rewards were articulated as an aesthetic ‘rightness of fit’ and an anaesthetic of the ‘unexpected.’ Through a critique of their experiences, an evolving connoisseurship among CITE students emerged, for being online involved understanding the senses and drawing

upon that understanding to critique the value of their learning experience (Eisner, 2002).

### **3.8 Aesthetics of ‘Rightness of Fit’**

Eisner suggests “judgements about qualitative relationships depend upon somatic knowledge or ‘rightness of fit’” (2002, p. 231). CITE students express their rightness of fit through critical self-reflection, identifying their virtual learning experiences as beneficial to their personal learning and professional teaching practice. Some students felt the opportunity to read and reflect upon the views of classmates was a key strength of the course. With strong encouragement to engage in the process of inquiry, Kate explored a variety of ideas and compared them all at once. She felt “such thoughtful process” could not happen in a traditional classroom. Dorsey stated it was “in my best interests...to ponder the many different views of my classmates.” Online learning “created positive changes” for students such as Sally who viewed it as an “effective medium for bringing individuals, communities, and nations together to form a wider critical community” than would be possible in a classroom setting. Georgia’s engagement with the opinions of invited guests, other professionals in the field with whom she would not otherwise have contact, made the experience of online learning worthwhile. The challenge of thinking ‘outside the box’ and thinking critically about new issues was a highlight for several others. Christina’s exposure to different thoughts and ideas was very important to her, particularly through the “invaluable” insights of a guest, a classroom teacher: “I always looked forward to reading her postings...as pre-service teachers...our classroom experience is limited...hearing from people who are currently teaching is very beneficial to those who will soon be teaching.” She wrote that online learning “will help us to deal with real life decisions and encounters.”

Virtual learning also “created a context in which people could truly listen to what others had to say” (Theresa). Theresa further described the “most obvious advantage of online communication” to be interactive discussions with people not normally accessible in a classroom, for instance, overseas participants. The participation of guests from international and public school settings gave students a more global understanding and a wider variety of opinions and viewpoints. Charles felt the international perspectives offered to the cohort were enriching and introduced him to new ways of engaging in education and communication. He claimed that online learning “sparked my interest to pursue studies in educational technology where I could explore more new ways of exchanging ideas and perspectives globally.” In summary, virtual learning encouraged students to gather thoughts, research

and formulate ideas, compose an opinion, and post it for consideration of the group. This ‘rightness of fit’ within the learning experience was a key benefit for many CITE students.

### **3.9 Anaesthetics of the Unexpected**

The CITE cohort shared unexpected outcomes of their learning experience, which are “deeply personal” and described “through [their] own frame of reference” (Donovan in Diaz & McKenna, 2004, p. 132). Unexpected outcomes emerged as students explored their role within the group and within real and virtual space (Stroupe, 2003, p. 257).

Some CITE students discovered online learning lacked what Paul referred to as “organic forms of expression.” He questioned the utility of the online component of the course, and while the cohort has a technical foundation, wondered why this technology was used over other methods, such as talking face to face. He felt the use of technology was “just for the sake of using it,” and this limited participant expression, leaving him with “a sour taste.” Paul described being virtual as “futile,” having “thwarted our learning experience.” At least one other student supported this notion, stating “in this course, technology was used simply for technology’s sake” (Ellen).

Liz felt the online forum unexpectedly became “a gathering of people’s opinionated postings,” and the failure of students to do course readings resulted in some participants “who skim the posted summary by the lead group and read a few responses.” For Marnie, the majority of people engaging in online discussions were “not professional and lacked the knowledge and experience to give me the answers I needed.” Marnie discovered online learning dislocated her ways of being as a learner:

I found that because we were doing all our work for the course online, I seemed to often forget about the course. With my other courses, I was in class all the time, which worked as a constant reminder of all the different assignments that I needed to get done. However, because there was not this kind of reminder, the [online] course often got put on the back burner and too often I almost forgot to even look at the forum! I think that a lot of students found this to be a problem, and if we were all putting the class aside or forgetting about it then our discussions were probably not nearly as in depth and good as they potentially could have been.

After experiencing this online course, several students affirmed their preference for in-person learning experiences. Georgia determined that the “technological vehicle in itself is not a significant obstacle to achieving quality online communication, but that human nature is.” She learned cohort



members must be “fully committed to contributing to the forum in order to initiate and maintain the momentum of a successful online discussion.” Still others concluded that online conversations cannot take the place of live verbal discussions and debates. Tom was surprised to feel “personal intimidation” when making postings. He found it difficult to gauge the context of peer responses, and when responses became more formal, Tom felt he was reading essays rather than comments: “I got sucked into this rational and felt as though I was sitting down to write a paper every time I went to post. More times than not, what I came up with didn’t cut it and ended up being erased resulting in my feeling of discouragement and humiliation.”

### **3.10 The Transformative Qualities of Aesthetic Experience in Virtual Learning**

Aesthetic experience results in a change of thinking, and this conceptual transformation requires “personal engagement and a vision of possibility,” which is the “heart of the educational process” (Rose in Diaz & McKenna, 2004, p. 102). In this case study, CITE students described how the ordinary moments of virtual learning were embedded with aesthetic and anaesthetic qualities, both of which contributed to their lived experiences and generated “educational value,” making “significant contributions to each student’s total enlightenment or self-actualization” (Chung in Diaz & McKenna, 2004, p. 46).

Student responses revealed how dimensions of aesthetic experience manifest in doing, knowing and being facilitated personal and professional transformations, and how their wide awokeness was central to understanding their online learning experience. Some students learned a great deal about the process of online learning and “how people choose to utilize it.” Helen felt she “gained a lot” from participating in the forums where “having a continuous global discussion accessible anytime with professionals and guests was a new idea to me and I loved it.” Jan contextualized virtual learning as an experience that has shown her “many different aspects of online communication” and with “the experience of being forced to consider different issues...I feel like I have really learned something.” “Intriguing conversations...forced me to consider several viewpoints on a variety of issues,” wrote Jennifer.” The experience enabled some to gain a greater understanding of online learning and a greater appreciation for the classroom, especially personal interaction. Pavinder, for instance, acknowledged that the forums helped her shape her beliefs and values in many areas of education.

Student responses confirm that the “relationship between computer viewer and interface” reflects “the ways that people have been structured to

look” (White, 2002, p. 173). Georgia found virtual interactions “thought provoking,” the questions and responses stimulated her reflection on issues of social justice, and heightened her awareness of the “complexity behind the ideological notion of equal education.” Others, too, were able to think more deeply about the ways in which the issues will impact their roles as teacher. Mia viewed the transformative experience as a holistic shift, stating:

To isolate one issue in which I feel that the discussions contributed to a greater understanding of the issue would be difficult because in all the forums there were interesting and thought provoking things discussed that made me see things in a different light. I enjoyed reading what others had to say about the issues that were discussed. Many people came up with good questions to ask about the issues raised in the articles and others responded with great answers. It was a bonus to have [guests], their perspectives on the issues added to the experience.

Several felt the best scenario for students is a combination of in-person and virtual group discussions. For Tom, the realization was more personal:

I think I now have a better understanding for those who have difficulty talking in front of the class because I had always been impatient with those who stayed quiet. I guess I now see how they feel when forced to do presentations and speeches as a requirement to pass a course.

There is no single way that CITE students experienced online learning. Students often expressed contrary viewpoints about the same learning experience. Occasionally students changed their own views in the course of writing about them. The diversity of perspectives suggests students felt that the reflection assignment, and perhaps the course itself, was a safe space to share their opinions, and at the same time, offered an opportunity where they could risk expressing something about both aesthetic and anaesthetic experiences. Their experiences may be described as “situated knowing,” where students, “aware of being located specifically in the world [make] diverse kinds of sense against their own landscapes” (Greene, 1994, p. 505). The transformative experience of CITE students began with their coming to a state of wide-awakeness as they explored online learning and as they imagined themselves as teachers grappling with the issues it raises. As a result of this immersion in a virtual environment, CITE students may attend to their worlds differently than they have done in more traditionally delivered courses.

#### 4. INSIGHTS FOR EDUCATIONAL PRACTICE

CITE students were sensitized to nuances in their acts of doing, reflecting, and finally, analyzing the value of their experiences of virtual learning. They brought aesthetic judgement to the medium of virtual learning based on how the virtual space made them feel. They told us if it was an authentic learning experience, if online learning felt cohesive and coherent, and if they experienced an embodied sense of self (Eisner, 2002). By living this experience, CITE students have refined, reworked and reinterpreted the course curriculum and in part, their pedagogic identities. When students understand the why and how of their learning experiences, they become better teachers. They are aware of the ways they come to know things, and the various ways they experience their own learning. The insights of CITE students reveal a transformative shift occurred during the course, resulting in different and dynamic relationships with each other in their virtual community. The tensions evident in this case study make the application of an aesthetic lens worthy of further consideration as we inquire into possibilities for understanding space, place and time in teaching.

According to Blumenfeld-Jones, “through educational experience we learn ways to be and these ways stay with us throughout our lives” (1997, p. 2). CITE students generated new and multiple ways of understanding virtual learning, making their knowledge construction a source of epistemological and ontological importance. Each contribution from a CITE student adds to the dialogue of virtual learning, aesthetics, and the intersection of these concepts, allowing us to “speak of a plurality of spaces that are all in different degrees partly real and partly virtual,” rather than “speaking of virtual as opposed to real spaces” (van de Vall, 2002, p. 147). It is in the multiplicity and variety of experiences, such as those described by the CITE students, that online learning becomes virtually aesthetic.

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## Chapter Twelve

# LEARNING TO TEACH TECHNOLOGY: THE JOURNEY OF TWO BEGINNING TEACHERS

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### 1. INTRODUCTION

Technology is ubiquitous in today's society. Computers, televisions, digital cameras are just some of the electronic equipment that today's students come in contact with on a daily basis. The purpose of the Digital Learning Tools (DLT) component in the CITE program is to prepare pre-service teachers about how to use technology as a teaching resource: using technology to teach the curriculum (math, science, social studies, etc) instead of simply teaching computers as another subject in an already crowded teacher education program. As its name suggests, DLT approaches technology as a teaching or learning tool, one of the many techniques pre-service teachers acquire to engage students.

Technology has been a component of the CITE program from the outset. Because the field changes constantly, the technology component recreates itself every year to include new advances and new approaches for. This chapter discusses our experiences and reflections based upon teaching the Digital Learning Tools component in 2004–2005. As recent graduates of the CITE program in 2003–2004, we were and still are beginning teachers in every sense of the word. The transition from CITE student to instructor was a quick and unexpected one. We knew our technology instructor (a seconded teacher) was returning to the field but we were surprised when the CITE instructional team asked us, two recent graduates, to teach the course. Having just completed our extended practicum, we had returned to UBC for the summer term. We were eager to complete the last stretch of our program then venture into the world of teaching. Both of us have been working towards becoming teachers for years, and the year in teacher education (CITE) definitely prepared us to teach K-7. However, to go from student to a

teacher in a teacher education program was a larger step than we had expected. Naturally, numerous concerns and questions materialized: How do we teach adults? Are we qualified to be teaching pre-service teachers? What will it be like to teach students who are older than us?

## **2. PLANNING THE DLT PROGRAM**

Planning the program was another challenge in itself. In fact, when we started the planning process, all our other concerns quickly dissolved into the background. There was no curriculum, learning outcomes or formal syllabus to follow. Even though we welcomed the autonomous nature of this position, basing a program on our personal experiences from the previous year was intimidating. Once again, many questions arose: Should we use similar assignments to those of the year before? Which new programs or technological advances do we include? How do we integrate DLT with other courses? How do we balance teaching skills and application? How do we lay out the year plan? How do we make DLT relevant and functional for CITE students on practicum and for the remainder of their teaching careers?

### **2.1 Goals of DLT**

In planning DLT, we began with clarifying our goals for the DLT program in CITE. After much discussion and reflection, we agreed on five aims which build on each other:

1. CITE students will have the confidence and ability to use technology;
2. CITE students will be able to use technology as a learning tool;
3. CITE students will be able to integrate technology with other subjects;
4. CITE students will have the ability and confidence to teach DLT in a classroom setting; and,
5. CITE students will take DLT into the field and introduce and expose schools and teachers to technology.

Our first goal, that CITE students will have the confidence and ability to use technology, is the foundation for the remainder of our goals. With any subject, attitude is a principal element for success. We wanted students to feel comfortable with technology from the beginning and so we planned a two-day workshop for the first week they were on campus with the aim of becoming familiar with some basic electronic equipment. Students used i-books, digital video cameras and digital still cameras. We wanted them to experience success quickly to alleviate fears and anxiety some students have

when it comes to technology. This first goal is essential for success in the course because once students feel comfortable and confident with the technology, the skills and ability will evolve as long as they are willing to work at it. In order to achieve this goal, students must have a positive attitude and the willingness to put time into working at technology. It is equally important for the instructor to provide a safe learning environment for students to explore with technology.

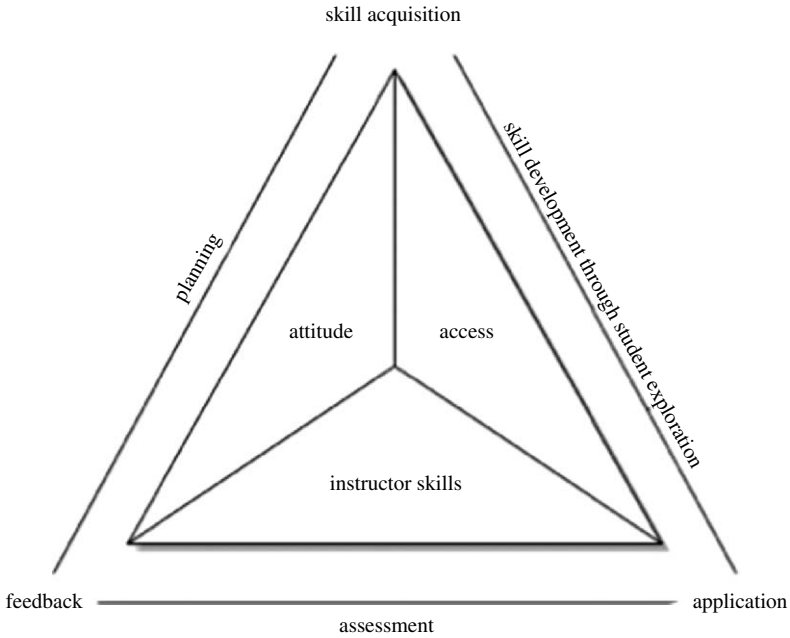
The next goal, that CITE students will be able to use technology as a learning tool, moves away from skills and focuses on application. Here, students take the skills they learned and use it to teach the curriculum. For example, web-building skills can be used to create a 'webquest' for fractions, art, butterflies or other prescribed learning outcomes. Even though we encouraged students to utilize digital learning tools, it is important not to force technology into the program. The goal here is to provide CITE students with another method of teaching, to be used with stations, literature circles or other learning strategies; and as a result, integration with other subjects should be natural.

CITE students will be able to integrate technology with other subjects, our third goal, is interlinked with the second. When technology is used as a learning tool for other subjects, integration naturally occurs. Integrating technology with the curriculum provides students with connections. More importantly, the CITE students will learn how to use technology in an academic context, not just typing or playing games. However, we recognize that students also need time to develop basic skills before they can use these tools (such as web page design) in their courses.

Our last two goals are field-based: CITE students will have the ability and confidence to teach DLT in a classroom setting, and CITE students will take DLT into the field and introduce and expose school pupils and teachers to technology. As a teacher education program, the notion that CITE students would teach using a variety of digital tools in their classroom is expected. Technology is a fairly new field and digital learning tools is an even newer concept; as a result we feel it is important for CITE students to take new advances to the field. From our own, earlier experiences as CITE students, we discovered that teachers and administrators were supportive and interested in how we use technology in the classroom. We also became the "technology expert" at our practicum school and were able to help some of our teaching colleagues integrate technology into their program.

### **3. A TEACHING MODEL**

To implement and to achieve our course aims, we drafted a teaching model (shown in Fig. 12.1 below). We focused on three main components that we considered to be crucial to run a successful DLT program: instructor



*Figure 12-1. Our Proposed Model of Teaching*

skills, access, and attitude. Access to both hardware and software is integral for a successful program. If there are not enough computers or up to date software, then the program will only be second rate. An instructor with up to date skills is also essential. Finally, the attitude of the instructor and students is key. If all individuals have a positive attitude, are willing to take risks and value lifelong learning then this will foster a favourable learning environment. Pre-service students would be more willing to push the limits and explore possibilities for integration.

Working with these three components, we next considered how we might go about planning the teaching process. We decided to follow a similar teaching approach that was used in the previous year, with some minor adjustments based upon our own experiences. Thus we envisaged a cyclical development of skills, one that builds on the CITE students previous knowledge to move the individual to the next level. Following the model the cycle begins with skill acquisition, followed by the application of integrative technology and finally feedback.

Initially we intended to provide opportunities for the students to acquire the basic and fundamental technology skills needed to perform tasks that will occur throughout the year. Secondly, we planned a number of directed teaching activities where the students are taken through the skills in



manageable chunks and small steps. Thus we hoped for increased success and self-confidence: the beginnings of a positive attitude. In order for students to reach the ability to enhance their curriculum activities with technology, they need to reach a minimal stage of skill development. Once this level of basic skill development is attained, we would then introduce them to projects based on their assignments in other CITE courses and that were increasingly student-centered and less teacher directed. Ideally these projects could also be used by the CITE students in planning the curriculum activities and units that they will be teaching to school pupils in their extended practicum. The next step in the teaching process is assessment, to determine if students have grasped the concept before continuing. We planned an assessment strategy that would focus on two criteria: one was their technology skills and the second was the potential of the integrative learning tool they created to enhance student learning. We intended to create assessment rubrics that could be used by both ourselves and the CITE students themselves to engage in some combination of self-assessment and peer-assessment. These types of assessment activities lead to our final level, feedback, which is an important part of this process as it includes students' feedback regarding the activity and teacher feedback for student work. This two-way flow of communication was essential for us to plan the next project.

## **4. IMPLEMENTING THE DLT PROGRAM**

### **4.1 The Orientation Week Technology Workshop**

We were fortunate to be given two days during the orientation week where we were able to introduce the CITE students to a number of activities and skills that would provide a firm foundation of technology skills for the rest of the term. After much discussion and reflection among ourselves, we decided that the goal of the orientation sessions was to allow students to feel comfortable with technology and give them a small taste of what was to come. The orientation, then, was to give students a sample of what technology can do and how it can be a powerful learning tool. Furthermore, because of the varying degree of experience, and a lack of experience with Apple computers, we also wanted students to become familiar with using the Mac, wireless i-books that the Faculty provided. Furthermore, the School District in which we were working was a 'Mac district' and so it was important for the CITE students to learn how to navigate using a Mac platform.

Using the skills that we had learned in the CITE program the previous year and using the students' prior knowledge of technology, we organized

the orientation workshop so that the students would be introduced to the basic skills that would be later applied to more integrative projects. Here we could help the students gain confidence and acquire a positive attitude to DLT. Helping the students to become more comfortable with the computer and navigating around the internet was approached with individual and group activities. The use of an in-focus or LCD projector helped to not only aid the visual learners in the class, but it helped to model our own comfort level with technology for the CITE students. The results from our Technology Questionnaire that was given to them on the first day of orientation, indicated that half of the 33 students had a moderate comfort level with just maneuvering around the internet. Therefore this basic skill was first on our list to master before we introduced them to some multi-media tools such as digital photography, iPhoto, iMovie along with an introduction to webpage design and webQuests.

#### **4.1.1 Webquest scavenger hunt**

Since the students would create a webquest as their final project in this course we wanted them to get acquainted with structure and components of one. Therefore we created a webquest where the students had to use and practice their cyberspace skills to navigate to various places where they needed to log in or create accounts to access information throughout the year (see Fig. 12.2 below). This webquest served as a tool to help them log into their accounts as well as allowing them to experience the process of completing a quest on line!

#### **4.1.2 iMovie**

While they waited for their turn to try out the webquest the students worked in pairs on a iMovie. We had downloaded footage from the general orientation session the day before onto each of the laptops. After a few brief pointers on iMovie, groups of two students worked at putting together a one minute iMovie presentation of themselves from the movie clips taken earlier. They explored and discovered things that the previous years class had not been able to work on until the third or fourth week in the term. The pairs consisted of one person that rated themselves as having 'weak technology skills' on the technology survey along with one person who rated themselves as having 'stronger technology skills'. They were encouraged to work things out together and when necessary to help out any other groups experiencing difficulties, with the intent of creating a positive and collaborative learning environment.

**Tech Quest 2004**  
**For CITE 2004/05**  
**ARE YOU READY?**

[JSirington@richmond.sd38.bc.ca](mailto:JSirington@richmond.sd38.bc.ca)  
 [SuChen@richmond.sd38.bc.ca](mailto:SuChen@richmond.sd38.bc.ca)

**Faculty of Education - CITE 04/05** 

[Introduction](#) [Tasks](#) [Process](#) [Evaluation](#) [Conclusion](#) [Credits](#) [Teacher's Page](#)

**RED ALERT!**  
**CITE is experiencing some technical difficulties and we need YOU to solve the problems. Until these the kinks have been worked out you will be unable to work on your iMoive. The TASK section will debrief you about your QUEST. Good luck and have fun!**

Figure 12-2. Example of a Webquest Page Using Mozilla Composer

### 4.1.3 iPhoto

The CITE instructional team also worked hard to incorporate other subject areas in the two day tech workshop to model the use of technology throughout the curriculum. The students were able to use digital still cameras on the first day where they participated in an art project with the CITE art education instructor, Sylvia Wilson, focusing on taking pictures with a certain form or colour and then uploading them into iPhoto and creating a slideshow.

On the second day the students participated in a relay race that helped them practice using and uploading footage from a digital video camera. Here the students had to film and then follow the steps that they had learned previously to get the footage downloaded into iMovie. It was a group process and it was interesting to see how it changed from a relay race into a collaborative class activity; people started to develop some expertise with the program and were going around to other groups and helping struggling students.

### 4.1.4 Webpage design

On the second day of the workshop the students started on the design elements for their very own webpage. They used Richnet (Richmond School

District's webspace that uses First Class as the host software). This activity used a "homepage" template from First Class (see Fig. 12.3), which allowed them to encounter the process of designing a webpage without the initial challenges of linking pages and typing html code. They were able to see how to organize all the elements of creating a webpage and finished the hour session with the skeleton outline of their very own webpage. This two day workshop helped to create a solid foundation for the students and using the programs iMovie, iPhoto and the First Class Homepage template, gave them instant success and helped them gain more confidence to take the next steps in the DLT course. It was an intense experience and it helped to speed up the learning process with helped them feel more comfortable with all the hardware and software that they would use for the remainder of the year. It allowed them to gain an understanding of how this component was going to be tied into other areas in their program. This two day workshop allowed us to set up routines, take care of administrative items (course fees, logins, ect.) that would have otherwise taken weeks to set into motion. This also allowed us to have other CITE instructors in helping us as well as allowing some of the instructors themselves to work on their own DLT skills along side the students. It was a great example of life long learning for the CITE student teachers.

The image shows a screenshot of a web page titled "Digital Learning Tools" for the "CITE Cohort" at "UBC Faculty of Education". The page has a navigation bar with buttons for "Home", "Course Outline", "Homework", "Handouts", and "Contact Us". On the left side, there is a sidebar menu with "Sample Work" (2005-2006, 2004-2005, 2003-2004) and "Links" (CITE Cohort, Richmond School District, DLT Links, Other Links). The main content area is titled "Homework" and contains the following text:

Please check this page for your homework assignments. They will be posted here after every class.

**For Oct. 26**

1) **RichNet Class Page:** The new due date is Oct. 26 (Friday) at midnight. We will be marking them first thing the next morning.

2) **Tech Page:** Keep working on them! They look great so far.

**Tips:**  
 "Double-check the sample page on our home page (in the feature box on the side) to make sure that you are including all of the required links, etc.  
 "Remember that when you want to work on them from your home computer, you need to drag the HTML page and all of the related files out of RichNet onto your home computer desktop (or "Website" folder!) and then open it using Mozilla composer. [Open Composer, then select "Open" and browse your computer to open the file.]

Figure 12-3. Homepage Template from First Class

Although the workshop went smoothly there were some constraints. It was a lot of preparation for us. All the laptops had to have passwords changed, programs updated, software loaded. We had to work with the Richmond School District Technology Supervisor to set up accounts, approve names and make sure that things were compatible. This of course was our job and we loved it, but it was a lot of work. Also a few of the students who had little experience with digital and computer related technologies were overwhelmed. And those few seemed to struggle and found it difficult to adopt a 'positive attitude' in their work. Therefore in the future we would try to simplify further some of the tasks so those who have little or no experience still feel successful at the end of the day.

## **5. OTHER DLT ACTIVITIES FOR THE TERM**

### **5.1 Home Page Construction Kit**

The decision to use the First Class Homepage template was a strategic one. Although it limited the students' ability to demonstrate their individuality and creativity, due to the standard structure of the template, it gave these students an instant and successful webpage building experience. That way we were able to model the ease, structure and importance of creating and/or modifying it from home or at UBC.

By using this program the students were able to understand the importance of design and how a webpage worked as a communicative tool, rather than becoming bogged down with technical problems. Another feature that helped to encourage the relevance of their webpage to their subsequent classroom teaching was the fact that it was so easy to update. They were able to log into any computer and change their webpage without having to upload and link files each time. We discussed the importance of communication as teachers and how a webpage can be used as a tool for this purpose. On their website we discussed how they could put student work on their page so that parents could see what was happening at school. They could keep a homework page up to date so that parents knew when tests and papers were due. And while on their practicum it served as a useful and helpful communication method between the student teacher, their students and the parents.

The creation of their initial Homepage was a great stepping stone towards a bit more sophisticated and open-ended webpage design (we used Netscape's Mozilla Composer program) where they learned how to use tables to create pages, insert images, and create links.

## 5.2 Composer

We made the decision to use Netscape's Mozilla Composer for several reasons. Perhaps the most important reason was that it could be downloaded free of charge on all types of computer platforms. Thus it could be easily used in schools and many school pupils would have some familiarity with Composer. Another important reason was the ease of use of this program. The introduction of a more open-ended webpage construction was done as a team based event. This step of creating a Mozilla Composer page was facilitated by their basic understanding of webpage design developed by building their First Class Homepage. They understood the purpose and elements of a webpage, which made it easier to focus on the more pressing issues of linking and adding images. An example of a Composer webpage that we had created for the CITE students to introduce them to structure of a 'web quest' was shown earlier in Fig. 12.2.

The CITE students walked through the process of creating webpages on Mozilla, in groups of 5–6 people. Their first task was to create a school website where they would later post reflective summaries about their experiences on their practica. They did this through a variety of activities (direct teaching, co-operative group work, relay races, partner activities)

The students next major task was to create a web-based portfolio. This project was done in conjunction with one of their assignments from the Principles of Teaching and Communication class. The focus was to produce a portfolio that they could send to a potential employer to look at and have a sample of their work on this page. This was a big step for some of the students, because they were now building a webpage on their own, instead of in a group. It also allowed for those students who had webdesign and building skills to become very creative with their design, while helping others who were not as comfortable with the task. The community that developed in the classroom during this time was wonderful. It was a very cooperative, yet the end product was an individual assignment.

By working on this project they were able to learn how to turn their word documents into a PDF file so they could place them on the web. They worked on their resumes, posted their philosophies and produced a biography page that allowed the employer to get to know the applicant. The finished projects were definitely unique to each individual and the growth that could be seen in the individual basic web skills was very evident.

Although they were able to work on their portfolios and practice their web building skills, our intention was to have the students at the point where they were comfortable to build webpages so they could focus on the

content for their webquest. This way they could use their webpage building skills to create an integrative teaching tool for use in their practicum teaching their own pupils.

### **5.3 Webquest**

The creation of a webquest was the final project and the pinnacle point of the course. During the various DLT classes throughout the year the students had engaged in completing two webquests and created one of their own related to core material for DLT. By modeling throughout the term and discussing the power and excitement of a webquest, the CITE students were aware of the project that lay ahead of them. The webquest assignment allowed for the integration of instructional courses and assignments at UBC, as well as the integration of units and topics that the students were preparing for their practicum. To help the students understand the structure and the purpose of a webquest, four classes were devoted to help front load the information to the students before they went out to create their own. Since webquests often involve co-operative group strategies it was important for us to stress the importance of working together and pooling resources to create a successful webquest. As in other courses that the students were taking, discussions and activities around Bloom's Taxonomy was vital for them to develop higher level questioning to reach all their learners in their classrooms. A day of brainstorming, stressing the importance of pulling in activities from all subject areas, helped the students before they sat down to begin their design of their own webquest!

## **6. REFLECTIONS ON OUR EXPERIENCES TEACHING THE DLT COMPONENT IN CITE**

Reflecting back on the year's work, we recognized numerous successes and challenges. On the whole, we believe the changes that we introduced that were different from the practices of the previous year were positive. First, the orientation workshop at the beginning of the year was integral in setting a positive tone and providing sufficient time to immerse student into a digital environment. We were able to accomplish tasks in those two days that took us a month to complete the previous year. CITE students were able to accomplish more because of the concentrated time in the orientation workshop to work through finicky and time-consuming tasks right away.

We also benefited from the Faculty program of providing each cohort with two to three 'tech coaches' – CITE students whose role is to provide technology help and support for the entire CITE community. Tech coaches is

a UBC Faculty of Education initiative which proved to be especially advantageous for the CITE cohort. Students apply for the position in September, are selected based on their experience with DLTs and are paid for their work in the DLT component and their work with CITE students and instructors in other UBC courses during the term.

Since both of us were graduates from the program the year before, it was a benefit to have experienced the pervious year's technology class and develop it further. It also allowed a great relationship to develop between the Richmond School District, where we both were working, and UBC. Richmond was supportive of our endeavours in a number of ways. First they provided us free access to Richnet, as described earlier, furthermore they allowed the students access to school computer labs to do workshops to learn District sponsored software such Reportcard Maker, Inspiration, etc. Finally they encouraged the CITE students to employ their newly acquired skills in practicum classrooms and allowed the students to bring in wireless 'laptop labs' from UBC to use in the classrooms. This allowed the students to gain first hand experience of using the DLT skills that they had been taught at UBC in an authentic, school environment by applying the DLT activities and projects to the curriculum units that they had prepared to teach in their extended 13 week practicum.

The teaching model we began the course with proved to be successful when all three components were in place. The ready access to up to date, functioning equipment allowed the program to run smoothly and minimized technical difficulties. We were fortunate to have access to a class set of iBooks, a wireless network and a LCD projector. However, we found it challenging to acquire enough cameras, both video and still, for students. This meant groups were larger and restricted the amount of hands on time for each individual. Using the iBook was also challenging for some students; many found the touch pad difficult to use and most students had trouble adjusting to OS X as they were Windows users. OS X was intimidating for some students and posed some compatibility issues when transferring files to a Windows computer. At the same time, OS X provided valuable programs (for example, iMovie) which was an important component of the DLT program.

In addressing the instructor skills component of the model, we recognized the challenges we faced as beginning teachers. We worked on fine-tuning our lesson plans and timing to ensure that students were receiving sufficient instruction and self-exploration time. We often felt we needed more than two hours a week to fulfill our objectives. Another drawback to the two hours a week was that we were unavailable to be on campus to support and remind students of course work and projects. Before the course started, we questioned our ability to teach DLT and while this



concern continued throughout much of the first term, we became increasingly more comfortable and confident of ourselves during the second term. The fact that we completed the course with considerable success can be attributed in part to the CITE community: first, for teaching us the skills to incorporate DLTs into our own instructional practices and second, for the continual support of the CITE instructors during the year.

A few challenges that we had with teaching the students focused around the attitudes of some individuals. It was difficult at the beginning to try and convince the skeptical students that learning these technology skills was worthwhile and not a hoax or fad. With that in mind the range of technology skills was also broad and that was a challenge in itself. Like in the regular classroom setting, we had to adapt and modify the activities to reach all our learners and meet them at their individual levels. The range of the students' attitudes towards DLTs also influenced how quickly the students were able to progress and how much content we were able to teach them. This challenge reduced over the course of the year as the attitudes of the majority was increasingly positive and those few that were still struggling we were able to help with more one-on-one assistance.

If we were to teach the course again, we would minimize the time devoted to teacher directed skill acquisition and allow more students exploration opportunities in class. The balance of teacher direction and student exploration is also sensitive to the personality of the class and their willingness to take risks. In the application stage of the model, we would also require students to create a lesson plan to accompany their project. Even though CITE students created webquests and iMovies, many were unsure how to introduce and teach it to their own students. Including a lesson plan with the application stage would alleviate some anxiety when students started teaching and using DLTs on their practicum. The assessment and feedback elements were both received positively. The continual feedback was especially beneficial for students and for us as beginning teachers. Other than some minor changes, we feel this is a successful model for teaching DLT and could also be applied to a DLT program in schools.

With respect to our goals, we feel they were all fulfilled, though with varying levels of success. Our first goal was the easiest to attain. The orientation process contributed to both increased confidence and ability to use DLTs, though each time we introduced a new project, students had to proceed and learn a new aspect of that particular tool. As a result, CITE students gained operational and troubleshooting skills; more importantly, they became more comfortable and confident with technology.

The two goals, ability to use technology as a learning tool, and to integrate it with other subjects, fuse naturally. From the assignments that the CITE students turned in we know they have the ability to fulfill both of these

aims. The challenge with these goals was trying to account for individual differences between the students in terms of their own skills as well as the different grade levels they were teaching in their practicums. Many learning tools catered more towards specific grades. Some learning tools are also used differently depending on the intended age group.

The ability and confidence to teach DLT in a classroom setting is a difficult aim to evaluate. After spending many hours working on projects and digital tools to help them teach their students, they found that it was difficult to actually find the time to implement it into the classroom. Many students felt nervous using UBC's laptops in the classroom, due to the fact that the classroom is an active environment where things could get damaged. Others found that there was not enough computer time per week at their school to complete assignments with their students. And finally some students faced situations where their sponsor teacher's philosophy of teaching and use of DLTs did not correspond with the objectives of the CITE student teachers. Therefore, some of the students felt disappointed that they could not implement their intended activities and assignments into their practicum environments. This leads us to an important question: Is the practicum a fair time or context to access students' use of DLTs? Many students did use technology on their practicum and enjoyed tremendous success. At the same time, many students faced challenges. We think the more important question is: Do they use DLTs in their classroom after they graduate from CITE? We were not in a position to answer this question, though from anecdotes from our CITE class from the year before, many graduates are currently using DLTs in their teaching.

Our final aim is also difficult to evaluate. However, it has been our experience in both our own cohort and the one that we just finished teaching that CITE students leave the program with more technology confidence and skills than most student teachers and many practicing teachers. Using innovative methods of teaching has granted CITE students an advantage in the field. When learning DLT, students were somewhat aware of the benefits, however, the advantages became much more apparent at job interviews. CITE students were often the most knowledgeable teachers with respect to the use of DLTs in their practicum schools. Upon graduation, we know of at least six graduates from the 2003–2004 cohort who have DLT related positions or use DLT in their job on a consistent basis. Thus, from our perspective the knowledge and dispositions developed by the CITE students regarding the use of integrating DLTs into our teaching practices has been an important asset in both our own and our colleagues school experiences.

Technological advances have increased exponentially in the past decade and have influenced learning objectives in schools. Incorporating DLTs into

the teacher education program is also relatively new. Furthermore, it is constantly evolving with educational and technology advances. Much of the DLT component is experimental, especially having us, two recent graduates instruct the course. This chapter acts as a log of our DLT activities for the 2004–2005 academic year, from the initial planning stages to teaching strategies, students' projects to year-end reflections. Due to its experimental nature, DLT reshapes itself from year to year; as such, we hope that future DLT instructors will consider our successes and challenges in planning DLT activities in subsequent years. The DLT component consists of numerous variables, however one constant is its innovative and progressive approach; with this approach, DLT can only improve and become more prevalent in teacher education and consequently shape the nature of the use of DLTs in our elementary schools.

## Chapter Thirteen

# MID-COURSE FEEDBACK ON FACULTY TEACHING: A PILOT PROJECT

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### 1. INTRODUCTION

This self-study pilot project on Mid-Course Feedback (MCF) reports on the work of a group of instructors at the University of British Columbia who collected mid-course feedback on their teaching practice in a deliberate attempt to enhance their teaching practices while their courses were in-session. Four categories of response to MCF were documented: Negotiating Responsive Feedback; Conceal Care; Finding Presence in Absence; and, Friendly Critic. Each makes a contribution to our understanding of the MCF process and, as illustrated in the chapter, provides direction to the further development of the MCF process.

### 2. MID-COURSE FEEDBACK VERSUS END-OF-COURSE FEEDBACK ON PRACTICE

Many post-secondary institutions provide instructors with the opportunity to receive feedback from students on their teaching practice. At University of British Columbia (UBC), the Standing Committee for the Evaluation of Teaching (SCET) in the Faculty of Education collects feedback from students at the end of each course. The end-of-course feedback (ECF) consists of 30 Likert-scale questions and 2 open-ended questions. The SCET office distributes the ECF results to instructors approximately four weeks after the final day of classes. A review of the literature indicates that most post-secondary institutions within North America, for example, at the Pennsylvania State University, and beyond use an ECF process (Cashin, 1999; Feldman, 1978; Ory, 2001). ECF is a very powerful tool for helping

instructors to improve their practice in future courses. However, ECF does not allow instructors to respond to student feedback in courses that are currently in-session. Therefore, from a student's perspective, ECF does not influence the quality of education that they receive from their current instructors; the ECF they provide will, at best, only benefit students in the future courses given by their instructors.

In an attempt to respond to student feedback while a course is in-session many instructors, at UBC and elsewhere, seek feedback from students through more informal means, for example, class exit slips, corridor conversations, etc. While this feedback is an important addition to the formal ECF, its ad hoc and informal nature does not guarantee that this practice is widely or consistently used among faculty. As a result, in-session feedback, and the processes involved and the benefits that accrue, are not well understood. More often than not, amid the time press of workload among other pressures, in-session feedback is easily overlooked or forgotten, and ECF becomes the only opportunity for students to respond to the quality of instruction that they receive. This study attempts to redress that imbalance by exploring mid-course feedback (MCF) to instructors while their courses are in-session.

### **3. THE STUDY**

The one-year elementary Bachelor of Education program at UBC is structured around a cohort model. Each cohort consists of approximately 36 student teachers and 10 instructors. Different cohorts have different programmatic emphases, for example, the 'Early Literacy' cohort, the 'Problem-Based' cohort, the 'Social Justice' cohort, etc., but all cohorts meet the minimum instructional requirements for teacher certification in the province of British Columbia. The majority of elementary cohorts at UBC follow a common timetable and curriculum. However, some cohorts are deliberately experimental in nature and explore alternative approaches to teacher education. These experiments require additional time and effort on behalf of the cohort instructors and therefore are usually only undertaken in cohorts where the instructors have a particular interest in teacher education and are able to combine their research with their teaching practices within the cohort. The study reported in this chapter is embedded in the 'Community and Inquiry for Teacher Education' (CITE) cohort at UBC and, as other chapters in this text have amply demonstrated, CITE is uniquely positioned for this sort of inquiry. Further, as inquiry is a central feature of the CITE program, the MCF study provides an excellent opportunity for instructors to model the sort of practice that they hope students might engage

in as they enter the teaching profession. Therefore, the purpose of this study was twofold: first, to explore the benefits of a formalized MCF process for instructors, and second, to explicitly model an approach to professional practice that embodies the sort of disposition that students might adopt as beginning professionals.

The idea for an MCF project was introduced during one of the weekly CITE meetings. These meetings are attended by the CITE instructors and two student representatives. After incorporating input from the group, a final version of the MCF process was adopted. The MCF posed two questions to the students:

1. The instructor would like to know what key element of his or her practice facilitates your learning (i.e., what's working for you)?
2. The instructor would like to know what key element of his or her teaching might be altered that would facilitate your learning (i.e., what changes might help you)?

The experiment with MCF began later in that term and continued for two years. Instructor participation in the project was voluntary. Twelve instructors were involved in the project over the two years. Some instructors sought MCF on more than one occasion. In total, MCF was provided on 18 occasions during the study.

There are four terms during the UBC Bachelor of Education program; three 13-week sessions and a final 6-week summer session. Data for the MCF project was collected during terms two and three of the first year and during terms one, two, and three, in the second year. To ensure anonymity and confidentiality of student responses during the study, an independent researcher, who was at arms length from the day-to-day workings of CITE, was responsible for the collection and analysis of the MCF data.

### **3.1 Data Collection and Analysis**

The students had a choice of two possible methods for providing MCF: a questionnaire distributed to all students in the class or a focus group interview with a random selection of students from the class. Once the MCF data was collected, the independent researcher analyzed the data to determine key themes from the feedback, and the relationship, if any, between the themes. The independent researcher then generated a report for each individual instructor. However, before the MCF reports were given to the instructors, each report was vetted by two students from the class to ensure that no individual student or group of students could be identified by the instructors. Once the students confirmed that the individual reports were

ready for distribution to the instructors, each report was given to the individual instructor for whom the MCF data was collected. Following the distribution of the reports to the instructors, a series of semi-structured interviews were conducted by the independent research with a number of the instructors and a random selection of students. The interviews provided an opportunity for the independent researcher to understand more clearly how the MCF process was used by the participants and how that feedback influenced the instructional practices during second half of the term for the courses in which the MCF data was collected.

In presenting the results of the project, we were particularly sensitive to the privacy of the individual instructors and students involved in the study. Therefore, rather than detail specific cases from the study, we have constructed four composite fictive vignettes (Badali & Housego, 2000; Billig, 1994) that are representative of the instructor responses to the MCF process. That is, no one vignette represents any instructor, rather the four vignettes represent continuum of responses. This rendering of the analysis is consistent with the dynamic nature of the MCF process as presented by the CITE instructors, whereby individual instructor responses rarely fell neatly into a single identifiable category but were a combination of one or more categories.

### 3.1.1 Four vignettes

#### 3.1.1.1 Stewart: Negotiating responsive feedback

*The classroom is hot and stuffy. It has been a long week on campus, the first week back after the 3-week introductory practicum in term one, and student frustrations are at an all time high. Emma, the independent research for the MCF project, walks into the room and greets the cohort. The students recognize Emma from her previous contact with the cohort during one of their classes and they acknowledge that Stewart has informed them about the MCF project. She inquires about their recent practicum and shares a humorous anecdote from her own student teaching days. Before she begins the MCF protocol she answers questions that the students have about the process.*

*Many of the student teachers are experiencing the first season of “school flu”, while others strain under the weight of assignment deadlines. They are tired and anxious. In addition, a particular assignment that the students regarded as problematic had just been raised by the students in an earlier meeting with the CITE instructors. This assignment represents for many students their current feelings of being overwhelmed and even frustrated by the workload at this point in the term. Emma, aware of these tensions, is fearful about requesting MCF at this time.*

*In consideration of these dynamics, Emma prefaces the MCF process with a few comments. She asks the student teachers to think about Stewart's teaching outside of other frustrations with the program. She asks them to think of the evaluation as a process in which they would be able to voice highlights, concerns, and to make suggestions to Stewart about his teaching. She encourages them to be specific and to provide detailed examples of what is working and what needs to be reviewed. The students are all very agreeable and spend the following 20 minutes completing the MCF on Stewart's teaching.*

*The next week Emma presents Stewart's MCF report to two students from the class. They review the report and concur that no individual or groups of students can be identified in the report. They feel that the degree of anonymity provided by having an independent researcher allowed them to be open and direct in their responses to the instructor without fear of grade retribution. (Gordon & Stuecher, 1992)*

*The MCF report is shared with Stewart. The following day, Stewart chats with Emma about the summary invoking a "think out loud" process and explores possible strategies for responding to the students' comments. He is pleased with the constructive manner in which the MCF process has unfolded, commenting that this type of feedback is more useful than the university ECF feedback that arrives a month or so after a course has finished.*

*Together Emma and Stewart talk about the specifics of the summary and also ways that Stewart could bring these responses to the class. By re-introducing the feedback in class, Stewart believes students will begin to construct a deeper understanding or rationale about some of the curriculum content and/or instructional strategies he is currently using and which were raised by the students in the report. In addition, he wants to work with the class to find alternative choices or directions to some of the issues raised. Stewart considers the evaluation process to be a space of negotiation where student opinions and the instructor's beliefs and practices can come together in productive ways. Most importantly for Stewart, he feels that the evaluations have not only provided him with feedback about what he needs to change, but also highlighted aspects of the course the students found most useful. Emma mentions that he might want to discuss with the students this positive feedback and encouragement as well as the suggestions for change. In the following weeks, Stewart uses the feedback to begin conversations about change with his students.*



### 3.1.1.2 Commentary

In the teacher education program we continuously encourage student teachers to become reflective practitioners, thus it seems only fitting that course instructors and programs adopt the same principle. Many of the instructors use exit slip strategies, or gather informal feedback through conversations, but rarely is there an opportunity for mid-term feedback that is formally analyzed and presented to instructors. Unlike scaled evaluations, written comments have no built-in structure and are often “read straight through from the top of the stack to the bottom, so that they seem to be a series of random, unconnected statements about the teaching and the teacher” (Lewis, 2001a, p. 25). In order to make sense of this type of data, qualitative methods of analysis are required. Lewis notes, in her article on techniques for interpreting student evaluations, that individual learning styles complexify student responses and comments and as such each written comment is textured according to each students attitudes and beliefs.

However, by sorting through these personal accounts Lewis believes patterns emerge that reflect many of the indicators that a scaled evaluation would highlight but that more qualitative renderings have the advantage of being accompanied by contextual data that gives a depth of understanding that might not otherwise be available. For example, Emma noted multiple references to common issues raised by the students in the MCF data and subsequently by grouping comments according to themes (such as course content, teaching methods, assessment and assignments) she was able to provide Stewart with a more finely nuanced portrayal of issues of significance to the students.

The literature on evaluation feedback emphasizes the importance of the time between the evaluation and the adjustment(s) that are made by an instructor to his or her practice as a result of the feedback. Lewis (2001b) raises an important issue regarding MCF stating that instructors' timely responses validate the process of feedback. Further, students are more likely to become genuinely involved in the process if they believe change will occur or witness change in an instructor's practice as a result of their feedback (Svinicki, 2001). Feedback that students sense will be dismissed or ignored will likely result in student passivity or hostility to current or future feedback procedures.

Dialogue with students about their feedback should be considered before direct implementation based on feedback occurs. Lewis (2001b) argues that it is essential to let the students know: (a) key summative points from the evaluation reports; (b) what adjustments will be made and why these key points are being addressed; and, (c) the process of responding to evaluations including how the previous years evaluations have effected the instructor's current teaching. It is important that students are aware of how and why their

feedback is being implemented into the classroom. In addition, one might add, that implementation is a collaborative process and that students feel justified in a feedback on practice cycle if they are consulted prior to changes being made to the instructor's practice.

By discussing the summary reports with the class, Stewart demonstrated a willingness to substantively engage in the feedback process. Observations by Emma, and informal conversations with students, indicated that this negotiation was highly appreciated. Many students expressed gratitude that Stewart took their evaluation comments seriously, and in some cases, students specifically mentioned key issues that had been changed and or structured differently. One of the central comments that students made was that they felt empowered that Stewart did not simply make changes on his own, but returned to the class to ask for further student input before implementing changes. His openness with the students encouraged student participation and indicated to them that he was serious about the MCF process. The final result was a refinement of practice based upon collaboration, discussion, and change that was both judicious and authentic in the eyes of all involved.

### 3.1.1.3 Martha: Concealed care

*Martha's class was the third class to complete the MCF feedback in the project. Martha is an energetic and enthusiastic instructor who is engaged in continual reflection on and evaluation of her teaching practice. One of the characteristics that emerged in the MCF data was Martha's regular invitation to students to provide feedback on her practice. It was no surprise that she was one of the first to volunteer for the MCF project. However, it appeared that the feedback provided by the students prior to the MCF project was exceedingly random in nature and, at times, somewhat overwhelming due to the wide range of suggestions that the students provided. Martha made a concerted effort to accommodate many if not all of the ideas but the idiosyncratic nature of the feedback generated by her open invitation to the class meant that: (a) she found herself responding to individual student's likes and dislikes as opposed to class-wide concerns; and, (b) many of the concerns tended to be personally and emotionally laden and Martha was left to try and strategize different ways of dealing with the students' individual preferences and moods. Therefore, it was difficult to bring a coherent pattern of change to her teaching practice and, unfortunately, it seemed that many of her efforts to respond to individual concerns were often unseen or unrecognized by the majority of the class.*

*Like Stewart, the MCF project was implemented in Martha's class in the week following the three-week practicum. Student tensions had leveled*

out a bit but Martha was nervous about the evaluation process. In fact she voiced concern that the evaluations might not accurately reflect student beliefs about the course, but might be caught up in program-wide issues over which she had little control. Aware of these tensions, Emma once again reminded the students that the evaluations were for a particular instructor and course, and not intended as a space to vent frustrations about the teacher education program or other non-course related issues. As a result, all responses were course-specific. The student responses were again quite detailed and very constructive. There was ample praise for the aspects of Martha's course that were most useful and engaging.

When the summary was sent to Martha she responded using a different approach than Stewart. It was clear to some in the class that she was taking the students' responses seriously and that care was given to implement changes. However, Martha followed her earlier pattern of instituting changes but not directly drawing the students' attention to or discussing the changes with them.

A number of students in follow-up interviews indicated some frustration because they did not feel that their concerns were recognized or addressed in Martha's class. Many of the students reported that from observing her practice they wondered if she had in fact read the summary report. Emma ascertained that some students could see that changes were taking place but that the seemingly piece-meal approach was confusing.

Martha's teaching practice was influenced by reflective practice and by fostering a classroom environment of care and appreciation of each and every individual in the class. However, because of Martha's quiet and unannounced changes to her practice, her actual responses were to a large degree concealed from the students giving further credence to their feelings that she did not appear to be responding to their MCF suggestions. In fact, as the term progressed Martha became increasingly discouraged and felt that the students were not supportive of her change efforts.

#### **3.1.1.4 Commentary**

This vignette raises some interesting points. The evaluation literature not only emphasizes the importance of responsive evaluation procedures as a key motivating factor in eliciting authentic feedback from students, it also argues that instructors need to teach students how to give feedback effectively (Svinicki, 2001) and the importance of instructors to signal their responses. Direct teaching of giving feedback, Svinicki notes, provides

students with a model of good feedback and communicates expectations about the feedback process. While there are no definitive guidelines for effective feedback the following qualities might aid students and teachers in the solicitation of valuable feedback: (1) feedback should be specific and use examples; (2) feedback should concentrate on observable behaviour rather than references to the ways in which an individual is thinking or feeling; (3) feedback should avoid personal and emotional comments; (4) feedback should describe the effect the behaviour has on the giver so that the receiver can experience it from a different perspective; (5) feedback should offer alternatives; and, (6) feedback should indicate successes and challenges of the instructor's teaching from the students' perspective, and not just focus on the challenges (Svinicki, 2001). As teacher educators, if we model and teach student teachers effective feedback procedures they will be able to continue to model this behaviour with their own students. Collectively, these all point to the need for instructors to follow-up and explicitly highlight for the students changes in practice that arise from feedback. Candid rather than concealed responses are critical here.

### 3.1.1.5 Amanda: Finding presence in absence

*Amanda's class was one of the last classes in the term for which the CITE student teachers provided MCF, and it appeared that they were not overjoyed to complete yet another set of MCF forms, even if the feedback was for another instructor. Some of the students began to question the usefulness of the MCF process as they had yet to see any tangible effect in their other classes, despite the fact that the first of the MCF sessions occurred only 10 days earlier, and they wondered if the MCF process was a "waste of time". A few others wanted to be more involved in designing the questionnaire form and a few more complained that some instructors seemed to be superficially "committed" to the process but were not using the feedback critically. The students were also very tired as it was the end of the day, and they appeared disinterested. Emma had to remind them three times to stay on task.*

*The students' MCF data for Amanda tended to be rushed and not focused, and the depth of their comments was not as specific, nor the suggestions as plentiful as for the previous instructors. However, it is also interesting to note that, like Martha in the vignette above, the students in Amanda's class had been encouraged to give informal feedback on a number of occasions but, for the most part, they felt that their concerns had not been directly addressed. Thus, when they saw the very general nature of the MCF questions they might have construed that if their earlier and more detailed feedback had been ignored, that there*

*was little point in providing anything other than a very general overview. Thus, a lack of student motivation seemed to play a significant part in the overall quality of Amanda's MCF.*

*However, the analysis provided some clear patterns. There were a number of issues that students almost unanimously voiced opinions about. However, when the summary report was returned to the Amanda, she was discouraged by the mundane nature of the feedback, hoping instead for a richer response from the students. From her perspective, there was little that could be gleaned from the responses that was worth discussing with the students or even attempting to implement in her class. Amanda was disappointed because she felt that the MCF project was an exciting innovative idea and potentially more powerful than ECF on teaching practice.*

*Amada felt that the two key themes that emerged from her MCF did not provide enough feedback to assist her. The first theme was something over which she felt she had very little control. The students complained about their assigned room for the course: a basement classroom that had poor lighting and ventilation. The other theme was the students increasing boredom with her standard structure of her class (e.g., starting with a think/pair/share activity, followed by a whole-class brainstorming activity, etc.). Amanda had designed the order of activities to maximize class participation and at the same time provide a logical sequence to the activities. If the students were becoming bored with the order, she would have liked some specific ideas from their perspective that she could incorporate into the class. While these issues appeared to be relatively trivial in the large scheme of things, when voiced by so many students, it seemed that questions needed to be asked about what might lie beneath these comments.*

### **3.1.1.6 Commentary**

Similar to student beliefs and motivations for conducting evaluation procedures, understanding the layers of meaning in evaluation comments can influence student participation in constructive feedback. Unless students believe that even the simplest concern is at the very least recognized then they quickly become closed to other issues and perhaps more important themes. While such things as the room scheduling for a class are rarely within the control of instructors, using this feedback with students as an opportunity to discuss institutional and programmatic imperatives (which quite likely are evident in their practicum schools) can be beneficial and viewed as opportunities for identifying and engaging in various discourse practices (political, pedagogical, etc.).

Interpreting student written comments is not an easy task. It is easy to over interpret “and blow the negative comments out of proportion” (Lewis, 2001a, p. 31) or to get bogged down by the seemingly contradictory comments or the triviality of some feedback. However, in addition to analyzing written comments through structured themes, there is a need to unravel hidden meanings and to look at those themes through different lenses. Sometimes it is what is not immediately apparent or the absence of a specific reference that speaks more loudly than a direct statement.

Perhaps the students misread the MCF process and did not express what they enjoyed or benefited from in Amanda’s class leaving her to assume that they were being overly critical and unappreciative of her efforts. Similarly, the lack of information on the evaluation forms might have been a message that the students were tired of filling out the same evaluation questionnaire, and not a direct response to the individual instructor. What might have happened had Amanda raised these issues with her class?

On the other hand the mention of physical discomfort may have been alluding to something else about the process. Students can fixate on a particular issue if they feel their concerns are not being addressed in similar contexts, even if other issues arise and are addressed. While instructor evaluations sometimes have a reputation for unreliability because of the lack of specificity or the narrowness of responses (Lewis, 2001a), what is and what is not expressed by students presents two sides to the feedback coin, both of which deserve attention.

### 3.1.1.7 Sandy: Friendly critic

*Sandy's approach to the MCF project was that of friendly critic. Sandy was involved in the design of the project but did not participate in the data collection process hinting at a general lack of confidence in the student ability to provide constructive feedback, worrying also that the process might generate a sense of dissatisfaction that might be more imaginary than real.*

*As noted above, Sandy was involved in the implementation of the MCF project and worked with the other instructors in constructing the questions. Sandy voiced both appreciation for and discomfort with evaluation procedures at each of the meetings during which the MCF was discussed. Sandy shared with the other instructors the belief that evaluations had the danger of being popularity contest and that courses provided little space for instructors to meet the needs of all students. More familiar with end-of-term university scaled evaluations, Sandy was uncertain that MCF was necessary or would contribute to significant changes to instructors' practices. Further, Sandy expressed concern over*

*student involvement in the evaluation of teaching practice preferring to use a more personal self-study approach as a part of a reflective teaching approach. Thus, Sandy chose not to participate in the MCF project beyond his initial contributions.*

### **3.1.1.8 Commentary**

The literature on scaled and written student feedback notes that many instructors do not see the validity or value of student evaluations noting that they are merely a contest to see who is the most favorite instructor. Often described as a love/hate relationship (Sojka, Gupta, & Deeter-Schmelz., 2002) the literature on student evaluations, however, recommends their continued use (Greenwald, 1997). Ory (2001) states, “to improve the validity of our student ratings, we need both to improve our practices and conduct research on their use and consequences” (p. 11). According to Ory there are five user-groups for evaluation ratings: campus evaluation offices, campus committees, administrators, faculty, and students. He argues that what is needed are different types of evaluation strategies depending on which group is to benefit from the evaluation process. Sojka et al. (2002) concur with this statement arguing that one critical area that has been under-researched with respect to evaluation procedures is student perception. In their study of faculty and student perceptions of evaluations, Sojka et al. note that most often student and faculty perceptions differ significantly and there is an overwhelming sense of distrust between the two.

Students often feel that the feedback they give influences the grades they get, even when evaluations are done anonymously at the end of the course. Faculty, on the other hand, perceive a lack of seriousness in evaluation procedures and that particular kinds of teacher performances in class produce higher evaluation scores. Most significantly, Sandy’s comments parallel the uncertainty and distrust that Sojka et al.’s research study illuminated. However, while the Sojka et al. uncovered many perceived differences they also discovered that both students and teachers agree that changes need to be made to evaluation procedures. Students want to know that their input is valuable and to see their suggestions implemented. This would indicate that explorations such as MCF are a necessary and needed processes in academia. Sojka et al.’s research also indicates that students and teachers would like more information on evaluation procedures and have questions that are related more specifically to individual courses, as opposed to generic faculty-wide questionnaires. Sandy is not alone in expressing these concerns about student evaluations. Becker (2000) notes that:

End of term student evaluations of teaching may be widely used simply because they are inexpensive to administer, especially when done by a student in class, with paid staff involved only in the processing of the

results...they can be dismissed or finessed as needed to achieve desired personnel ends while still mollifying students and giving them a sense of involvement in personnel matters. (p. 114)

However, as Lewis (2001a,b) and Svinicki (2001) demonstrate in their research on student feedback, students and instructors are more inclined to participate authentically when they feel that their input is responded to and made meaningful in some way. Thus, MCF procedures could be used not only as a valuable tool mid-term, but they may also begin to counter the negative perceptions of scaled end-of-term evaluation procedures. The research on feedback mechanisms shows that if students and instructors recognize and learn how to give feedback then benefits accrue to both. Being a friendly critic is important stance and a level of engagement in the process. Exploring other vantage points enriches the possibilities for all.

#### 4. CONCLUSION

This study provides an examination of MCF on teaching practice, including the associated challenges and celebrations while courses are *in-session*. Self-study research is increasingly being recognized as a valid and important form of inquiry. As such, this study provides an example of that genre of research and contributes to the scholarship of teaching in university settings. In addition the MCF project contributes to the research on faculty evaluation presenting a themed qualitative analysis on the importance and practice of responding to student needs and concerns.

The outcomes of the MCF project include: (a) the study protocol ventured into new territory by providing a themed analysis of student responses in contrast to more common ECF individual student responses on instructors' teaching practice; (b) MCF is unique in that it provided an opportunity for students to be formally involved in the teaching practices of their current instructors; and, (c) it was clear that MCF was a learning process for students and instructors across a range of dimensions. Further, the study demonstrates that students need to be taught about the ways and means of providing (constructive) feedback on teaching practice.

ECF processes occur at a time when students are at the end of their courses and understandably students are less concerned about their instructors' teaching practices (because, in most instances, that is the last time they will be taught by them). In contrast, MCF inherently means that students are still very much involved in courses and therefore have an important stake in the feedback they provide to their instructors. Therefore, MCF is significantly different in both nature and substance than ECF.



Likewise, providing MCF for instructors creates a very different learning environment for students and instructors—one in which both teacher and learner have to navigate respectfully and responsively to the concerns of both to ensure the process is authentic.

While some dimensions of MCF reported above are consistent with the literature on feedback processes in general, the study is unique in that it moves beyond generic and abstract renderings of feedback to more nuanced portrayals of instructor and student reactions to feedback—an important contribution of self-study within the CITE program.

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## Chapter Fourteen

# PORTFOLIO AS PRACTICE: THE NARRATIVES OF EMERGING TEACHERS<sup>1</sup>

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### 1. INTRODUCTION

All around my office are students' portfolios. They spill from boxes, binders and baskets. Some are wrapped like presents, others are swaddled in hand printed cloths, still others presented as scrapbooks, photo essays, or travel logs. Alongside one, there's a carrot cake. It's been meticulously prepared with organic ingredients and hand-milled flour, symbols of the cook's commitment to thoughtful practice. In all, there are thirty-one portfolios, the culmination of two academic terms in an elementary education program for post-baccalaureate students. Each portfolio reveals understandings about being part of a cohort called a Community of Inquiry for Teacher Education (CITE)<sup>2</sup>. Each portfolio also tells something about this year's shift from seeing oneself as student to recognizing oneself as teacher. My colleagues and I are overwhelmed by these portfolios and as students arrive at our doors with them, we receive them as gifts.

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<sup>1</sup> Reprinted from *Teaching & Teacher Education*, Volume 17. Issue 1. Farr Darling, L., Portfolio as practice: The narratives of emerging teachers. Copyright 2001 with permission from Elsevier. 107–121.

<sup>2</sup> The 1997-1998 cohort began with 34 students. There were eight men in the group. Although the ages of students ranged from 21 to 40, there were two main clusters: a group of students in their mid twenties and another in their early thirties who were studying for a "second career." Diversity was representative of teacher education students in Vancouver: a majority of middle to upper class Caucasian students, a smaller number of Asian and Indo-Canadians students. At the time portfolios were due, one student had left on maternity leave, another student had dropped out of the program for medical reasons, and a third student had been counseled out of teaching.

Of course those of us who teach and advise in the cohort know these are not gifts in any usual sense. Ahead is the task of evaluating these thirty-one efforts. We go back to the criteria presented to the students in September: Do their portfolios represent their understandings and their intellectual growth? Do they show evidence of changing perceptions, useful insights, and clear goals? Is there knowledgeable reflection and thoughtful analysis? Is the presentation a creative portrayal? We ask these things and more, and suddenly none of them seems easy to answer or measure. As I sit surrounded by the various bundles and binders one question recurs: Just what *are* portfolios anyway?

In exploring answers, I have considered ways in which other teacher educators have described student portfolios in the literature. There has been considerable interest in recent years, especially since 1996 when Wade and Yarbrough discovered that despite the growing popularity of portfolios, only nine studies documented successes and limitations of their use in teacher education. New interest has brought new definitions of portfolios. The portfolio has been characterized as a tool for promoting reflective practice (Borko et al., 1997) a way of initiating dialogue about teaching, as well as demonstrating evidence of achievements in learning to teach (Loughran & Corrigan, 1995) and as a vehicle for teacher growth (Athanases, 1994). None of these definitions seems entirely adequate for capturing what portfolios represent to the people who make them, as well as the people who examine them. It is claimed that the *process* of creating a portfolio and the *product* that results, represent two different, albeit related things (Loughran & Corrigan, 1995; Meyer & Tusin, 1999). The product, as seen from the viewpoint of the evaluator, has received considerable attention, and, in fact, much of what has been written about portfolios focuses on the evaluator's expectations and purposes. While evaluators look at the achievement itself, *portfolio as product*, many students find that the *process of creating portfolios* embodies the growing pains they experienced through a program. It is the process, not the product that may reveal most about who they are as emerging teachers. I consider the journey our CITE students took as they recorded, reflected, and analyzed their way through the teacher education program. Theirs was a challenging task, to pin down experience that was always fluid, sometimes looking murky, sometimes clear. This paper attempts to recapture twelve students' perceptions of the process in light of internal and external goods associated with what I call the *practice of constructing portfolios*.

## 2. PART ONE: PORTFOLIO CONSTRUCTION AS A PRACTICE

The construction of the portfolio, that is the process of creating entries and then putting a portfolio together evolved for our students as a ‘practice’. I refer to a practice as a complex human activity governed by rules, standards of excellence that are considered in light of certain virtues, and initiated through a particular intention or set of intentions (MacIntyre, 1984). These are carried out within a community in which understandings about certain practices are shared (Benhabib, 1992). Every practice needs to be considered in light of these features: rules, standards, virtues and intentions. These in themselves are complex notions, and when interacting with one another even more so. Together they provide a rich way to view certain kinds of human activity from dressmaking to baseball to composing a musical score, all of which have rules (without which the practices would be unintelligible and in fact, impossible) and standards (you can do these things poorly or well.) Importantly, a practice is understood in terms of intentions, intentions that are known to those who engage in the practice and those who have learned to truly appreciate it. For example, because I do not understand the intricacies of rock climbing I can only marvel at what seem to be magic feats of athleticism and strength. I am not “inside” the practice so I understand neither the rules nor the standards, nor the intentions behind the various moves.

According to Alasdair MacIntyre, practices are associated with two kinds of goods, those goods that are internal to the practice, and those goods that are external to the practice. Both kinds of goods are very real, and both can be important to those who engage in a practice. The concept of goods internal to a practice should seem somewhat familiar to educators; a discussion of intrinsic motivation for learning, that is, learning for its own sake as opposed to learning for the sake of an extrinsic reward, is a discussion of internal versus external goods. Goods *internal* to the practice include such things as the pride that comes from accomplishment, and the pleasure that comes from engaging in certain sorts of activities skillfully and successfully. Internal goods also include appreciation of the inherent value of a complex human achievement such as the elegance of form in a mathematical theorem or a piece of music. One needs to be sufficiently “inside the practice” to fully know what the standards of excellence are, and getting inside the practice takes time, self-discipline and of course, instruction or modeling or apprenticeship. Each practice has its own internal goods (though in cases goods could overlap certain practices). As examples of goods internal to a practice, baseball players talk about the delight they take in a hearing a certain crack of the bat when the ball hits it in just the right way. Similarly, an artist I know welcomes the challenge of painting the

effect of light on water which when successful, is dazzling, and even when not is an effort worth her time and painstaking care.

In contrast, those goods *external* to the practice are such things as rewards, prizes, grades, and recognition, goods that are bestowed on a practitioner subject to the judgment of other persons such as employers, judges, critics, teachers, and sometimes the general public, e.g. the movie going public.” Most people making these judgments are themselves “inside” the practice such as former Olympic gymnasts who judge present competitors. Occasionally they are not, for instance, most of us believe we can judge excellent bread from fair even though we may not bake bread. One may decide to participate (or learn to participate) in a practice because of the internal goods of the practice (its standards of excellence and its rules) or because of the external goods: honours, money, fame, etc. Sometimes both kinds of goods are on our minds when we enter into a practice (or begin to learn one.)

Importantly, there is a tension that can be present between the internal and external goods associated with any practice. People who are motivated to learn and engage in a practice *solely* because of external rewards (like winning) will not be motivated to achieve the standards of excellence that govern the practice. They will try to win in any way they can. And because external goods are limited by their very nature (we can't all be famous or rich or record holders) some people who demonstrate skill and excellence may not be judged winners by external judges. As MacIntyre explains, external goods are “characteristically objects of competition in which there must be losers as well as winners” (p. 190). Not everyone can go home from the county fair with a blue ribbon. That doesn't matter much to those who are concerned primarily with internal goods. For example, a young woman, Martha, loves to race small sailboats. Whether she wins or not is immaterial to her, though she becomes upset with herself if she trims a sail improperly. The goods internal to the practice that is sailing to the best of her ability according to the standards of excellent sailing that she has come to accept, are more important than the external goods that is winning over her competitors. Martha would never consider cheating in order to win, as that would defeat the rules of the practice itself. The internal goods associated with excelling as a sailor, are themselves the reasons for engaging in the practice. MacIntyre puts it this way:

A practice involves standards of excellence and obedience to rules as well as the achievement of goods. To enter into a practice is to accept the authority of standards and the inadequacy of my own performance as judged by them. It is to subject my own attitudes, choices, preferences and tastes to the standards which currently and partially define the practice (p. 190).

Martha is willing, even determined, to let the standards of the practice guide her own involvement, and she is willing, even determined, to learn all

she could from her teachers and other experienced sailors. This kind of commitment is a prerequisite for achieving the internal goods of a practice, and it is hard work. Among other things, it requires the exercise of a number of virtues. “We have to accept as necessary components of any practice with internal goods and standards of excellence, the virtues of justice, courage and honesty” (MacIntyre, p.191). We should add humility and patience to the list because in learning to do anything well we will experience setbacks, moments of confusion, stumbling blocks, and the very mistakes we must learn from. “We have to listen carefully to what we are told about our own inadequacies and to reply with the same carefulness for the facts” (p. 191). In the young sailor’s case, striving for excellence on the water demands her precise observation of others’ strategies, their interpretations of wind and water, their navigational judgments. It also demands that she pay close attention to their criticisms of her own participation in the practice.

There is one further, and related, consideration to attend to in exploring the notion of a practice. We cannot understand the significance of a particular practice in terms of an individual’s accomplishments and desires unless we understand his or her *intentions* in carrying out the practice. Take gardening for example. Loosely paraphrasing MacIntyre, to make sense of the practice of gardening as carried out by a man on a given Saturday morning we have to know why he is puttering around the rosebushes: perhaps he is escaping an onerous inside chore, or following doctor’s orders to get more fresh air, or collecting a bouquet for his wife, and so on. To merely witness the man gardening is not sufficient for understanding his intentions (or the goods he sees in the practice.) We do not know what significance this practice has for him, or, and this is extremely important, its connection to the rest of his life. This is because practices are not isolated activities, but are parts of an entire life that is seen as a narrative. A narrative, in turn, is not just any old story, a narrative has structure and it has continuity. The meaning of a practice for the person carrying it out is derived from the relationship of the practice to an individual narrative: a person’s identity, his or her social roles in both private and public spheres, and the life plans that have been made over time are facets of one’s narrative.

The narrative of a teacher education student is his or her story of taking on a new role, the narrative of an emerging professional. In an important sense, a new dimension of one’s identity is developing. Portfolio construction can be a crucial part of the journey, or it can be just another hoop to jump through. Seen as a practice, creating a portfolio is documenting, according to certain rules and standards (such as evaluative criteria) the experience of becoming a teacher, recording it from the inside as it unfolds. Seen as a practice, creating the portfolio is associated with goods both external and internal to the practice. External goods, such as a good

grade, praise from professors, and the knowledge that one has a useful collection of material to take to a job interview, provide reasons enough for putting some time and effort into the task. These external goods are not insubstantial or unimportant, in fact, they should be considered through every phase of the process. I would argue, however, that these external goods are not the whole picture. Too much emphasis on these will interrupt the acquisition of other goods, goods that will ultimately have more value over an entire teaching career.

The goods internal to the practice of portfolio construction are much harder to attain and to appreciate than the external. These goods are associated with both the process of construction and the achievement itself, the final product. They include a better understanding of learning from a variety of perspectives, heightened sensitivity to the complexities of teaching and classroom dynamics, a commitment to lifelong learning and ongoing critical reflection, and finally, the expression of virtues developed through documenting a narrative with an eye to intelligibility, coherence, and communicative power. Among these virtues are perseverance, clarity of thought and expression, self-awareness, and integrity. The intention to construct the portfolio as record of one's narrative is the intention to go beyond recalling achievements and instead gain "insight into one's thinking" (Loughran & Corrigan, p. 574). To do this well, one must be willing to submit to the rules of the practice: serious deliberation about what kind of teacher to be, careful examination of failures as well as successes, and continual exploration of one's own motives and reasons for action and judgment. It is a commitment to engage with the literature and thinking that have contributed to knowledge about learners, pedagogy, and subject matter. It is recognizing that there are standards to meet in terms of action, reflection and analysis. All of this must be undertaken in a spirit of genuine engagement with those people who can shed light on the unfolding narrative- instructors and peers, researchers and other writers, and school based educators.

The quality of effort and the amount of time put into such self study varies enormously from student to student. It may well depend on their view of the goods involved in constructing a portfolio. Concentrating on the external goods alone can cloud the ability of students to "enter into the practice" in MacIntyre's sense, that is, fully participate in the rigorous and demanding task of creating a narrative of one's own development as a teacher. Without the requisite commitment to the internal goods of the practice, efforts may be superficial or perfunctory. Portfolios that are created with only the external goods in mind can lack narrative unity or overall coherence, even if individual pieces are of acceptable standards. An unwavering focus on the final grade or on the product to show a prospective employer inhibits full realization of what goes into becoming an inquiring,

reflective teacher. Students who create a portfolio with only external goods in mind, may forego a valuable part of their preparation, that is, the ability and the inclination to critically examine their teaching. On the other hand, those students who intentionally engage in the practice of creating a portfolio for its own sake, may come to appreciate the goods internal to the practice. The resulting portfolio, based on knowledgeable reflection and insightful self examination, offers insight into teaching that is its own reward.

### **3. PART TWO: THE PRACTICE OF TWELVE PRESERVICE TEACHERS TALKING ABOUT THEIR PORTFOLIOS**

#### **3.1 Context**

In late March, 31 students in the teacher education initiative, CITE, left campus for their extended school experience. They would return for a few summer classes but most of the coursework in their one-year program was finished. Their progress had been assessed in a variety of ways, but the most comprehensive assignment for assessment *across* courses was the portfolio, which had been introduced the previous September. In the first of several “workshops” students were presented with a definition constructed by members of the instructional team:

A portfolio is a document that tells a coherent story of your learning experiences in the program, and highlights thoughtful reflection on, and analysis of, those experiences. It is not simply an accumulation of pieces and products, it is an unfolding of your understandings about teaching and learning, and about your development as a professional.

Throughout the two terms, students were expected to document their learning with an eye to creating a final portfolio. A small portion of the grade for each of their courses (both foundations and curriculum courses) was based on the team’s evaluation of the portfolio. This meant that the portfolio would have to represent knowledge from a number of domains. Students would need to illustrate ways in which they grappled with, for example, various theories of learning, the development of literacy, classroom climate, and issues related to the social and political contexts of schooling. Creativity was highly encouraged in terms of presentation, themes, and format, but instructors required that four components be included in some way:

- an introduction that explained the nature and form of the selections and the reasons for choosing them (was there an overarching theme?)
- a philosophy of teaching



- at least one example of teaching practice (e.g. lesson plan, resource file, etc.) related to each of the school subject areas (math, reading & language arts, art, music, science, social studies, physical education)
- an action plan for teaching that included explanations and/or illustrations of classroom organization and governance, curricular goals, instructional approaches, and plans for professional development.

In subsequent sessions, we constructed evaluative criteria with the students eventually arriving at standards we expected each portfolio to meet. We had discussed the possibility of assigning a “pass or fail” mark only, but, interestingly in terms of this paper, the pass-fail option was eventually rejected by students and instructors as unsatisfactory given the effort students planned to expend. Together, we decided each portfolio would be evaluated as excellent, good, fair or unacceptable, on the basis of:

Coherence and Cohesiveness: elements of the portfolio fit together, and make a strong unified statement.

Comprehensiveness: all aspects of the program are addressed in some way

Clarity: the point and purpose of each entry is clear and carefully designed/composed.

Creativity: the author’s own voice and point of view are presented imaginatively.

Communicative potential: in expression and form, the portfolio reflects student experience in a way that could be effectively shared with others.

The process of building portfolios had been a long one. At the start of the program, the students were not clear about what their portfolios would look like. The narrative of becoming a teacher had not yet unfolded. Importantly, they were just starting to make sense of what good teaching is and how learners learn. Still, they were busy at the beginning of the year documenting a trip to the anthropology museum, a community school, and a science lesson in a skating rink. They collected reading responses, modified lesson plans, and commented on a workshop on wildlife habitats or a cross-cultural lunch with Chilean students. First term was “data gathering,” explained Linda in January. “Now I have to make sense of it.” Even during the early process of data gathering, themes emerged. “I guess gender really was an issue for me,” said a surprised female student as she looked back at how often she wrote about girls’ interactions with technology. Another student, the daughter of Greek immigrants, remarked about her particular sensitivity to language issues: “Until I started writing about ESL, I hadn’t thought in a long time about how awful kids made me feel because I spoke with an accent when I started school.”

Themes were sometimes more clear to a reader than a writer. After school visits in October, I noted that one of our students, a biology graduate, favoured elementary classrooms that were organized and run as living laboratories. “I’ll have to go back and look at those entries,” he told me, “I wasn’t sure what I was looking at.” Sometimes instructors helped students discover connections between seemingly disparate experiences on campus and in schools. Sam was surprised when I noted that his philosophy background was apparent in his comments about improving students’ problem solving abilities. He soon began to refer to his earlier academic experience, weaving it into the narrative of student teaching. “I needed to learn this stuff and they can, too” he told me. “The rules of argumentation don’t change even when the problems they’re arguing about seem pretty basic to us.”

By January, most students had decided on themes they would address and had settled on a format. Their ideas and entries were shared in several afternoon sessions devoted to peer editing. By February, many students were spending some time each week refining their portfolios, some in consultation with instructors. The students completed their portfolios in mid March, one week before they were placed in elementary classrooms for a thirteen- week practicum.

### **3.2 Video Recordings and Interviews**

After students handed their portfolios to the instructional team for evaluation, I asked for volunteers to speak about their experiences in front of a video camera and to participate in an interview with me later that spring. Twelve students (four men and eight women) responded to the invitation. I explained that participation would serve two purposes: furthering teacher education research, and giving advice to the upcoming cohort of teacher education students who would be constructing their own portfolios the next year. All video recordings (ten minutes each) were made in a single day prior to the practicum. The twelve interviews (45 minutes each) took place in my office on campus in June. The interviews were structured only to the extent that I asked each student to talk about the value of the portfolio to teaching.

I tried to ascertain whether students regarded the portfolio and the process of putting it together intrinsically valuable. Were they willing and able to take up the obligations associated with carrying out the practice with an eye to its rules and standards? Did they come to appreciate any internal goods associated with the practice? Did they perceive the portfolio process as an integral part of becoming a teacher? Instead of asking them to answer a set of interview questions on tape, I asked the students to choose the way in

which they would present their portfolios and talk about constructing them. The students spoke individually on videotape for between eight and ten minutes. There was no “audience” for these sessions, and my only interventions were requests for clarification. Participants directed their comments to future students, speaking of the process and the result, which they were able to show on camera. The interviews in June were opportunities for students to revisit the portfolio after their extended school experience. In presenting their perceptions here, I have concentrated on four categories important for examining the practice of making portfolios. The four categories closely represent the phases of construction and reflection that students described and shed light on the sorts of goods that students perceived were associated with the practice:

1) *Initial responses to the portfolio assignment.* All participants began their videotapes by speaking about these. Six participants told me that this was important information for the next set of students. As a teacher educator, I wanted to discover students’ reactions to the challenge so I could reshape subsequent introductions.

2) *Structural and stylistic approaches to construction.* I chose to examine the second category because findings would shed light on students’ approaches to any extended and unfamiliar practice. I hoped to find ways to link theories of learning in the elementary classroom with teacher education students’ learning and make these connections part of my teaching.

3) *Overarching themes addressed by students.* The third category was important to investigate because the themes students chose reflected their individual priorities and concerns. I wanted to know how and why these themes emerged and to what extent they reflected explicit course themes and program emphases, or background experiences.

4) *Metaphors represented in the final products.* This category came about because I hypothesized students’ explorations with similes, metaphors, and analogies would provide insight into the ways they framed new understandings and interpreted experiences. These could also reveal how they might choose to communicate their experiences to others.

### **3.3 Initial Responses to the Portfolio Assignment**

Recollections of first reactions are contained in journal entries that many shared on tape. It became clear that many students’ comments about the introduction to the portfolio reflected their feelings about the program at that early stage. Jeanne, for example, took a “wait and see” stance toward the portfolio while Michael decided to plunge into the task in the same spirit with which he plunged into the life of the cohort community. When he attended our first instructional “workshop” on portfolios at the beginning of

the year, Michael recalled the assignment as “completely undefined.” It seemed a daunting prospect: “You can do anything you want... You’ve been given as much rope to hang yourself with as you could possibly need,” he remarked. Nevertheless, he began to wrestle with the challenge. Jenny noted that it was an enormous undertaking, and “since the day we were first told about them, I was stressing.” She was particularly concerned about “trying to bring all my random thoughts and ideas together.” She was also concerned about how others might view her work: “What would my instructors think of me?” Alice found that the idea of a program portfolio was so alien to her previous academic experience “that it was intimidating” although she welcomed the opportunity “to stretch myself.” For Michelle, a student with a background in fine arts, portfolio building was, on the other hand, familiar territory, and a chance for her to bring visual imagery into a program that was essentially verbal. Even among the twelve students who appeared on tape, initial reactions varied, although most admitted to anxiety about the scope of the task and the lack of detail about the rules.

The initial challenges seen by the students can be divided into two aspects: the challenge of making the portfolio coherent in light of ambiguous guidelines and the challenge of bringing a sense ownership to the task, or “making it my own,” as Lisa put it. Both of these are integral to creating a meaningful narrative. One of the difficulties was picturing a portfolio: how big should it be and in what form? What aspects of the program should be represented and how? Pulling the many pieces of a professional program together into a package seemed confusing but some students decided to dive in anyway. “I decided I would continue to do reflections,” said Michael “even though I didn’t know what a reflection was.” “You kept track of changes over time,” said Sam, “until they amounted to something.” Authenticity and sincerity were key elements for Lisa who “fretted and worried” about expressing herself in genuine ways, “as a real person here.” When students heard words like “imagination and creativity” associated with the task, many feared they had no experience or aptitude for “writing poetry or making art.” For many students, deciding on an approach “that felt honest” in Lisa’s words, and a method of organization that “would work for me” as Jenny put it, were worries from the beginning.

### **3.4 Structural and Stylistic Approaches**

Finding an approach that would work for each individual was often a matter of trial and error. Some students never found a structure that seemed appropriate and their portfolios lacked, in the view of at least one instructor, “glue,” which I see as synonymous with cohesiveness. A number of students experimented with structure in the same way they explored different

teaching styles and approaches in their classes and school experiences. Several students decided to experiment with approaches that were foreign to them and required learning something new. This was the case for a computer novice who created an entire portfolio on the Web. Some people, including Sam, decided on a structure that matched “the knowledge and experience I already had.” He imagined a philosophical dialogue between a student and his mentor, and he never wavered from this first plan, even though it meant some reflections did not fit. Other students waited for a framework to emerge and put their efforts into collecting their observations, journal entries, and reading responses. One student remarked, “If I was going to be caught out, I wanted to be caught with too much stuff, not with too little.” As students became more comfortable with their roles as emerging teachers, a playful approach became common. Based on math work with tessellation, Alice built her portfolio around tile patterns. Each tile represented a special learning experience that fit into the whole. She asked evaluators to piece the pattern together with written directions. “Working with visual images was new for me. Hopefully, I communicated to my instructors that I am really engaged in my learning, because I certainly was.”

Michael wanted to find a structure that would give him room to include his “whimsical side.” “I took a lot of risks with my portfolio. I gradually came to the idea that I would make it a book of wisdom, but be somewhat light-hearted about it. So, I drew a map and I visited all these sites. This let me go into hard, difficult stuff, then leave, to go back out and be light again. At one point I asked someone I met for directions to Mt. Neverest. At the top was the chapel of “Our lady of Perpetual Pedagogy,” where I would supposedly find my philosophy of education. We were supposed to write it, but I chose to represent it other ways...unique ways.”

Lisa ultimately abandoned the structure she had tried to work with from October until February. “It just didn’t come together for me. In the end, I trashed it all and had fun. ...I had this idea that the written journal entries I had done would go directly into the portfolio but that wasn’t the case at all. It’s important to do the journaling but it may not translate. I wish I had decided a lot earlier on to have some fun with it. When I relaxed about it a bit, I found I could try out some things like a Reader’s Theatre piece and some video clips with neighborhood kids.” Contrary to her own expectations, Lisa’s portfolio did not reflect the kind of coherence her other work in the program had. An eloquent speaker and careful thinker, Lisa was able to express the agonizing she went through in trying to find a structure that matched her explorations and her philosophy of teaching. “I’ve still got way more questions than I can *begin* to answer,” she said, “this thing is definitely *not* wrapped up.”

### 3.5 Themes

The search for a theme became important for many students who were eager to communicate their understandings of what Michael referred to as, “the big ideas.” Themes were often the result of ongoing discussions about the purposes of education or core commitments such as providing equality of educational opportunity. Some reflected long held beliefs about teaching. For Melissa the program was part of the realization of a childhood dream to have her own classroom of ESL students. She envisioned herself developing autonomy as a teacher, or “learning to walk on my own” and that became her portfolio theme.

Teacher educators hope that students will address educational themes and concerns from various viewpoints (Zeichner & Liston, 1987; Grimmett & Wideen, 1995). At their finest, portfolios are sites where powerful themes take root. Lisa documented her struggles to write a philosophy of teaching because she felt she had to, “they were so personal and so present at the time.” Michael, too, felt the need to document the “really hard, difficult stuff that happened to me” as part of his self-revelatory journey. For both these students, the struggle to understand their own growth and transformation was always present, and the internal tension that it caused became a pervasive theme. Ann had a different kind of struggle. Her international travel and studies had forced her to question what it meant to teach about and with diverse peoples. In her portfolio and her work life, she was trying to find a peaceable resolution between the competing conceptions of multiculturalism she had confronted in various contexts. Her own “naïve idealism about the irrelevance of difference to common humanity,” had already been tested. The portfolio became the place to challenge her assumptions, and this challenge became her theme.

The themes that worked best for their authors revealed something about their particular passions. Diane looked at elementary education through the lens of gender roles and expectations, carefully exploring facets of her own childhood experiences as a “tomboy” and re-visioning each curricular subject based on her “personal philosophy about all the things girls can achieve.” Sara was pregnant throughout most of the program and took a leave to have her baby in February. The portfolio became a place to discover the many heartfelt connections (and important distinctions) between teaching and “mothering.” As a newcomer to both of these, Sara earnestly explored concepts such as nurturance and independence and combined these explorations with musings on the developmental changes in her infant daughter.

Jenny chose to express one aspect of her theme on her cover with a twist on an old proverb by writing, “I can see the forest *and* the trees.” In talking about the portfolio process, she explained,

This was emotional for me and I wasn't prepared for that. I decided to tell a story of how my class would be in a future year and put it in a scrapbook. I wanted to tie it altogether with something that stood for my own growth and learning. So for me that was trees and I used leaves throughout as symbols. When we started the program in the Choi Center we were surrounded by trees and on the first day I wanted to be out in the trees- to heck with this program- and then in the end it was thinking about all the things I could do with trees-all the things I could teach about trees- in my classroom.

A few students seemed to distance themselves from active involvement with a powerful theme or issue. Their lack of strong engagement with themes often reflected what one instructor called "the teflon approach to teacher education- nothing sticks." For some students, the portfolio was an opportunity to catalog aspects of the program for future career opportunities, not a place to share any trials or transformations. This was true for Ron who demonstrated in his portfolio that the external goods associated with the final product far outweighed any internal ones. "I wanted to get the job done" and "easily turn this into a professional portfolio I could bring to an interview." Although straightforward and quite informative about the facts of his experience, Ron's portfolio was nevertheless an impersonal document to read. There was little included that shed light on intellectual or pedagogical struggles that may have taken place over the year. The portfolio did match his stated intention, however, and fulfilled the only purpose he considered justifiable. Mandy brought a similar intent to her portfolio, which she constructed as a set of exams with the overarching theme of inquiry. "I thought the portfolio should be where I showed my strengths to people, not my challenges. My strengths were always in taking exams, so that's what I chose to do...I wasn't interested in putting in journal entries because that was too personal."

For other students, the theme was only icing on the cake. In an otherwise sensitive portrayal of experiences, Jeanne's "gardening theme" seemed an embellishment, even to her. "Out of nowhere came this gardening theme," she said, "and it came on the weekend before the portfolio was due." Jeanne readily admitted that she had started to put pieces together "at the very end," which left little time for developing what could have been a workable theme. Instead, "gardening" became a decorative motif, adding visual appeal, but no intellectual depth to her project. Craig's portfolio was an example of a theme laid on top of entries in specific areas. He constructed his portfolio as an advertising campaign with a series of familiar educational slogans attached to each subject in the elementary curriculum. Rather than critically engaging with the content, Craig chose to construct a number of artful posters and a clever logo that highlighted "my marketing background." The theme of "advertisements for education" worked on one level as a way for Craig to

communicate his priorities for a classroom, but the polish of delivery worked against serious examination of the messages.

### 3.6 Metaphors and Analogies

Generating fresh and lively metaphors came easily to some students while others communicated on a literal level. When successful, metaphors became an important way to explore notions of teaching and learning. Early in the year, I introduced the students to Israel Scheffler's classic article "Philosophical Models of Teaching" in a philosophy class, noting that each model Scheffler describes can be fruitfully explored through metaphors. Students generated their own metaphors to describe various teaching approaches and philosophies, particularly those they considered close to their own hopes and ideals. Months later, metaphors and analogies appeared in the portfolios, often in original and illuminating ways, three of which I share here.

Amy chose to illustrate her progress through the program on her cover. It was carefully composed with two framed pencil sketches of her hand, both done in the art methods class students had in the fall term. The first sketch was a "blind drawing" in which the students were required to look away from the paper as they drew. She describes the sketch as, "like me at the start of the program. The lines are undefined and there are a lot of rough edges. And I'm all over the place." The second drawing was done in a later class. "We got to look at what we were drawing. Things are becoming more clear- the edges are more defined. I'm learning about me-I'm learning about teaching, I've got a long way to go but I'm not as rough around the edges." The comparative drawings of her own hand, executed with greater assurance and skill as Amy moved through her course of study were apt metaphors of becoming a skilled and confident new teacher.

Michael's metaphor for himself throughout the portfolio was the "traveller, the seeker of wisdom" who finds himself following leads about where to find "this guy called Dewey," meditating about intellectual virtues in temples, scrambling through "valleys of despair- that was the integrated unit..." and landing, Gulliver- like, in a strange lands of curricular documents, learning outcomes, and "mandatory study groups." Wide-eyed and adventurous, Michael took risks as a student and a student teacher and these found humorous expression in his portfolio. In one sense, the metaphor he chose allowed him to play with multiple identities as a teacher just beginning his journey.

At the conclusion of her portfolio, Jenny wrote a poem about a difficult rock climbing experience and the nearly paralyzing fear that gripped her as she struggled to find a solid foothold. She regarded learning to teach, she said, as a struggle to overcome her fear of failing, failing to meet her own



expectations and the needs of her future students. At the top of the rock, she looked out over a hundred more peaks to climb, “and felt exhilarated. That’s how I feel now,” she added, “exhilarated.”

The portfolios of all twelve students interviewed received either excellent or good evaluations from the instructional team. At the time they made their videotapes, the students did not know their grades. Because all twelve students readily agreed to “go public” with their portfolios, it is likely that all twelve were proud of some aspect of their work and confident about communicating the experience. This is certainly the impression left by the tapes and interviews. In this sense, all twelve students realized at least one of the goods internal to the practice: pride in their efforts. Even so, the differences between students’ attitudes and reflections are noteworthy. Three of the students I quoted, Ron, Mandy, and Craig revealed that their interests were mainly in the portfolio as product, something to fulfill program expectations and to show a prospective employer. Ron concentrated on building a resume, Mandy on demonstrating specific areas of expertise she thought would be marketable, and Craig on creating a series of visual displays that covered “all the bases.” A fourth student, Jeanne, found herself casting about for a thematic motif that might “fit” her entries, rather than shaping her portfolio around a theme that had genuine meaning for her. She struggled with the portfolio as “just another assignment, but a big one that counted a lot.”

These four students exhibited at least some preoccupation with the “goods external to the practice,” either in the form of grades or a product for an interview. Did preoccupation prevent realization of internal goods associated with the practice? I think it inhibited full realization. In interviews, Ron, Mandy and Craig showed little introspection and engagement when they spoke about possible relationships between building a portfolio and becoming a teacher. In discussions, none of these three connected learning to teach with learning to inquire or reflect. Ron, for example, dismissed the idea of keeping a log or journal once he began “the real work” of teaching. For the other eight students however, the portfolio was clearly more than just another assignment; it was a reflection of growth and discovery. Learning emerged through a practice constituted by standards and goods. Their work was characterized by earnest engagement with issues they were passionate about, the willingness to risk mistakes, and the commitment to explore all aspects of instruction through their own narrative.

#### **4. PART THREE: REFINING PORTFOLIOS IN TEACHER EDUCATION**

It is still my belief that portfolios can have a central place in the evaluation of students’ performance in teacher education programs. This position has

been argued by many educators (Barton & Collins, 1993; Loughran & Corrigan, 1995; Wade & Yarbrough, 1996; Borko et al., 1997; Meyer & Tusin, 1999). Among the most salient reasons cited are that portfolios represent a holistic view of student growth and the development of professional qualities key for effective classroom teaching. The evaluation of portfolios represents a welcome departure from assessments based on visions of teacher education that researchers describe as technical and mechanistic (Sachs, 1997). In addition, portfolios are said to offer students the opportunity to, as one of my students noted, “put a piece of myself back into the program.”

The reasons are persuasive, but they do not tell the whole story. However sound the theoretical base, the potential of portfolios has not always been realized in practice. As Wade and Yarbrough note, we need further empirical research to determine what kind of difference portfolios make in individual cases (1996). Conversations with my former students have underscored this point for me. In some instances, portfolios remained random collections of undeveloped thoughts and ideas, the very thing that initially worried Jenny in her reflections. (In her own case, her fears turned out to be groundless.) The potential “internal goods” of the portfolio were never realized for some students. Their own sense of growth and accomplishment as emerging teachers did not find expression in their narratives. Several students never moved beyond viewing the construction of a portfolio as another “hoop to jump.” In order to make the portfolio experience as meaningful as possible, we need to address important concerns, several of which were expressed by students, and others of which came through their work. Among these are:

- anxiety about the scope and nature of the task
- doubt about the intrinsic value of the process (or goods internal to the practice)
- lack of “models” that might guide early phases of construction
- little academic preparation for a creative and personal piece
- concern about the subjectivity of evaluation

To consider the significance of these concerns for refining the portfolio assignment, I turn to the four categories I used earlier: initial responses to the assignment, structural and stylistic approaches, themes developed, and metaphors represented. I have found these useful in reshaping the assignment for my own students. Clearly, responding to the context is critical, but some suggestions may transfer to other programs.

## **4.1 Initial Responses: Calming Anxieties**

The sooner we can reduce anxieties the sooner students will become genuinely engaged in the practice. One of their concerns is their unfamiliarity with the concept of portfolios. Asking students to generate ideas for specific content helps to bring them into the process early and proactively. Our students thought of content areas we did not: resource reviews including films and exhibits they saw, original songs, commentary on newspaper articles, photographic essays, personal archives, and short stories. Other students eagerly adopted these suggestions. For two students, fictional narratives describing the kind of teachers they wanted to become were centerpieces of their portfolios.

Negotiating evaluative criteria helps students become clear about the broader purposes for constructing portfolios and the goods associated with them. These goods include taking ownership for one's own learning. Working through this process is a good way to link portfolio evaluation with the sorts of assessment practices they will engage in as elementary teachers (Meyer & Tustin, 1999). Teachers at all levels struggle to construct fair and meaningful standards for evaluating students' work. Portfolios offer special, complex challenges because they attempt to capture so many aspects of learning. Constructing standards together is a way to acknowledge student autonomy. "What knowledge was most important for your own growth?" is a question we keep in the foreground.

## **4.2 Helping with Structure and Style**

As with any complex and long-term assignment, we try to achieve a "balance between guidance for content and structure on the one hand, and flexibility and choice on the other" (Borko et al., 1997, p. 347). We initially made the portfolio assignment open-ended but found the ambiguity was debilitating for some students who had no idea how to start. Providing samples of other portfolios helped students envision possibilities for their own. The danger is that students will restrict themselves to a shape and structure too soon or stay with one that is inappropriate for their intentions or personality. Some might find, as Lisa did, that chosen structures do not match well with the story they want to tell. Even considering this risk, the novelty of constructing a portfolio warrants some scaffolding with models and examples. Students should feel free to pursue independent directions, but secure enough to fall back on an established framework if needed. Michael was one student who was comfortable with risk taking from the start. Other students were more cautious in their approach and only later gained confidence in their ability to create original frameworks.

### **4.3 Supporting Exploration of Themes**

Students have to make important decisions about what ideas to include and what to leave out in their portfolios and justify those decisions to others (Loughran & Corrigan, p. 567). This can be daunting if they have not had opportunities to address issues and themes. Class discussions are one venue for dialogue. We provide other opportunities by creating small study groups that meet weekly in a two-hour block. This is generative time, and though groups occasionally report to the whole cohort, study groups follow up on inquiries of their own choosing. We also encourage students to hand in drafts to instructors for feedback. Peer editing of portfolio entries is encouraged as well. None of these approaches ensures that students will engage with the kinds of powerful issues we think are important. At best, we can open up space for students who are already inclined to examine and debate, and support their efforts. Their examples may well inspire others still on the outside of the practice. For students who become engaged, one “internal good” emerging from the portfolio process is the knowledge they have dealt seriously with perennial dilemmas and conflicts in education. This in itself is a source of satisfaction.

### **4.4 Working with Metaphors**

There have been significant efforts to transform teacher education in recent years, efforts to move programs beyond the ubiquitous talk of teaching skills, techniques and behaviours. It is widely accepted that learning to teach is as much a matter of cultivating certain dispositions and sensitivities as it is amassing pedagogical tools (Zeichner & Liston, 1987; Reichert, 1990; Fenstermacher, 1992; Tom, 1997). Understanding the reasons for the curricular decisions one makes, being able to justify instructional choices, knowing both limits and possibilities of various methodological approaches, and meeting the unique and dynamic needs of learners, all require a critical eye, an inquiring spirit, and careful judgment. Clearly, a teacher preparation program is only the beginning of one’s education for teaching, but it does represent the foundation for future exploration. While we cannot instill passion for discovery (including self-discovery) we can nourish it. Encouraging students to explore metaphors that shed light on their own learning opens up conversations in which taken-for-granted assumptions about teaching are tested and vague platitudes are questioned. Bringing imaginative and unusual metaphors into the portfolio keeps reflections fresh and original. I find some of the richest sources for beginning these conversations are found in novels, poetry, film, and children’s literature, excerpts of which I share in most classes. Students who doubt their own

imaginative capabilities gain confidence from discovering many ways human beings make sense of their experiences and communicate to others.

## 5. A FEW CONCLUDING REMARKS

Making sense of experience and communicating it to others is one useful description of writing or telling a narrative, especially applied to a portfolio. For eight of the students interviewed, the portfolio assignment turned out to be a unique story of their experiences in learning to teach. They documented their emerging identities as professionals, sometimes quite powerfully, through combinations of words and images that expressed anticipation, fear, confusion, disappointment, and, as Jenny said on the last day, exhilaration. For these students, constructing the portfolio became a practice in which the external goods were secondary. Even the external good that might come from having a professional portfolio to take to an interview paled in comparison to their achievement. They successfully documented stories of becoming knowledgeable, reflective teachers. The internal goods associated with the practice mattered most: a deeper understanding of self as both teacher and learner, a disposition to question and examine assumptions and actions, and a sense of excitement about writing the next chapter.

These were the eight success stories. It is the other four (and similar stories) that give me pause. Each year some students are less able than others to bring coherence or insight to their portfolios, and less inclined to see beyond the external criteria for procedures and grades. Far from being at the heart of their own experiences, portfolios remain on the periphery of their time in teacher education. Bringing them inside the practice of self-study is a continual challenge. As I consider the place of portfolios in our program these I need to keep these students clearly in mind. It is the stories these students tell that can easily get lost. Their stories also speak strongly to the limitations of my own instruction. In the interviews, I discovered my own biases and beliefs about teaching often came back to me unchanged, sometimes word for word. Because of this discovery, I hope I am learning to assert my own views with less haste. I should not assume I know my audience, or prejudge responses to my arguments. Learning to see portfolios through students' eyes gives me an opportunity to view my own instruction as they do, as one model for their own. It is a humbling experience.

In the final analysis, it is the promise of goods internal to the practice of portfolio construction that should shape instructional expectations and students' efforts. This is not an easy promise to keep, but it is worth keeping in mind. We find the real value of the portfolio in students' perceptions of the process. What matters most, it seems to me, is that students come to

believe the process is integral to teaching with knowledge, understanding and compassion, all of which are goods worth pursuing through this, and other practices.

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## **SECTION III REVISIONS**

# Chapter Fifteen

## COMPLEXITY SCIENCE AND THE CITE COHORT<sup>1</sup>

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### 1. INTRODUCTION

In this chapter we use two general questions to frame our analysis of complexity science and its contribution to the ways in which we think about and make sense of our work within CITE: (1) What is significant about cohorts in teacher education?; and, (2) How might complexity science inform our understanding of cohorts in particular, and of teacher education programs in general? We argue that the use of a cohort-type structure in a teacher education program provided us with the type of flexibility and potential for improvisation that allowed us to address the perennial problems of program fragmentation both within the campus-based courses and between the campus experiences and the field-based experiences. In order to better understand our own teaching and learning practices in this community setting we sought an analytic framework that emphasized the importance of the learning potential of the collective as opposed to just the learning potential of the individual and we argue that complexity science, with its ecological emphasis on learning systems, is such an analytical framework. Through the analysis of narratives emerging from our own practices we endeavour to illustrate five features of complex learning systems germane to teacher education that have been proposed by Davis and Sumara (2004). We go on to generate a further five propositions about the role and value of cohorts in teacher education that we have generated from considerations of our own practice as viewed through the lens of complexity science.

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<sup>1</sup> This chapter is an adaptation of the article: Clarke, A., Erickson, G., Collins, S. & Phelan, A. (2005). Complexity Science and Cohorts in Teacher Education. *Studying Teacher Education* 1(2), 159–177.



## 2. COHORTS IN TEACHER EDUCATION

Bullough et al. (2001) recently commended the increasing use of cohorts in teacher education and reminded us that the cohort concept has received significant endorsement within the educational community over the past two decades (Mather & Hanley, 1999; Holmes Group Report, 1986; Goodlad, 1990). However, Bullough Clark, Wentworth, and Hansen (2001) note that “despite what appears to be a growing interest in the cohort idea and expansion of the practice, there have been remarkably few published studies” (p. 98). While some literature does exist, it generally addresses practical issues related to cohorts (Fenning, 2004; Peterson et al., 1995; Seifert, & Mandzuk, 2004). Others have pointed out some of the problematic aspects of cohort groupings (Sapon-Shevin & Chandler-Olcott, 2001). The article by Bullough et al. (2001, p. 99) sought to “deepen the understanding of the strengths and weaknesses of cohorts primarily from the teacher education students’ perspectives.” Using a grounded theory approach, they developed categories and themes from observation, survey, interview, and sociogram data generated over the course of their cohort students’ professional year in education. Their analysis highlights “evidence [that] supports the value of cohorts in teacher education as a means of providing beginning teacher support, enhanced opportunities to learn from other beginning teachers, and realizing that learning to teach is a community responsibility” (p. 101). They also note that although cohort organization has great educative potential, “this potential is not realized simply by administratively shuffling students into groups...structural changes to teacher education like cohort organization must be complemented by efforts to alter common-sense conceptions of teaching” (p. 109). We are encouraged by the similarity between their findings and the issues that we have documented in CITE in recent years (Erickson et al., 2004); the similarity suggesting that our respective experiences with cohorts in teacher education are comparable. However, in responding to the call by Bullough et al. (2001) for more substantive research on cohorts, we deliberately attempt a broader analysis in this article of the cohort concept itself; a move beyond thematizing the particulars to theorizing the practice of cohort use in teacher education.

To do this, we sought an analytic framework that emphasized the importance of the learning potential of the collective as opposed to enhancing the learning potential of the individual, an approach that is promoted by other group-based approaches to teaching and learning such as cooperative learning (Johnson & Johnson, 1991). Hence, in our earlier analyses (Erickson et al., 2004, in press) we drew upon Lave and Wenger’s (1991) “community of practice” concept and Scardamalia and Bereiter’s (1992) “knowledge building community” approach. However, the philosophical traditions from which these two approaches arise, with rational and structural underpinnings, do not

encompass the fuller sense of the simultaneous emergent and collective knowing that we believe characterize our work within CITE. For these reasons, we have chosen to explore the potential of complexity science, with its ecological emphasis, as a way of exploring the use of cohorts in teacher education. We ground our analysis by introducing narratives of our experience, which illustrate some of the practices characteristic of CITE. However, before we introduce these narratives we will outline some of the basic tenets of complexity theory as they pertain to our analytical concerns.

### **3. COMPLEXITY SCIENCE**

Our interest in complexity science as a way of thinking about the CITE cohort has emerged over the last few years. In particular, we were intrigued by four aspects of complexity science: an emphasis on a non-linear frameworks (Davis & Sumara, 2004), the view that cognition is not simply representative of what we know but rather of a continual bringing forth of what we know through the process of engagement (Capra, 2002); the belief that open systems maintain themselves by being in a state of disequilibrium yet they remain stable nonetheless (Prigogine & Stengers, 1984); and, the spontaneous emergence of order from apparent random or unrelated events (referred to as emergence or self-organization) (Johnson, 2002).

Some instructors have introduced the concept of complexity science to their students as a way of thinking about learning and others have used it as a way to frame particular inquiries. Our explorations have been further prompted by contributions by Davis and Sumara (2004), two educators who have actively been exploring complexity science in their respective fields of study (mathematics education and language education). For Davis and Sumara (2004) complexity science is the study of learning systems “which are defined as self-transformative, recursively elaborative phenomena that are nested” (p. 5). Within such systems, “a learner is any complex agent or organization that is capable of adapting itself to emergent circumstances” (p. 8) and where learning is understood to be the process of adaptation. This way of thinking about teaching and learning stands in direct contrast to approaches that regard learning as something that is essentially an ordered sequential process with clearly defined outcomes at the outset.

Complexity science is a science of entanglement, not of distinction-making. It is about participation, not specification. An important caveat of this sort of discussion is that a complex phenomenon is irreducible. It transcends its parts, and so cannot be studied strictly in terms of a compilation of those parts. It must be studied, that is, at the level of its emergence. Classrooms aren't just collections of students, schools aren't

just collections of classrooms. As such, complexity science provides a means to read across cognitive, social, situated, critical, cultural, and ecological discourses—without collapsing them or their particular foci into unitary or coherent phenomena. (Davis, 2003, p. 43)

Educators who draw upon complexity science as a way to interpret the world reject conceptualizations of schooling that attempt to simplify classrooms or disregard as ‘noise’ student contributions that interrupt or deviate from prescribed curricula. Rather than studying schooling systems, complexity theorists prefer to study learning systems.

Complexivists, that is, are as much interested in occasioning complexity and triggering transformations ... Education hasn’t paid much attention to this particular [perspective]—unlike business, economics, politics, ethics, law, and several branches of medicine, including immunology and neurology. We suspect that part of the reason for the slow uptake among educationalists has to do with the overwhelming commitment to linearity and linear causality, inscribed in institutional structures, classroom resources, developmentalist theories, curriculum intentions, and pedagogical methods. (Davis & Sumara, 2003, p. 39)

Davis and Sumara (2004) and their colleagues have described five features that characterize complex learning systems that they regard as potentially important to teacher education programs: internal redundancy, internal diversity, neighbour interactions, decentralized control, and enabling constraints. While there a number of other features of complex systems, we believe these five are particularly germane to the self-study that we undertake in this article. In the following vignette, we attempt to illustrate, albeit briefly, these five features.

### **3.1 Vignette: Whose Backpack Is It?**

*As a UBC Social Studies instructor I teach a number of sections of the elementary Social Studies methods course for the B.Ed. program. Near the start of the each course, I introduce the concept of artifacts. Recently, I have begun using an activity called “Who packed the pack?” In this activity, I take my wife’s backpack filled with assorted items that she uses in her role as an elementary vice-principal when she goes on excursions to the park, the mall, or other places with the children from her school. After my class comes back from a break, I show them the backpack and pretend that I found it in the hallway. Holding up the pack, I ask, “Does this belong to anyone?” They shake their heads very seriously. After a little fussing I say that we really should find out who owns the pack and start rummaging through the contents. Some students seem a little concerned about what I am doing with a stranger’s*

*property but their concern turns to curiosity when I start distributing handfuls of the pack's contents to tables around the classroom. I ask the students at each table group to examine the artifacts and come up with theories, backed by the evidence, as to who might own the backpack. Typically, the table groups are quite secretive and competitive because they want their table group to be the one who solves the mystery. Earlier this year I did this activity with the CITE cohort. At first, the activity proceeded as usual with individual table groups discussing possible solutions to the riddle. However, about halfway through the activity, something unusual happened; something that I had not witnessed in my other sections. One student began to ask the students at a neighbouring table about their artifacts. Very soon all table groups began a collective sharing of their artifacts and tentative theories. Another student went to the board and started listing the contents of the backpack as described by the different table groups and, with the help of students throughout the class, began to categorize the items. In taking this collective approach the class quickly generated a number of very plausible theories about the owner of the pack. This self-generated approach to solving the mystery allowed the class to very quickly identify the real owner!* [CITE Social Studies Instructor]

The activity described in the foregoing narrative illustrates how a group of people can share common values that influence or even drive certain behavior and events; in this case, the commonly valued tenets of a community orientation and of engaging in inquiry resulting in students moving beyond the expected parameters of the activity. Instead of resorting to secrecy and competition, they quickly moved to a realm of collaboration, maximizing the force of the inquiry by pooling the information resident in the group as a whole.

This activity, likewise, illustrates a common feature of complex learning systems, which is that of *internal redundancy*. The redundancy referred to here is not one of waste but one of commonality, where shared properties among 'agents' in a system are necessary for coherence and interactivity within the system. Without some common or shared characteristics, it is difficult for elements of a system (e.g., ideas that might be generated as a result of a discussion on classroom management) to interact productively with one another.

This Social Studies activity also relied on the varying learning styles, diverse backgrounds, and personalities of each student. The backpack activity took advantage of the various forms of knowledge and variety of ideas that each group was able to offer. This is an example of *internal diversity*. It reminds us that variety is essential to ensure the generative potential of a system. Narrowly defined or highly delimited systems lack the capacity for growth and development, and at best, are only able to mimic current practices within a system. However, the more diverse a system is the greater the possibilities for the system to emerge and adapt, flourish and develop, in response to changing circumstances. Internal redundancy interacts with internal diversity so that in extreme instances of either

excessive difference or excessive duplication, which are likely to inhibit rather than enhance the generative capacity of a system, are counter-balanced by each.

Furthermore, the students in CITE created a sense of shared consciousness, or common knowledge, through their conversations where they exchanged ideas about the ownership of the backpack. At first the interaction was within small groups. The predisposition of this class toward community quickly transformed these interactions into a classroom wide conversation. This *neighbour interaction* is another feature of complexity and emphasizes the importance of contact between 'agents' within a system. Within the context of a learning system, Davis and Sumara (2004) argue that it is important to think about agents as ideas, rather than people, that "bump up against one another" (p. 10), where this interaction gives rise to rich "interpretive moments" (Davis and Simmt, 2003, p. 157) for knowledge generation. Moreover, it is important that there is a sufficient density of interactions to allow for a range of possibilities, where some ideas will be disregarded, some adopted for wider use, and others held in abeyance for later scrutiny. The important point here is the extended engagement of ideas that lies at the heart of a complex learning system.

When students began reaching beyond their small groups for more ideas, control for the activity began to shift from the instructor to the students in ways that distinguished the backpack activity in the CITE cohort from other cohorts taught by the instructor. This class tested the traditional classroom limits and experimented with taking on some of the class authority for themselves. The instructor, perceiving "a teachable moment," allowed that authority to be shared in this instance. *Decentralized control* exists when "collective authorizing rather than external authorizing" (David & Sumara, 2004, p. 13) is valued and encouraged within the system. Indeed, the willingness to relinquish control is important for complexity to occur: "invite chaos, trust complexity" (Bloom, 2004). For example, within CITE it is not an individual instructor or an individual student but rather the collective of instructors and students that is important in terms of knowledge generation. Decentralized control calls into question an assumption that underlies many learning theories that learning is essentially an individual act.

The artifact activity was still bounded by expectations for productive behavior and constituted a structured teaching and learning environment. The instructor still had the responsibility to preserve reasonable limits for the activity, to provide guidance toward the learning goals and to ensure closure at some level. The students were aware of the acceptable level of disruption and of the established code of conduct within the class. Furthermore, they also had an interest in conserving an effective learning environment. The backpack activity and its contents provided parameters within which

engagement of the problem took place but the activity itself was deliberately open-ended to allow the students to generate a range of possibilities. In the process, the backpack also allowed the students to present, test, and refine those possibilities with each other. Established broad limits allow for choice, creativity, and optimum interaction. This feature is referred to as *enabling constraints*. Davis and Simmt (2003) argue that complex systems “are rule-bound, but those rules determine only the boundaries of the activity, not the limits of possibility” (p. 154). This feature highlights the importance of rendering tasks broadly enough to allow a variety of explorations but focused enough for productive outcomes to be generated within the system.

At the end of each academic year, we hold a three-day CITE retreat to review issues arising from the previous year and to plan for the following year. The language of complexity science has begun to enter our discussions more frequently during these extended examinations of our practice. During our most recent retreat, the conversation generated sufficient interest for the instructors to hold extra sessions after the retreat to explore further complexity science and this article is a direct outcome of those discussions. One challenge we faced was overcoming our temptation to fall back on familiar ways of knowing and constructing our experiences within CITE. We had to make a deliberate effort to move away from linear and deductive representational forms. As a result, we began to draw on narrative renderings of our practice, which seemed more in keeping with the ecological perspective on practice that we were seeking. Additionally, narratives because of their storied nature allowed us to dwell longer with the events over time, more so than vignettes, thus providing opportunities to see more than we might have registered at first glance. In the sections that follow, we provide two narratives to illustrate how we framed and examined our inquiries into the relationship between complexity science and cohorts in teacher education. The narratives are typical of the sorts of discussions that take place among CITE instructors, many of which begin as impromptu conversations during the week and emerge more fully in our weekly instructors’ meeting. We have chosen these two narratives because they illustrate the distinctive nature of the discussions that arise in CITE and that we encounter less often in our work in the regular teacher education program.

### **3.2 Narrative #1: The Case of the British Columbia College of Teacher Standards**

*The British Columbia College of Teachers (BCCT) has recently witnessed the arrival of “standards for the education, professional responsibility and competence of its members” (BCCT, 2004, p. 3). The standards are an attempt to delineate the knowledge, skills and attitudes required of “professional educators” (BCCT, 2004, p. 6). There are few surprises:*

*professional educators must “value and care for all children,” “have an in-depth understanding about the subject areas they teach,” “implement effective teaching practices” and “apply principles of assessment, evaluation and reporting” (BCCT, 2004, p. 10). At first glance, the words appear as common sense, a relatively benign and acceptable response to the implicit question: What is teaching? Faculties of Education in the province of British Columbia are currently exploring what the standards mean for programs and practices in teacher education. In the University of British Columbia such exploration is located in a range of different program contexts; CITE is one such context. In a series of monthly two-hour meetings, members of the CITE team gather to re-interpret the standards in relation to our program practices.*

*What was striking about our initial attempts at discussion of the standards was the diversity of reading practices that was evident. Some took a strictly conceptual approach to the “problem” and asked: What is the etymological root of the term “standard”? Where did the term originate? Some interpreted the standards critically seeing them as yet another attempt to control and de-professionalize teaching. For those with this critical perspective, the attempt to standardize practice in teaching and teacher education was both inappropriate and unacceptable. Others wished to read the standards historically in light of their origin in British Columbia and elsewhere in Canada. Still others wanted to read the standards as an opportunity for thoughtful action (praxis) in the CITE program. Questions emerged such as: How might we reconsider our assessment and evaluation practices in light of the standard? The diversity of positions and ideas was energizing and engaging almost in the manner in which a good graduate seminar can be. The new circumstances—the standards—became a site of learning within CITE as contested ideas collided with one another and different responses to our new situation were proposed. Individual histories and commitments became evident and new affinities formed among us. While everyone appeared to have the opportunity to speak, some views seemed to not be as welcome as others. A tension seemed to exist between those who believed that critique could have a productive role to play and those who feared that critique could simply be reduced to criticism/complaint barring the route toward thoughtful action. This is where diversity of ideas in and of themselves seemed not to be sufficient condition for learning within CITE. There had to be some commonality that we shared that would allow us to live alongside our differences.*

*Infused throughout the conversation was concern with our positioning as faculty members relative to the teacher organizations, government, our*

*own faculty and our colleagues in schools. For example, by our second meeting, it was clear that the phrase “piloting the standards” used by faculty administrators, did not express CITE’s intent; our task, we agreed, was to “re-interpret” the standards in light of CITE program values. This, of course, returned us to the CITE handbook and the articulation of what we had previously termed, “student understandings, abilities, sensitivities, dispositions and commitments.” The return to shared values was an act of memory, a re-membering of ourselves and what we hoped for graduates of CITE: that they have an understanding of the socio-historic context of schooling, that they have the ability to interpret and carry out research on teaching, that they be sensitive to difference and that they show a commitment to supporting others’ growth. These were not mere statements but the result of a shared consciousness arrived at through many years of conversations. In recalling these hopes, we implicitly recalled a set of relations amongst ourselves and the world that we hoped to bring forth together (Davis, Sumara & Kieran, 1996).*

*However, while the statement of values in the program handbook served as a reminder, it also invited reconsideration in light of the standards but also in light of new instructor and student membership in CITE: Is this what we still stand for? What have we omitted? What might be problematic about our previous articulation? What must we keep? The recursive nature of our exploration suggests that the program and its curriculum are dynamic and moving forms in a constant, but reasoned, state of reconfiguration. Our reconsideration was evident, for example, as we redesigned a portfolio assignment in light of these conversations. One of the major questions that emerged was whether we should insist that students frame their portfolios in terms of the new BCCT standards. Rather than taking this approach, we decided to include the standards document as one of three such documents that students should consider as they designed their portfolios. Our hope was that students might inform our own thinking about the place of the standards in assessment: What forms and approaches might they generate that we never considered? In this manner, re-interpreting the standards became a shared responsibility, a source of individual agency but also a site of collective knowledge generation.*

### **3.3 Narrative #2: Why on Earth Should We Go ‘On-line’ to Discuss Issues When We See Each Other Everyday?**

*This was one of the many questions that we faced when two instructors introduced our CITE students, during the orientation phase of our 4th*



cohort group, to our proposal of doing one of their courses on educational issues and equity using an on-line discussion forum rather than the usual face to face classroom setting. While many of the students were aware that there was a significant focus on digital learning tools in the CITE program from materials they had received once they registered in the teacher education program at U.B.C., they were not familiar with the specific communicative and learning tools and strategies that have evolved over time in the CITE program.

We explained to them that one of the important features of a community of inquiry is that the knowledge generated by the community must be open to public scrutiny and criticism and that we were interested in the possibilities of expanding our current community to include former CITE students (most of whom were in various types of teaching positions) along with other educators in different geographical and institutional locations. Further we indicated that engaging in a series of structured, on-line discussions around the primary topic areas of the course<sup>2</sup> would provide some flexibility in their work schedule because they would not be attending regularly scheduled classes. Moreover, it was indicated that the on-line learning environment would also provide them with one type of model for collaborative learning that they could potentially use in their classrooms. Based on these shared understandings of the rationale for this unusual practice (where they could at times be sitting right beside one another in a classroom or a computer lab responding to a colleague's comment on the electronic forum), two CITE instructors, the 36 CITE students, and a group of former CITE students and other interested educators embarked on a journey exploring pedagogical terrain that was unfamiliar to most of the participants.

We continued to navigate our way through numerous technical and pedagogical issues associated with this on-line course for the next three years, learning much about the medium, ourselves, and our 'taken-for-granted assumptions about teaching' in the process. Both the students and the instructors learned a great deal about the nature of collaborative, on-line learning environments. Furthermore the students gained a new appreciation of the importance of dealing with challenges to their own deeply held beliefs about some of the issues discussed in the forum and became sensitized to possible strategies for creating productive teaching and learning conditions. While we only have

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<sup>2</sup> The course was entitled "Educational Studies" and it was focused around the discussion of issues related to social justice and educational practices. The topic areas that we dealt with were: multiculturalism, gender and sexual orientation, second language issues, disabilities, aboriginal education, and poverty.

*anecdotal student comments to support these claims, we believe that they are powerful reflective statements about their own learning processes and about the content being discussed. We will only offer two such student comments to illustrate these claims:*

This type of discussion reflects problem solving, in that we were thinking critically, and questioning the thoughts of one another. This questioning benefits both the outside readers, and the actual participants, because when a participant's idea or point of view is challenged, one of two things happen. The writer either adjusts his or her thinking, or deepens his or her understanding by justifying the point of view to others. (Student 1)

The responses of others to the question that were posed helped to solidify my own viewpoints, or they served to provide more food for thought. In the past, I have done most of my learning on my own. I have not worked with other people, nor have I bounced ideas off them. Learning has been done solely on my own, in an environment fraught with a competitive edge. What has been encouraged is sharing of ideas. This learning has been about delving into issues, expressing our viewpoints and sharing them with others. (Student 2)

*Thus it seemed that this type of forum not only encouraged the participants to provide some justification for their viewpoint, but also the 'permanent access' that they had to the ideas of others meant that they explicitly quoted and referenced the contributions of their peers. This inquiry into on-line communicative practices, along with others that we have explored since we created the CITE program, have provided the foundation for continued growth and improvisation in our structures and practices. Furthermore, these inquiries represent an ongoing form of self-study of our own practices with the view of creating a defensible and effective teacher education program. Towards this end we examine, in the next section, a series of propositions that we think are justified with respect to the cohort model of teacher preparation that we have adopted in CITE.*

#### **4. A READING OF CITE AS A COMPLEX SYSTEM**

Through the construction and analysis of narratives of our practice, including those above, we realized that almost unbeknown to us our pedagogical focus had shifted from a preoccupation with program outcomes to a focus on the nature of our engagement with and among ideas and people. Further, we seemed to be more frequently 'inviting chaos and trusting complexity' as

part of our daily practice. And finally, the cohort concept has emerged as an critical initial condition for the emergence of complexity within CITE (i.e., where the interaction between entities becomes the genesis for the emergence of more complex entities). Our initial inquiry grew out of a curiosity about the longevity of CITE: Why is it that the CITE cohort has sustained itself productively over so many years when our experience with, and the literature on, cohorts suggests a short life span for such endeavours? A partial response to these questions can be found in our earlier discussion of how our CITE experiences can be interpreted in terms of the five features of complexity science outlined by Davis and Sumara (2004). To their analysis of the features of complex systems in a teacher education program, we wish to add a series of five propositions that distinguish our experiences in CITE from our experiences in the regular UBC teacher education. These propositions draw upon some of the essential features of complexity science and focus on the structural organization of cohorts that we have used in CITE. Individually, these propositions are not necessarily new to teacher education, but the ecological emphasis offered by complexity science brings them together in a way that provides far more productive and explanatory power than other contexts in which we have encountered them.

#### **4.1 Proposition 1: Entertain Uncertainty**

There are many criteria upon which teachers are judged to have reached a level of competence in the classroom; independence, confidence, and self-assuredness are a few examples. However, one of the overriding criterion in the literature is the ability to be reflective about one's practice (Zeichner, 1987). Our experiences in CITE indicate that a key element of reflection is the ability for ourselves and our students to entertain uncertainty. When we permit ourselves to entertain uncertainty, we are allowing ourselves to live dangerously with pedagogy. To invite chaos (uncertainty) suggests that we will trust the processes of complexity to generate pathways and possibilities for action. Thus, for student teachers to entertain uncertainty they need to feel a level of trust, support, and confidence from their instructors and from their supervisors.

#### **4.2 Proposition 2: Seek to Articulate What You Do Not Know**

Reminiscent of Vygotsky's zone of proximal development, the current structure of the CITE program encourages both students and instructors to identify what it is that they know and, of equal importance, to identify what

it is that they do not know; where the “space of the known” is surrounded by the “space of the identified unknown” but potentially knowable.

The instructional team has engaged in a variety of practices that illustrate this proposition along with the closely related proposition above on *Entertaining Uncertainty*. These practices range from our commitment to weekly meetings during the teaching term, our planning/evaluation retreats at the end of term, and our ongoing program of inquiry into various elements of the program. In these various activities the instructional team is constantly exploring and analyzing the “space of the identified unknown.” For example, in the case of our inquiry into the BCCT standards narrative we decided not to eliminate any of the analytical practices that might be brought to bear upon this problem area. Instead, we proceeded to: (1) situate the standards historically, politically and socially; (2) to explore the etymological roots of the term; (3) to examine each standard in turn, asking questions about the conceptions of teacher, teaching and teacher education upon which each is premised; (4) to evaluate the standards in light of CITE commitments; (5) to identify and test out various approaches to teacher evaluation using the standards; and, finally (6) to initiate a seminar series on the topic. In these ways, we worked with the concept of standards, attempting to understand it and to play with its practical and theoretical boundaries. Our individual and collective passions were enlivened by the liberating force of play (Doll, 2003). Likewise we have encouraged our students to engage in these kinds of activities through a series of reflective exercises as a part of their coursework, practicum experiences, and a culminating professional portfolio.

### **4.3 Proposition 3: Acknowledge Agency**

While we believe this to be true regardless of how we might organize ourselves, attending to the features of complexity science reminds us that interactivity is constantly at play in shaping one moment to the next; in determining who we are and how we act. Agency and complicity are at work here simultaneously! Complexity science reminds us that attempting to separate one from the other makes little sense. Rather, we should acknowledge the interactivity between the two and to be attentive to the possibilities that might arise in a given situation as we are to predicting the anticipated outcomes. Of particular importance here is that every interaction, however small or insignificant, is determined by and determines the quality of the learning environment that is created. The narratives provided earlier in the article provide clear evidence of the way in which circumstances unfold and simultaneously enfold our practices within CITE.

#### **4.4 Proposition 4: Allow for Improvisation**

Our analysis of the events portrayed above suggests that, almost unbeknown to us, improvisation has become a highly valued element of the way in which CITE has evolved.

Improvisation occupies a special place in the range of techniques that actors use. It is often used to help solve problems where conventional thinking particularly within a creative context is not working. It is also used to develop new ways of working that can be spontaneous and innovative. Through improvisation we create relationships with other improvisers that utilize our imagination and explore the differences that exist in relating that leads to creative emergence. (Naidoo, 2004, p. 10)

Furthermore, improvisation is a crucial characteristic of adaptive systems in terms of complexity science. It is an emergent property that is generated by systems that contain sufficient diversity to generate creative responses to challenges that are inevitable in any learning system. Our ever-evolving use of digital learning tools is but one illustration of this proposition as we continue to improvise on both the types of tools used and their applications in our own teaching practices as well as the students' teaching practices in their various practicum settings.

It seems to us that pragmatism is at work in the CITE cohort. As Davis, Sumara, and Kiernen (1996) suggest, CITE as a system is about the "survival of the fit" rather than the "fittest" (p. 166). Rather than trying to achieve some ideal or idealized program, our challenge is to sustain conversations about practice that allow us to discard those practices that are destructive to our learning community while selecting more "useful" practices. The goal is not to discern a pre-given ideal form but to create that which is possible to sustain—a "good enough theory of curriculum" in teacher education (Davis, Sumara & Kiernen, 1996, p. 163). This allows for improvisation when things like the BCCT standards come up and suddenly we are faced with how we ought to respond and learn. The strength of this positioning in a system is its openness to difference and its capacity for passionate exploration (Doll, 2003).

#### **4.5 Proposition 5: Value the Possibilities of the "Slow School" Effect**

An interesting outcome of our analysis of CITE is that when teams of teachers work with teams of students—where the cohort experience is authentic and not contrived—then the net effect is a slowing down of the educative agenda and a reduction of the time press that bedevils many 12-month B.Ed. programs. Our experience with the cohort model is that it

allows students and instructors to place more emphasis on key issues by dwelling longer in those moments that arise in the course of the program that prompt us to think more deeply about our present and future roles and responsibilities as educators. Holt (2002) has titled this phenomenon the “slow school effect.” This is an unexpected but interesting outcome of our analysis of CITE and, in interesting ways, honours the features of complexity science; it allows for interactivity and collective authorizing, both of which require time, within the network of relationships that constitute the cohort.

## **5. CONCLUDING COMMENTARY**

In analyzing our experiences in CITE we held in abeyance more traditional interpretive frames in an attempt to explore links between complexity science and cohorts in teacher education. We were particularly interested in an analysis of the CITE program writ large as opposed to an analysis of the individual components of the CITE program. CITE, as a programmatic initiative, provides a unique opportunity for this kind of examination. An important assumption that we made at the outset of this inquiry was that learning, by its very nature, exemplifies a complex system. Our task has been to make sense of the CITE program in light of recent developments in thinking about complexity science in educational settings. We conclude this final section by addressing two questions that have run throughout this article.

First, what is significant about cohorts in teacher education? As teacher educators, we sensed the value of bringing students and teachers together as an intact group to enhance learning. However, when we think about complexity science in education, it is important to remind ourselves that it is not the number of people in the group but rather the number of ideas that are generated and the opportunity to engage, share and interrogate those ideas that are of primary importance. In short, density and interactivity are two important characteristics of a complex learning system. However, the number of participants in a group will affect the opportunity to engage, share, and interrogate ideas. If the number of students is too great, then a ‘system of schooling’ rather than a ‘system of learning’ is likely to arise; large group lectures, common assessment tasks, lock-step curricula, standardized testing, bell-curve grading, etc., will become the norm. For this reason, an optimal group size is one that is large enough to ensure density and small enough to ensure interactivity. We believe that cohorts, such as CITE, meet these conditions. Furthermore, cohorts of the size of CITE may be more likely to have the freedom (within limits) to define their own internal structures and practices and, as such, allow the five features of complexity science, discussed

above, to arise. These processes of engagement and interactivity are prominent features of a self-organizing systems, which we think can be attained through a cohort programs like CITE.

Second, what might complexity science have to offer teacher education? It has long been argued that teacher education is under theorized and has struggled to be recognized as a field of study in its own right (Clarke, 2001). As such, we were curious about the possibilities that complexity science might have for allowing us to theorize more substantively about teacher education and about our practice as teacher educators.

In terms of the practice of teacher education it is important to note that complexity science focuses our attention on the process of engagement more so than on the outcomes of that engagement within the learning system. We do not dismiss program outcomes as being unimportant but equally we do not want them to hijack the conversation as they have a tendency to do in many educational settings. This hijacking can be seen, for example, in the competency-based movement of 1970s in the U.S. and the current standards-based movement across North America and elsewhere. These discussions are so narrowly focused on outcomes that a consideration of the process of engagement within the learning system rarely enters the conversation. Whether or not CITE produces skilful classroom managers for the short-term time frame of a particular practicum setting seems far less important than whether or not the process of engagement that CITE offers enables our students to understand and appreciate the value of establishing classroom routines and, in so doing, become skilful classroom managers over time as they develop into more mature practitioners. In other words, we have evidence that the process of engagement that our CITE student teachers experience during their time with us leads to significant career-long benefits that may not be evident in other outcome-driven teacher education programs.

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## Chapter Sixteen

# “THE FILTER OF LAWS”<sup>1</sup>: TEACHER EDUCATION AND THE BRITISH COLUMBIA COLLEGE OF TEACHERS’ TEACHING STANDARDS

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### 1. TEACHING STANDARDS IN CANADA

While the movement for more public standards has gained considerable strength in the United States, there has been little talk of teaching standards in Canada until quite recently. Beginning in the late 1990s there have been publicized reforms in teaching standards by conservative governments in Ontario, Alberta and British Columbia. In this chapter we examine how the Community and Inquiry in Teacher Education<sup>2</sup> (CITE) cohort in the Faculty of Education at the University of British Columbia—tried to interpret the teaching standards in light of program values and practices. Using a self-study approach cohort instructors asked: In what ways might the standards enable or hinder our effort to live the values of community and inquiry in teacher education?

Ontario’s College of Teachers produced Standards of Practice for the Teaching Profession in 1999 as a basis for assessing pre-service teacher-education programs. Beck et al., (2002) note the potential for this document, and standards in general, to increase the status and autonomy for teachers. They endorse teaching standards over curriculum standards

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<sup>1</sup> From: Todd (2005). Promoting a just education: Dilemmas of rights, freedoms and justice.

<sup>2</sup> CITE Community members who were involved in this inquiry into the BCCT Teaching Standards also included: Heather Kelleher, Karen Meyer, Tony Clarke, and Carol Stewart and the CITE Cohort of 2005.

because they are “more in keeping with the kind of learning required in today’s world: learning that is conceptual, comprehensive, problem-oriented, applied to real-life situations, and open to constant change” (p. 181). However, they worry that the use of the term “standards” will be associated with the prescriptive and detailed specification of required teaching practices characterized by curriculum standards such as those exemplified in recent top-down mandates for teaching in England. Such need not be the meaning of standards and that in itself may be part of an on-going conversation during the continuing process of developing them. But Beck, Hart, and Kosnik further register a strong concern about the teaching standards movement. It focuses too much on academic learning and neglects an integrated focus on what they call “life learning.” They advocate an approach to learning and teaching that is immersed in real life situations and is intrinsically connected to experience. Specific, detailed standards will struggle to predict exactly what those experiences might be and will be challenging to assess in any linear or quantitative manner. Interpretation and continued discussion are necessary.

In concluding their review of Ontario teaching standards, Beck, et al. (2002). note that teachers are already practising in accordance with these standards and, further, that teachers are more aware of student life needs and more able to address their personal and learning requirements than are school critics. They caution against the loss of professional autonomy and the need for teachers to be included in the conversation.

Even the apparently sound principles of the teaching standards movement should not be imposed on teachers in a top-down manner. The reflection and initiative of teachers must be respected and engaged in the ongoing enterprise of teacher development and school renewal. (p. 191)

Phelan (1996) analyzes Alberta’s teaching standards document *Quality Teaching: Quality Education for Alberta Students* and provides commentary on teaching standards more generally. She suggests that the push for standards is driven by technical and economic concerns rather than a view of education as a social and cultural relationship. Teachers are objectified and controlled rather than recognized as knowing subjects. “In this sense, teaching is about techniques and teachers are reduced to the methods they use in the classroom” (p. 336). An appreciation of the complex nature of teaching and the quality of the relationships that are beyond prescription are virtually ignored within this fixation on presumably objective standards. In the Alberta document, “there is no mention of teachers as intelligent, inquiring, perceptive, and informed individuals” (p. 337). The result for both teachers and student teachers could be to focus mostly on appropriate behaviors and to inhibit valuable professional activities such as inquiry, reflection, and pedagogical discussion.

Phelan (1996) advocates a move toward metaphors of teaching as artistry and teacher education as conversation. As such, there can be more description, interpretation, and even speculation about what teacher competence means and how it is manifested. Throughout their teacher education programs students and their instructors need to learn to identify and analyze the biographical, institutional, and educational discourses that have shaped their thinking about what counts as good teaching. Placing the emphasis on becoming a teacher rather than simply learning to teach suggests that a teacher's identity is an invention, a social negotiation among discourses that are made available during teacher education and thereafter.

British Columbia has witnessed in recent times the arrival of "standards for the education, professional responsibility and competence of its members" (BCCT, 2004). The standards are an attempt to delineate the knowledge, skills and attitudes required of "professional educators" (BCCT, 2004). We might ask: What are some of the underlying factors influencing this recent focus on standards, given that the British Columbia College of Teachers (BCCT) has been in existence for over seventeen years and is only now introducing a formalized set of teaching standards?

## **2. TEACHING STANDARDS IN BRITISH COLUMBIA**

The British Columbia College of Teachers (BCCT) was created by a legislative act called the Teaching Profession Act in 1987, which outlined the object of the BCCT as follows:

It is the object of the college to establish, having regard to the public interest, standards for the education, professional responsibility and competence of its members, persons who hold certificates of qualification and applicants for membership and, consistent with that object, to encourage the professional interest of its members in those matters. (BCCPAC, 2005; [www.bccpac.bc.ca/Issues\\_Bulletins/BCCT\\_FAQ.htm](http://www.bccpac.bc.ca/Issues_Bulletins/BCCT_FAQ.htm))

So while there was a mention of standards in the original Act, it was broadly interpreted as the criteria and standards that would be brought to bear as the College developed procedures to address their legislated mandates such as the certification and decertification of teachers in the Province. One mechanism that the College used to certify prospective teachers being prepared in B.C. was to create a set of policies and criteria for approving entire teacher education programs offered by institutions in British Columbia and for judging the qualifications of teachers who were prepared elsewhere in Canada and other countries.

Significant changes to the structure and practices of the College were brought about when the Government passed Bill 51, amending the Teaching Profession Act in 2003. There were three key amendments to the previous Act: it altered both the composition and the ways in which Board Members would be selected to serve on the College; it revoked the College's policies and practices of approving whole teacher education programs in B.C. educational institutions; and, in the area of professional conduct it required the College to accept complaints directly from the public about the conduct of a currently licensed educator. In response to the last two of these legislative changes the BCCT has produced a draft document called Standards for the Education, Competence and Professional Conduct of Educators in British Columbia. One can note from the title that these standards are attempting to address three inter-related, yet potentially very different, contexts in which judgments are being made about educators. First, is the Educational context of preparing new teachers for the profession. Second, is the context related to addressing the ongoing Competence of existing teachers to ensure that they continue to function as professional educators. And third, is the context where the College must respond to complaints brought forward about the Professional and Ethical Conduct of its members. While one can appreciate that some set of standards and criteria are required to engage in the task of making these professional judgments about particular cases in each of these three contexts of professional preparation and practice, it is less clear that the same set of standards can serve all three domains equally well in terms of the procedures involved and the types of judgments that must be made.

While the BCCT appears to take the stance that the Standards Document is relatively unproblematic, only requiring some minor modifications and adjustments as it goes through a "review process" over the next couple of years, it is less clear about how these standards will actually be used. One section of the BCCT website is particularly informative in this regard:

The College will use the Standards as it carries out its statutory responsibilities in the areas of certification, teacher education and discipline and will form the basis for certification as well as for the determination of competence or appropriate professional conduct.

Of particular note is the new process by which the graduates of BC teacher education programs can be recommended to the College for certification. In June 2004 the College signed an agreement with the BC Deans of Education that places the Standards at the center of a process of assessing applicants for certification. Rather than test applicants as they apply to the College, the College will rely on the assessment of applicants

that is carried out by the teacher education programs in the province. The BC Deans of Education have agreed that their programs will be designed in ways that allow for the Standards to be attained and to be adequately measured. The College will be able to examine how the assessments are carried out and determine whether or not the assessments allow for sufficient knowledge and skill within the Standards (BCCT, 2005, <http://www.bcct.ca/standards/faq.aspx>).

On the one hand it is reassuring to note that the College recognizes the many pitfalls associated with trying to develop a valid test instrument to assess teacher candidates on these standards – an approach taken by many American jurisdictions. On the other hand, the upshot of their position and the subsequent agreement with the B.C. Deans of Education is that the College has left the thorny problem of how one creates the necessary policies and procedures required to determine whether individual students meet these standards up to the faculties of education in the province.

The Standards document consists of thirteen general or “foundation statements” of standards, with each statement being accompanied by four to seven more specific descriptors or “criteria”, as they are called. There are few surprises: professional educators must “value and care for all children” (foundational statement #1); “have an in-depth understanding about the subject areas they teach” (foundational statement #3); “implement effective teaching practices” (foundational statement #7); and, “apply principles of assessment, evaluation and reporting” (foundational statement #8) (BCCT, 2004). At first glance, the words appear as common sense, a relatively benign and acceptable response to the implicit question: What is good teaching? Various institutions responsible for teacher preparation in the province of British Columbia are currently exploring what these standards might mean for programs and practices in teacher education and how they might be assessed in their particular program contexts. As a result of these developments, the task of the group of teacher educators in the Community and Inquiry in Teacher Education (CITE) cohort was to grapple with a series of questions and issues related to how we might use or otherwise draw upon the standards as a basis for making judgments about the competence and preparation of the prospective teachers in our cohort. What function and role are these standards expected to play in the preparation and continuing development of teachers in the Province of British Columbia? How do these standards enable or hinder the practice of a group of teacher educators and their cohort of prospective teachers in the CITE cohort as they engage in the many activities involved in preparing professional teachers for the complex world of teaching?

### 3. COMMUNITY AND INQUIRY IN TEACHER EDUCATION

There is general agreement amongst cohort instructors that learning to teach, and teaching itself, is a complex and uncertain enterprise that demands ongoing, thoughtful inquiry and discernment. We invite aspiring teachers to participate in action research projects, to become critical consumers of the research literature in light of practice and to develop a reflective approach to decision-making (Gitlin et al., 1999). The understanding is that “what is known and worth knowing about teaching is related to the practical knowledge possessed by teachers of how and when to act in actual teaching situations” (Cochran-Smith & Lytle, 1993, p. 141).

Our orientation to inquiry in teacher education differs from the applied science model of teacher education that has predominated in universities during the twentieth century (Schön, 1983). Teaching, in this view, involves the straightforward application of generalizable knowledge and skill with little need for discernment in the actual situation itself. As such, there has been a strong tendency to disembed knowledge from the immediacy and idiosyncrasy of particular teaching situations and from the experience of teachers (Dunne & Pendlebury, 2002; Phelan, in press). In this “practitioner-proof” view (Dunne & Pendlebury, 2002, p. 197), teacher education is premised on the understanding that the sources of teacher excellence are in certain knowledge systems that have been sedimented from the research literature (Phelan, in press). Teaching standards are typically associated with this practitioner-proof or technical rational perspective—a standardized and uncontested view of teaching and performance indicators against which teacher competence can be judged.

While CITE instructors agreed that we need high expectations in education and that we need to be clear about our aims (Hare & Portelli, 2001), we were also aware that there are numerous complexities and especially values issues that have not been adequately addressed in standards talk, beginning with conceptualizing what standards are meant to portray.. Are they declarations of our commitments, or are they units of measure? We sometimes talk as if they can, or should be, both. Crucial and challenging questions about standards have been raised by numerous educational theorists and researchers who share the belief that we need to take more seriously the rising tide of accountability movements in schools and in teacher preparation programs: What purposes do standards serve in schools and in the education of teachers? Which standards should guide our teaching practices? What standards ought to direct curricula? Whose standards should hold sway for schooling in a liberal democracy? Should students (and student teachers) be consulted in the process of establishing standards?

Some theorists (Ross, 2000; Portelli & Vibert, 2001) are most concerned with the erosion of democracy that seems inexorably to follow national preoccupation with articulating and enforcing common standards in schools that serve diverse populations. Are diverse perspectives on standards ever considered? Their concern is also about the gross inequities that continue to surface when appropriate support and resources are unavailable to many schools saddled with the same mandate to fulfill prescribed standards as schools in wealthier districts.

In higher education, a concern emerges around the academic freedom of faculty members who wish to critique and/or reject teaching standards as guides for teaching or teacher education. Some researchers (McNeil, 2000) openly critique the rhetoric of standards and examine the negative consequences for teachers (and aspiring teachers) who are required to focus on a narrow range of standards at the expense of other worthwhile (and perhaps more transformative) educational goals. British philosopher, Onora O'Neill (2002), worries that excessive focus on accountability and standards can easily distort what she calls the proper aims of professional practice, thus damaging professional pride and integrity, and leaving teachers (and we would add, teacher educators) less time and enthusiasm for teaching. Elliot Eisner voices a related concern about the entire educational enterprise: "When the concept of standards becomes salient in our discourse about educational expectations", he writes, "it colors our view of what education can be and dilutes our conception of education's potential. Language matters, and the language of standards is by and large a limiting rather than a liberating language" (Eisner, 2001, p. 395).

Because this chapter focuses on a particular set of standards developed for teachers (both new and experienced) it may be useful to lay out at least one ethical issue that should be considered by those who establish professional standards for others to follow. In one of her BBC lectures, O'Neill (2002) takes up the subject of accountability in terms of the public trust. In one sense, standards are intended to be the reflection of the trust a community or society already has in its caregivers and teachers. Seen in this light, professional standards of accountability are always founded on values principles, hopefully values that are shared by the widest possible public. These values principles should speak to what matters to us in a liberal democratic society, and to what we believe should be passed on to our children. Thus on this view, the professional standards developed by leaders of the College of Teachers in British Columbia are supposed to represent the articulation of a shared set of goods, and are intended to speak for a trust that is publicly held. In setting such standards, the developers would have been wise to engage the professionals who will have to live by them, as well as the community members who will supposedly be served by them, as these

people are also, and importantly, “the public.” The fact that there was no opportunity for dialogue between the various stakeholders in British Columbia about professional standards for teachers suggests an ethical problem for the developers: Whose interests are being represented by these particular standards? What values do these standards reflect? Are these values widely shared?

#### **4. SELF-STUDY IN TEACHER EDUCATION**

While we set out to explore our questions, we were also keen to find some way in which we could live in good faith with our students alongside the teaching standards. While we are deeply committed to inquiry in teacher education, there is pragmatism at work in the CITE program. CITE is about the “survival of the fit” rather than the “fittest” (Davis, Sumara, & Kiernen, 1996, p. 163). Rather than trying to achieve some ideal or idealized program, our challenge is to sustain conversations about practice that allow us to discard those practices which are destructive to our learning community while selecting more “useful” practices. The goal is to uncover not what is a pre-given ideal form but to create that which is possible to sustain—a “good enough theory of curriculum” in teacher education (Davis, Sumara & Kiernen, 1996, p.163). This allows for improvisation when faced with any change in our context—the emergence of the BCCT standards for example—and suddenly we were faced with how we ought to respond and learn. The strength of this positioning in a system is its openness to difference and its capacity for passionate play (Doll, 2003). Our commitment to studying our own practices within CITE is a sustaining value.

Recent writings in the area of self-study (Loughran et al., 2004) provide increasing support and guidance for the sorts of inquiries we continue to undertake. We engage in self-study in order to learn something about and improve our practice but also to contribute to the broader landscape of teacher education. In the context of our self study, we attempted to: (1) situate the BCCT standards historically, politically and socially; (2) to explore the etymological roots of the term; (3) to examine each standard in turn, asking questions about the conceptions of teacher, teaching and teacher education upon which each is premised; (4) to evaluate the standards in light of CITE commitments to inquiry in teaching and teacher education; (5) to identify and test out various approaches to teacher evaluation using the standards; and, finally (6) to initiate a seminar series on the topic. In these ways, we worked with the concept of standards, attempting to understand it and to play with its practical and theoretical boundaries.



There were two sources of data in this study: (a) conversations; and, (b) documents. In a series of monthly meetings of two-hours duration, during the 2004–2005 academic year, members of the CITE team gathered to re-interpret the standards in relation to our program practices. A graduate research assistant attended and documented those meetings, and subsequently provided extensive written syntheses to all members. Students engaged in conversations with instructors through a range of classroom activities: discussion and analysis of standards in light of CITE program experience, and workshop discussions of portfolio construction in light of the standards. The documents used for analysis in the study included the official text of the BCCT standards, student-teacher portfolios, and archival materials (letters, memoranda) related to the emergence of the standards in British Columbia.

## **5. EMERGING THEMES**

A number of themes (outlined below) emerged from an analysis of our deliberations and practices over the course of the academic year.

### **5.1 The Existence of Diverse Views**

What was striking about our initial attempts at discussion of the standards was the diversity of reading practices that was evident. Some took a strictly conceptual approach to the “problem” and asked: What is the etymological root of the term “standard?” Where did the term originate? Some interpreted the standards critically seeing them as yet another attempt to control and de-professionalize teaching. For them, the attempt to standardize practice in teaching and teacher education was both inappropriate and unacceptable. Others wished to read the standards historically in light of their origin in British Columbia and elsewhere in Canada. Still others wanted to read the standards as an opportunity for thoughtful action (praxis) in the CITE program. Questions emerged such as: How might we reconsider our assessment and evaluation practices in light of the standard? A tension seemed to exist between those who believed critique could have a productive role to play and those who feared that critique could simply be reduced to criticism/complaint barring the route toward thoughtful action. This is where diversity of ideas in and of themselves seemed not to be sufficient condition for faculty inquiry into the standards. There had to be some commonality that we shared that would allow us to live alongside our differences. It became necessary for some of us to suspend our disbelief in the potential benefits of the standards in order to proceed with this inquiry.

## 5.2 A Concern with Positioning

Infused throughout our conversations was a concern with our positioning as faculty members relative to the teacher organizations, government, our own faculty and our colleagues in schools. For example, by our second meeting, it was clear that the phrase “piloting the standards” used by faculty administrators, did not express CITE’s intent; our task, we agreed, was to “re-interpret” in the standards in light of CITE program values. This, of course, returned us to the CITE handbook and the articulation of what we had previously termed, “student understandings, abilities, sensitivities, dispositions and commitments”. The return to shared values was an act of memory, a re-remembering of ourselves and what we hoped for graduates of CITE: that they have an understanding of the socio-historic context of schooling... that they have the ability to interpret and carry out research on teaching...that they be sensitive to difference... that they show a commitment to supporting others’ growth. These were not mere statements but the result of a shared consciousness arrived at through many years of conversations. In recalling these hopes, we implicitly recalled a set of relations amongst ourselves and the world that we hoped to bring forth together (Davis, Sumara, & Kieran, 1996). The question that we continued to ask is: Might the BCCT standards be a part of such a world?

## 5.3 The Flatlands of Teacher Education

The metaphor of the “flatlands” pervaded our conversations as we struggled with the standards’ apparent lack of dimension. There was no variety, no topography, no diversity, no valleys or mountains in a flat worldview. We wondered: Do the standards bring us into the flatlands of teacher education? What place, if any, does imagination, innovation, difference and complexity have in this landscape? When conceived of as a first step in a much longer journey towards becoming a teacher, some instructors believed that we could make room for complexity and difference in good teaching. Some CITE members believed that in order to minimize the power of the standards that we ought to consider them as a minimal threshold—the least of what a teacher should be, necessary but insufficient in and of themselves. This led us into a discussion of “excellences” whereby we might begin to rewrite the standards in order to capture their deep, normative structure—the values and virtues that lay hidden amidst their interdictions. During a seminar on the standards, hosted by the Centre for the Study of Teacher Education, we invited groups of colleagues at university, district and school levels to examine the standards in such light. One group of participants attending the seminar chose to examine the standard describing teachers as “ethical

educational leaders” who “act within legal boundaries”, “maintain constructive relationships” with multiple others, “accept... teaching or administrative positions”, are “accountable”, collaborative and supportive. In an attempt to tease out the excellence or virtue underlying these interdictions, participants raised questions such as: “Is it always ethical to act within legal boundaries?”; “What inspires us to be ethical?”; “Is the meaning of “ethical” culturally determined or conditioned?” At the end of the conversation, participants agreed that while a teacher’s ethical judgement was a paramount “excellence,” its quality or outcome could not be prescribed or standardized in advance, outside of the particular context in which it was generated.

## **5.4 An Opportunity to Redesign**

While the statement of values in the program handbook served as a reminder, it also invited reconsideration in light of the standards but also in light of new instructor and student membership in CITE: Is this what we still stand for? What have we omitted? What might be problematic about our previous articulation? What must we keep? The recursive nature of our exploration suggests that the program and its curriculum are dynamic and moving forms in a constant, but reasoned, state of reconfiguration. Our reconsideration was evident, for example, as we redesigned a portfolio assignment in light of these conversations. One of the major questions that emerged was whether we should insist that students frame their portfolios in terms of the BCCT standards. Rather than go this route, we decided to include the standards document as one of three such documents that students should consider as they designed their portfolios. Our hope was that students might inform our own thinking about the place of the standards in teacher self-assessment: What forms and approaches might they generate that we never considered? In this manner, re-interpreting the standards became a shared responsibility, a source of individual agency but also a site of collective knowledge generation. The interaction between and among faculty and students within CITE around the design and creation of the portfolios could lead beyond simple reporting or reproduction of standard guidelines to the collective authoring and authorizing of new understandings of what counts as good work in teacher education.

## **5.5 Responsible Inquiry or Neutralizing Accountability?**

Some of the key questions with which we struggled were: How do we engage pre-service teachers in conversations about the standards while acknowledging the power of the standards to frame assessment and

evaluation of their professional competence? Is there a danger that the pressure to meet the standards shuts down the possibility of inquiring into the standards? We invited CITE students to engage in two conversations around the standards of teaching with a view to considering the standards as they created their teaching portfolios. During the first conversation (November, 2004) small groups of students had to focus on one standard assigned to them and to consider the following questions:

1. What is the meaning of this particular standard?
2. Where, if anywhere, is the standard reflected in the CITE program?

We found that students responded easily and earnestly to the questions, identifying over and over again where they experienced the standards in the program. There was a persistent concern, however, that the standards have the effect of neutralizing the conversation about what counts as teaching. The statements appear self-evident, decided-upon and in little need of interrogation, purblind as they are to the social, political and institutional contexts of teachers' work (Phelan, 1996). Moreover, the acceptance of the standards fit easily with students' desires to find jobs. It seemed important to relativize the standards so that alternative understandings of teaching could enter the conversation.

The second conversation with students occurred as they embarked on their portfolio construction (February 2005). This took the form of a whole class discussion with four CITE instructors present. Interestingly, the students at this point expressed unease about how the standards might be taken up within the portfolio. They had many questions, both practical and political in nature:

- Should we use the standards to organize the portfolio overall?
- Should we allow each section (autobiography, philosophy, pedagogy and future inquiry) to demonstrate implicitly (rather than state explicitly) that we have achieved the standards?
- What if my use of the BCCT standards in my portfolio jeopardizes my chance of getting a job?

At this juncture, students were clear that the members of British Columbia Teachers Federation didn't support the standards; there was little if any acknowledgement of their existence at school or district levels. Consideration of the teaching standards raised questions for students about the intended audience for the portfolios: Who were they for? Prospective employers? University instructors? Students engaged in a wonderfully rich and sometimes passionate debate among themselves at this point. While

some argued that the portfolio presented an opportunity for idealistic reflection and declaration about who they were becoming as teachers, other students expressed sincere concern that the portfolio helped “sell themselves” to school districts.

While as instructors we had hoped that the portfolio might allow students to accomplish both of these goals, it became evident that the introduction of the BCCT standards had politicized the portfolio assignment over and above our wanting and doing. The introduction of the standards and the tension that they have created between professional bodies had allowed prospective teachers to consider history and politics in teaching. As the conversation proceeded four approaches to the use of standards in the portfolio emerged:

1. the correspondence model (show explicitly how you fit the standards);
2. the end note strategy (reflect, at the end of the portfolio, on the relationship between the standards and your experience of learning to teach;
3. the implicit approach (read the standards and allow your portfolio narrative and artifacts to demonstrate your competence without any explicit reference to the standards); and,
4. the “ignore” model (decide to ignore the existence of the standards altogether). Students’ choices further informed our inquiry into the standards and provided an opportunity to reconsider teacher education. Interestingly, only three students decided to ignore the standards!

## **5.6 Self-interested Subject or Subject Oriented to Public Good?**

Although students did not appear to perceive the standards as a threat per se, an initial reading of the portfolios suggested their approach was generally to fit themselves with the standards. As such, the standards seemed to position them as self-interested subjects whose knowledge, skills and attributes needed to correspond, if you will, to external standards of the good. In order to accomplish this, students borrowed the language of the standards document to shape/regulate/model themselves accordingly. For example, Teresa identified the standards as identifying the “essential” components of being a teacher. She wrote:

My hopes for being a teacher are expressed in section 7.3 [which states that teachers] “provide learning experiences in which students understand and develop their own role and responsibility in the learning process and as life-long learners”.

Kathleen dealt with the standards in her portfolio by using footnotes. Having described her approach to creating a classroom environment, her footnote read: “This particular component of my classroom environment reflects the BCCT Standards 1.2 and 1.4;” or later a footnote on assessment practices read: “My thoughts on assessment adhere to principle 8 of the BCCT Standards.”

Interestingly, some students used the standards to declare their commitment to teaching. There was the flavour of oath taking to these statements as they used words connoting belief, promise and hope.

I believe in mutual respect between students and teacher, and in recognizing and valuing the differences that each child brings to the classroom—differences in ability, skill area, home life, family values, or cultural background. (Frank)

I look forward to sharing my knowledge with my students but I am also eager to learn from experienced teachers to build on my knowledge of teaching practices. As a teacher I hope to reflect all of the Standards of Education. (Maria)

I have and will continue to seek out the necessary knowledge to increase competency in these subject areas. (Jess)

Other students perceived the standards as a tool for further reflection. Hope spoke of the standards as “something to which I can refer in order to remind myself of the basic guidelines of professional conduct and to guide me to improve myself and my teaching in various areas”. She went on to insist that while the standards were “one possible tool for evaluation”, they were “not...a checklist”. In this sense, the standards, although producing a kind of consensus around what counted as good teaching, did not seem to envelop aspiring teachers in a kind of presentism (Lortie, 1975). The standards seemed to contribute to an understanding of teaching as a practice of learning (if not inquiry) and as such produced a kind of forward-looking commitment to life-long learning. The standards acted as reminders that teaching entailed a commitment to something beyond themselves.

A minority of students engaged in questioning and dissent. Some refused to address the standards in their portfolios while others, like Josephine, Dorothy, and Joan, asserted their generality, contestability and utility.

These standards are so general, broadly encompassing issues that many may have differing perspectives on. (Josephine)

A wonderful aim, to instill public confidence in the education, skills and competencies of teachers ... but how they will be used to ensure this ... (Dorothy)

[The standards are] not entirely realistic and contradict certain pedagogical conventions currently prescribed in the BC school system ... inclusion is a fiercely debated topic. (Joan)

During class discussions of the standards the students were concerned about the level of accountability that they represented. Citing standard 9.4, Dorothy raised this issue again in her portfolio:

Teachers are accountable to students, parents, employers, the profession and the public. I find this statement alarming as there is no interest group to whom teachers are not accountable, and thus potentially subject to scrutiny by. The indication here is that teachers may be forced to relinquish any sentiment or habit, which could be viewed as dissenting in any way by one or more of the aforementioned groups.

The student's realization that teachers are not free to choose or know themselves outside the will of others is profound. This was also evident in the majority's decision to deal with the standards as an endnote in their portfolios. This, they suggested to us during class discussion, allowed them to remove or delete those portfolio sections when applying for work in local school districts. Their consciousness of the political context (e.g., the refusal of British Columbia Teachers' Federation to engage the standards seriously) was evident in their fear that they not interfere with job possibilities. There seems to be a danger here, however, that all forms of accountability become tarnished with the same brush. Provincially mandated standards are conflated with professional self-regulation, consumer accountability, and democratic accountability. Teachers are viewed as open to the whims of diverse parent consumers, for example, rather than responsible for sustaining a democratic public.

## **5.7 Standards and the Question of Judgement**

Student questioning sometimes took the shape of a gradual recasting of the standards as prescriptions to standards as practical issues about which to make judgements. Joan's response as a movement from metaphors of "coverage" to "decision[s]" is a case in point:

There are a number of standards that I feel my university program covered in depth. We spent a lot of time discussing some of the more major issues and I feel that although I do not have all the answers right now I am well on my way to understanding the issue and making my decision about it.

Tom, for example, identified three tensions. The first related to the problem posed by trying to measure good teaching on the basis of a set of obscure standards. Drawing from Rath (1999), he wrote:

One of the major concerns I have with the proposed teacher standards in British Columbia is the ability of the professional body to come up with clear and effective criteria. If these standards are to be used in assessing educators' competence in teaching then they must be understood by everyone involved and measurable .... [Raths] found that in order for the standards to be accepted by the majority and able to engage the "complex and diverse" nature of teaching they needed to be "obscure". The problem arises that because the standards are vague they become unclear to the educators as to what is expected from them.

Tom's second source of critique referred to the tension that may arise when "teachers begin to focus on meeting the needs of the standards rather than the needs of the students". He drew a comparison between teaching and curriculum standards stating that teachers must use both sources of standards as guides but that ultimately learning is always negotiated by those involved and cannot be externally prescribed. He related his concerns to his prior experience in the forestry industry.

One of the reasons I moved into education from forestry was because of the highly specific and rigid forest practices code. This set of professional standards, I feel, took the decision making process out of the professional's hands and left it up to the politically motivated rules. This led to practices that were economically productive but incredibly damaging to the environment. For example, in an attempt to be accountable to the public's needs, the British Columbian government implemented a forest practice that made it mandatory to leave a given amount of space around a specified size of river. The result was a content public and many destroyed ecosystems because the unprotected trees were blow down by the wind. If a professional forester had the flexibility to adjust his practices to best suit the specific needs of the site, both economic and environmental success would have been achieved.

Tom emphasized the inescapable role of judgement in teaching. Furthermore, Tom's story underscored a difficulty associated with standards that some of us were experiencing—their abstract nature. Torn from the particulars of practice, both in teaching and teacher education, the standards seemed to refuse the priority of the particular and concrete in teaching and learning. While abstract statements about valuing children, for example, contribute to our understanding of each individual child, our seeing is always in the particular and cannot be determined in advance (Phelan, in press). The ethical appropriateness of a pedagogical response is inseparable from the concrete particulars of the situation. Moreover, the situation has the power to change our general understandings be they theoretical or standardized. While the experience of a particular child or a particular student-teacher can remind



and reinforce our understanding of developmental patterns in learning (or learning to teach), the particular may change our minds about the validity of developmentalism as a framework for understanding in this particular case. Tom's example brought home the importance of this play of thought in judgement and inquiry as the ground for such play. In practice we are continually called upon to endow meaning with significance (in this particular case) rather than merely to manipulate predetermined meaning. Standards, like theories, must be held lightly so they are always open to revision. Insights about the significance of judgement led us to realize that the word "judgement" did not appear anywhere in our program descriptions. We needed to reassess with a view to rearticulating, perhaps.

## **6. TEACHING STANDARDS AS HYPOTHESES**

It is easy and reasonable to assume that when teacher educators are confronted with teaching standards we are faced with the problem of application; we have tried to resist this interpretation. Borrowing from John Dewey (1938) we argue that as with other educational ends, teaching standards may best be viewed as hypotheses that, "have to be formed, developed and tested 'in strict correlation with existential conditions as means'", that is, with human purposes and consequences (Beista, 2005, p. 13). Treated as hypotheses, teaching standards can invite inquiry into whether what we desire is achievable, but also whether achieving it is desirable (Beista, 2005).

Teaching and learning in any context are not causally linked, however, and the means and ends of educational processes are always intertwined. Our role as teacher educators must be more than simply focusing on the most effective way to bring about ends pre-determined by the teaching standards. It is rather to engage in inquiry about those ends, and this in close relation to inquiry into means (Beista, 2005). There is a need to broaden the focus of evaluation beyond technical concerns about measuring effects of teacher education.

Broadening the focus of evaluation in this way also involves broadening its methodologies beyond analytic techniques to include methods and accompanying institutional frameworks to promote full, free and open normative debate among all those with a stake in the policies concerned, including service users and citizens (Sanderson, 2003, p. 343).

A democratic society, Biesta (2005) argues is "precisely one in which the purpose of education is not given but is a constant topic for discussion and deliberation" (p. 14). CITE instructors' attempt to extend the conversation about standards to students, faculty, teachers and members of the community-at-large is indicative of such purpose.

Given the propensity of prospective teachers to try to accommodate the standards, the concern persists that in doing so their view of teaching is stabilized. As such, there is no space for the new in the profession. As teacher educators, we have a responsibility not only to introduce aspiring teachers to the traditions, practices and values of the profession to date, but to preserve their capacity to act in ways that renew the profession (Phelan et al., 2005). Standards can be potentially paralyzing if there is no possibility for newness. Dialogue opens up a space for the new.

Positioned within a context of democratic deliberation, teaching standards can become instruments of professional action. By thinking alongside standards, rather than trying to apply or meet them in practice, CITE instructors and students were able to engage with one another about their significance for teacher education and the profession more broadly. Explorations of the particular representations of teachers, teaching, and teacher education in the BCCT standards informed our work with CITE students leading us to reconsider the language we use to explain the purposes and practices of CITE. The worldview implied by the standards provoked us into considering alternative views and reconsidering our own.

Thinking alongside standards points to the cultural role (De Vries, 1990) of inquiry in “providing different interpretations, different ways of imagining social reality” (Biesta, 2005, p. 14). In the academic year 2005–2006 the University of British Columbia submitted a Status of Attainment Report to the British Columbia College of Teachers. In that document the Dean of the Faculty of Education outlined how teacher education programs in the Faculty would meet the BCCT teaching standards. Informed to some degree by the CITE inquiry, the document is strategic in its attempts to steer clear of an overly technical response. While electronic portfolios were identified as key locations of evidence of student-teacher competence, there was a concerted effort to recognize the complex nature of teaching and teacher education and the fact that teacher performance is very much linked to specific contexts which are difficult to predict or isolate through global standards (Valli, Rennert-Ariev, 2002). The importance of reflective judgement was emphasized. It is recognized that the existence of standards may not help teacher educators in making judgements about aspiring teachers. Each student teacher in our care, not unlike every student in a school, requires a response from us and as Sharon Todd (2005) reminds us:

That response can only live up to its name of response when I refuse to impose upon them a set of criteria or hear their words only through a filter of laws, regulations and such. Instead, the response that is commanded is a listening to the other knowing that my judgement must come through a reflexivity in which I continually ask myself—is this a just decision? (p. 3)

## 7. CONCLUSION

While diverse views of the standards continue to exist among CITE members, they trouble us all to some degree. Perhaps it is the memories they invite. Historically, the framing of teacher education as a policy problem has begun with standards and ended with competencies and performance indicators (Phelan, 1996). Inquiry and ethical judgement wither in the wake of instrumentalist views of teaching and teacher education. The question remains as to how we might write policy for teacher education and evaluation, which frames both as educational challenges and not policy problems. The core of the problem of standards may be their masking of teaching and teacher education as evaluative moral activities that shape individuals in particular ways. There is little agreement on what should be the direction of that shaping and the potential ethical and political debate that surrounds decisions about educational practice is tremendous. Why then try to still the debate? Why not engage standards dialogically as opportunities for further reconsideration and conversation? The renewal of teacher education and the profession of teaching cannot be:

...accomplished simply by using a set of standards to create observation/evaluation forms and portfolio guidelines and rubrics. It requires deep understanding of the history and traditions of teacher education and teacher-education reform efforts, of the contrasting epistemologies and philosophies that undergird reform efforts, and of the political pressures and contexts of reform. (Valli, Rennert-Ariev, 2002, p. 220)

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## INDEX

- Aesthetic dimension of learning, 137–138, 141
- Anaesthetics online, 140, 141, 149
- Arendt, Hannah, 26, 27, 29, 30
- Art as engaging with the world, 67, 72
- Artistic and creative processes, 67–68
- Beck, C., Hart, D. & Kosnik, C., 227, 228
- Beista, G., 243
- Benhabib, S., 12, 187
- Bereiter, C. & Scardamalia, M., 10, 105, 210
- Bryson, M. & de Castell, S., 121
- Bullough, R., Clark, C., Wentworth, N. & Hansen, J., 210
- Capra, F., 40, 45, 48, 96, 99, 211
- CITE
- community in schools, 30–36
  - description of, 1, 3–6
  - design features, 4–6, 16–17
  - evaluation of students, 5–6, 14–15
  - faculty advising in, 3–6, 29–30
  - history of, 1, 4
  - organization of, 14–15
  - principles of, 4–5
  - teaching in, 3, 16, 17, 25–27
  - tensions in, 4
- Clift, R.T., Mullen, L., Levin, J. & Larson, A., 103
- Cochran-Smith, M. & Lytle, S.L., 232
- Cohorts in teacher education, 210–211
- Collins, S., 4, 5, 6, 39, 42, 44, 134, 201, 247
- Communities of inquiry, 1–3, 9–22, 25–27, 29, 92, 232–234
- Communities of learners, 2, 10–11, 25, 35, 37, 38, 114, 115
- Community in elementary classrooms, 2, 3, 14, 17
- Complexity science
- decentralized control in, 212, 214
  - definition of, 211–212
  - enabling constraints in, 215
  - internal diversity in, 212, 213
  - internal redundancy in, 212
  - neighbour interaction in, 212
- Complexity theory, 40, 45–46, 92, 96, 211, 247
- Complexity thinking, elements of, 40–48
- disequilibrium, 40–41
  - ecology, 44–45
  - emergent properties, 47–48
  - evolution, 45–47
  - order and chaos, 41–42
  - self-organization, 43–44
  - shared consciousness, 48
- Complexity thinking, introduction to, 40
- Creswell, J., 138, 139
- Critical incidents, 122, 128, 133
- Davis, B., 42, 44, 48, 93, 209, 211, 212, 214, 215, 217, 220, 222, 236
- Dewey J., 11, 12, 199, 243
- Dialogue among teachers, 11–12, 15, 17, 27, 34–35
- Diaz, G. & McKenna, M., 137, 141, 149, 150, 152
- Difference in CITE, 60
- Digital learning goals in CITE, 156–157
- Digital learning tools, introduction to DLT, 155–156
- Digital technology in teacher education, 5, 57, 101, 119–120
- Dispositions, 3, 9, 12, 14, 15, 19, 123, 168, 173, 203, 204, 214, 217, 236
- Dispositions for teaching, 3, 9, 12, 204, 214
- Doll, W. E., 221, 222
- Drawing as seeing, 70, 199
- Dunne, J. & Pendlebury, S., 51, 52



- Eisner, E., 137, 140, 143, 147, 148, 152, 233
- Enactivism, 93
- Ethical practices in teaching, 236–237
- Fenstermacher, G., 9, 13, 203
- Fullan, M.G. & Stiegelbauer, S., 120
- Greene, M., 138, 139, 140, 151
- Grumet, M., 137
- Holmes Group, 10, 12, 210
- iMovies and iPhoto, 160, 161
- Improvisation in CITE, 5, 55, 222
- Information and communicative technologies (ICT)
- functional competencies in ICT, 130–131, 134–135
  - generative competence in ICT, 132–133, 134
  - introduction to, 16, 101–102
  - participative competence in ICT, 131–132, 134
- Innovation in reform, 54–58
- Inquiry groups, 14, 16, 17, 139, 140
- Inquiry in reform, 58–61
- Integrating technology and curriculum, 103, 124
- Kiernen, T.E., 48, 93, 209, 211, 212, 214, 217, 220, 222, 234, 236
- Labour, Arendt's concept of, 26, 29
- Laferrere, T., 105, 119
- Latham, G., 120, 121, 130
- "The Learning Series" in CITE, 56
- Learning as a social process, 92
- Learning through art, 68
- Lewis, K., 176, 181, 183
- Loughran, J., 186, 190, 201, 203, 234
- MacIntyre, A., 18, 187, 188, 190, 191
- Marti, P., 26, 138, 143, 144
- Master of Education in Teaching Program, 52
- Mid-course feedback, 171, 172
- as self-study, 182
  - instructor vignettes, 174–175
  - reasons for, 171–172
- Mitchell, J. & Wakefield, J., 124
- O'Neill, O., 233
- Ory, J., 171, 182
- Pedagogical openness, 71, 73
- Phelan, A., 5, 6, 52, 53
- Pitfalls of online learning, 141, 142, 146, 147, 149
- Portfolios
- approaches to construction, 195–196
  - definition of, 186, 191
  - evaluation of, 192
  - metaphors in, 199–200
  - practice of constructing, 186, 190, 193, 202
  - student responses to, 194–195
  - themes in, 197–199
- Practices as complex human activity, 187
- goods external to practices, 188, 200
  - goods internal to practices, 187, 188, 190, 191, 200
- Practicum, 18, 25, 39, 82–85, 97, 107, 114–115, 124, 126, 127–129, 134
- Professional judgment and standards, 241–242
- Ramsey, P., 119
- Reflection in CITE, 5, 14–15, 92, 137, 156, 165–169
- Reform as evocative practice, 52–54
- Relationships in teaching, 21–22, 28, 31–32
- Responsible inquiry, 237–239
- Rogers, E.M., 121, 130
- Russell, G. & Russell, N., 119, 121
- Scholarship of Teacher Education, 61
- School personnel relationships in CITE, 31–32
- Self-study in teacher education, 234–235, 239
- Social Studies methods course, 92, 95

- Socio-cultural models of learning,  
10, 16
- Sojka, J., Gupta, A. & Deeter-Schmelz, D.,  
182
- Sumara, D., 48, 93, 209, 211, 212, 214,  
217, 220, 222, 234, 236
- Svinicki, M., 176, 178, 179, 183
- Teacher education students' views of  
standards, 243–244
- Teaching Profession Act, 229, 230
- Teaching standards, 215–217, 221,  
227, 229, 243  
in British Columbia, 229–231  
discussion of, 227–229
- Technology and pedagogy, 103, 123,  
124, 125
- Tensions in teacher education, 3–4,  
18–22
- Theory and practice connections, 3  
6–37, 122
- Todd, S., 244
- Tripp, D., 133
- Valli, L. & Rennert-Ariev, P., 244, 245
- van de Vall, R., 138, 143, 152
- Virtual communities, 140, 145, 152
- Virtual learning, transformative  
qualities of, 150–151
- Virtues in teaching and learning to  
teach, 189, 190
- Web pages, 125, 126
- Web quests, 157, 160, 164, 165
- WebCT, 29, 123, 126–128, 129, 134