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OISE’S COMMITMENT TO SCHOOL-UNIVERSITY PARTNERSHIPS

Initial Teacher Education at OISE is guided by seven broad principles that can also be considered program goals, given the ongoing effort to enact these principles in practice. Briefly stated, the Initial Teacher Education program is characterized by seven principles:

1. Teaching excellence
2. Research-based and research-driven
3. Cohort-based learning communities
4. Coherence
5. Faculty collaboration
6. School-field-university partnerships
7. Equity, diversity, and social justice

Research in teacher education clearly supports the extending and enhancing of school-university partnerships beyond traditional teacher education activity such as practicum placements (Darling-Hammond & Bransford, 2005). At OISE, the strengthening of school-field-university partnerships has been a high priority for over 20 years, and is reflected in four teacher education programs:

- Bachelor of Education/Diploma in Technological Education (BEd/Dip.Tech.Ed.), a nine-month consecutive program
- Master of Teaching (MT), a two-year consecutive program leading to a graduate degree and teaching certification
- Master of Arts in Child Study and Education (MA-CSE), a two-year consecutive program leading to a graduate degree and teaching certification
- Concurrent Teacher Education Program (CTEP), a five-year concurrent program

The goal of Initial Teacher Education at OISE is to integrate theory and practice and to support learning among all stakeholders. Going well beyond practicum experiences, OISE makes connections between courses and
practica through many innovative and lively approaches. Following are some examples of the range of OISE’s partnership work:

• Curriculum and instructional leaders from the field are regularly seconded to OISE or come to OISE as guests to discuss their approaches and practices.
• Joint professional development takes place with schools and school districts.
• Small grants for joint research projects bring faculty and field partners together.
• Ongoing attention is given to relationships with field partners through the OISE’s School-University Partnerships Office (e.g., the formation of the External Advisory Committee and the Associate Teacher Advisory Committee).
• A one-month field-based internship provides experience for teacher candidates at the end of the B.Ed./Dip.Tech.Ed. program, which deepens understanding, refines skills, and serves as a bridge between the pre-service program and teaching.
• Well-established partnerships include groups of schools that have ongoing connections to teacher candidate cohorts.1
• The “Learning Consortium,” an institutionally grounded model of educational change, has thrived since 1988 as a district-university partnership.
• Joint work (e.g., book publications, conferences, summer institutes) takes place with federations, such as the Elementary Teachers’ Federation of Ontario (ETFO), as a means of influencing provincial policy.
• Partnerships with professional bodies, such as the Ontario College of Teachers and the Literacy and Numeracy Secretariat of Ontario, jointly sponsor national and international teacher education conferences.
• Induction, mentoring, and renewal initiatives take place in school districts, with support from the Ontario Ministry of Education.
• The “International ITE Liaison,” a designated role at OISE, has been initiated to map out and explore international partnership activities related to teacher education, including exchanges, meeting with visiting delegations, and supporting education development activities.

THE SERIES OF PUBLICATIONS

“School-University Partnerships: Research Into Practice” is a unique research and practice initiative in OISE’s Initial Teacher Education program. Since its inception in the 2002–2003 academic year, it has focused on enhancing learning experiences and strengthening relationships between OISE’s field partners and the university. It provides grants up to $2000 to initial teacher education instructors in recognition of exemplary projects that are intended to support and extend school-university relationships. Each project reaps learning benefits for a range of stakeholders, including students in schools, teacher candidates, associate teachers, and teacher educators. The projects encourage inquiry, creativity, and growth of knowledge to improve teacher education.

The current publication, Initial Teacher Education: Enriching and Extending Partnerships is fifth in a series of publications that report on the projects of this initiative.2 Foundational to this series is the belief that the combined wisdom of field practitioners and university educators can transform new teacher preparation. High quality teacher education programs depend on such partnerships because collective efforts are vital for educators to be able to continually examine and develop successful ways to reach the diverse learners in today’s classrooms. Through mutually enhancing the intersecting school-university communities, educators can better address complex challenges that are confronting schools—especially while they seek to deepen and improve student understanding and achievement.

As I reviewed the almost 50 school-university partnership projects profiled in past issues of this series, I was struck by the power of innovation, inquiry, reflection, and collaboration that continues to transform the teaching/learning profession. The wide-ranging partnership work has included many themes, including:

• Understanding today’s students
• Enhancing learning for diverse learners
• Improving school climate

1 (see pages 4 and 5 for descriptions)
2 Transformation of Teacher Education, 2007
Creative Connections, 2006
Innovation in Teaching and Learning, 2005
Research into Practice, 2004
• Conducting action research
• Improving instructional and assessment practices
• Committing to equity, diversity, and social justice
• Supporting mentoring, induction, and co-learning
• Engaging in curriculum development in literacy, mathematics, technology, the arts, mathematics, psychology, etc.

Clearly, the possibilities are endless in terms of how schools and universities can work together to achieve shared goals.

THE OPPORTUNITIES AND CHALLENGES OF PARTNERSHIP
Jerome Murphy, a former dean of Harvard’s Graduate School of Education, encourages education schools to be places where university educators and practitioners collaborate to “address pressing contemporary problems.” He also urges research and interventions “that are a part of an expansive agenda born out of long-standing partnerships” (as cited in Hartley & Kecskemethy, 2008, p. 443). Murphy believes such work demands leadership and creativity. This publication demonstrates the many ways that our faculty has assumed such leadership. I am inspired by the difference we can make in the teaching-learning process when faculties of education join forces with field partners to tackle challenging issues.

All of the previous and current projects within the “School-University Partnerships: Research Into Practice” initiative demonstrate the value of creating communities of inquiry and practice within teacher education. There is increased opportunity for teacher candidates to experience coherence in their programs; new and experienced teachers can learn from and with one another; and, university- and school-based educators can work and learn together to design rich learning environments that benefit all learners.

I believe that a teacher education program is successful only when it is a collective and shared undertaking. However, enacting partnerships is challenging. Tensions exist and obstacles get in the way. Tensions are present in partnerships not only at the individual level of educators but also at the organizational levels of schools, districts, community organizations, and universities. To complicate matters, there are similarities and differences between school and university norms and cultures, conflicting ideologies, limited resources, and the need to develop trust and mutual respect. However, the benefits outweigh the challenges, especially considering the advantages for prospective teachers learning to teach in professional learning communities and partnerships. Within these social contexts, teacher candidates are able to experience firsthand how collaborative work can change school and university cultures in ways that can make each become more productive environments for teacher and student learning.

Finally, as I reflect on the five years of this initiative, what has been truly inspiring is that the ideas represented in these publications do not represent singular events. Rather, the ideas that have been proposed, tried, and written about have influenced subsequent teacher education program improvements at OISE, altered practices in schools, and have been disseminated widely. Partnership teams have presented their work at local, national, and international conferences for both practitioners and academics. They have also shared their work with OISE colleagues so that good ideas can be adapted and applied more broadly. Many of the research, field development, and applied practices that emerged from these projects have become institutionalized, with new partnership teams improving on ideas from one year to the next. Most importantly, OISE has created a way of doing business in teacher education … a way that deeply values the work with our field partners.

We look forward to many more years of innovation and learning together.

ACKNOWLEDGEMENTS
On behalf of OISE, I extend my sincere appreciation to OISE instructors, teacher candidates, graduates, associate teachers, and school-university administrators who have participated or lent support to the projects outlined in this publication. Your commitment to these projects not only strengthens relationships today but also results in long-term systemic changes in teacher education for tomorrow.

REFERENCES
Teacher Education at OISE is organized into cohorts, which are tied to particular instructors, foci, themes, or geographical regions. The cohorts are groups of instructors and teacher candidates who learn together during the Initial Teacher Education program. Teacher candidates often take classes with their cohort and do practicum placements in cohort schools. The cohort design, which is supported by research on teacher education, creates a sense of community and increases responsiveness to the needs of teacher candidates. These small collaborative and collegial learning communities facilitate shared professional learning, and offer teacher candidates a supportive, cohesive, and integrated program that reflects the interconnectedness of both theory and practice and also university and field experiences.

**SECONDARY PROGRAM COHORTS**

**Inner City Education**
This site-based cohort provides teacher candidates with opportunity to develop teaching strategies unique to inner-city secondary schools. It seeks to ground policy and theory within the dynamics of area schools and their neighbourhoods. The cohort examines issues of race, ethnicity, class, ability, religion, language, and culture, as well as the impacts these issues have on student engagement and achievement within inner-city schools and their communities.

**French as a Second Language and International Languages**
This cohort provides a program for those planning to teach French as a second language or international languages in secondary schools. Through faculty-based inquiry and field experiences, this program emphasizes hands-on teacher development, including seminars, guest speakers, interdisciplinary activities, second language portfolios, professional portfolios, self-directed research, technology-assisted learning, and collaborative learning inquiry.

**School, Community, and Global Connections**
This cohort encourages teacher candidates to reflect on the interplay of school, community, and global influences, and how this forms a basis for student achievement, advocacy, global awareness, and community building. Informed by integrative equity, this cohort seeks to promote social justice, conflict resolution, and transformational change at the local, national, and global levels.

**Education and Work**
This cohort provides a program for teacher candidates enrolled in Business Studies and Technological Studies. Interdisciplinary approaches to research and teaching provide teacher candidates with an understanding of the context and complexities of the educational workplace, the knowledge society, diverse technologies, and lifelong learning.

**Peel and Dufferin-Peel Partnerships**
This site-based cohort works in partnership with the Peel District School Board and the Dufferin-Peel Catholic District School Board and provides teacher candidates with practicum and internship experiences within these boards. Candidates have opportunity to experience the full spectrum of curricular and co-curricular programs within these progressive boards of education.

**Multilingual and Multicultural Classrooms**
This cohort prepares teacher candidates to work in schools that serve linguistically and culturally diverse communities. While learning the Ontario curriculum, candidates also learn effective instructional practices for supporting students who are learning English, as well as strategies for creating an inclusive classroom environment where linguistic and cultural diversity are valued.

**Students at Risk: Learning Pathways**
Risk, resilience, and engagement are the underpinnings of this cohort, which was established for beginning teachers who are interested in working with students’ strengths to create possibilities for success. The cohort encourages teacher candidates to engage all learners—at the applied, academic, or essential level—especially those at risk of failure. By addressing gaps in student achievement, this program complements professional development initiatives in schools and boards.

**The Arts**
This cohort is designed for teacher candidates who work in drama, music, and visual arts and wish to focus on the creative and artistic life of schools. Teacher candidates develop an understanding of teaching and learning through an “arts lens,” and they gain a sense of what it means to be an arts educator in a secondary school.
Social Justice in Catholic Education
This cohort is designed for teacher candidates who are interested in promoting social justice initiatives in Ontario Catholic secondary schools. While sensitizing teacher candidates to Catholic social justice issues, the cohort also informs their educational practice through such national and global issues as addressed by the Canadian Conferences of Catholic Bishops and other stakeholders in the extended Catholic educational community.

Regional Cohorts
Regional Cohorts, such as Toronto East, West, North, South, York/Durham, and Peel/Halton, are based on the location of their sessions during the academic year. This common geographic base within each cohort promotes professional growth, community, and collegiality among teacher candidates. Each cohort addresses the themes and issues facing the schools and school boards in its particular region.

Emily Carr Secondary School/York Region
This site-based cohort works in partnership with the York Region and York Catholic school boards, where teacher candidates have opportunity to study and apply their learning. Teachers at Emily Carr Secondary School in Woodbridge serve as mentors and associates for teacher candidates. The cohort pays attention to York Region initiatives in assessment, instruction, literacy, and character education.

ELEMENTARY PROGRAM COHORTS

Central
The Central cohort offers a field-linked program in which teacher candidates examine the teacher’s role in promoting learning among young children in urban classrooms. The role of children’s literature is a feature of the program, and teacher candidates have opportunity to explore the practice of conflict resolution.

Crosstown
The Crosstown cohort emphasizes the inclusive classroom, knowledge of subject areas, curriculum integration, differentiated instruction, and developmentally appropriate practice. Cooperative learning strategies are modelled throughout the year, with explicit teaching on how to assist a group of learners to move through the stages of inclusion, influence, and community.

Doncrest
The Doncrest cohort is a field-based program located at Doncrest Public School in the York Region District School Board. In helping teacher candidates learn to create powerful, inclusive learning environments for students, the cohort aims to develop instructional intelligence—a capacity that facilitates connections among assessment practices, curriculum knowledge, instructional methods, ways students learn, and the process of educational change.

GTA Catholic
This cohort partners with Catholic Schools in the GTA to prepare teacher candidates to teach effectively in Ontario’s Catholic Schools. The aim is to support the spiritual, academic, and professional development of Catholic teachers by helping teacher candidates to become knowledgeable in the culture, heritage, and tradition of the Catholic faith, and to become reflective practitioners who critically examine practice.

The Inner City
The Inner City cohort, strongly linked to inner city communities, focuses on social justice and an anti-oppression agenda that addresses systemic power imbalances in the educational system and society. The cohort emphasizes the importance of demonstrating high expectations for all students, and developing and using instructional practices, curricula, and educational materials in ways to ensure equity of access for all learners.

Midtown
The Midtown cohort prepares junior/intermediate educators by emphasizing a strong professional learning community in which teacher candidates and instructors work collaboratively. A central focus is teacher inquiry through action research as teacher candidates conduct critical investigation into self-selected topics.

North
The North cohort, located in C.H. Best Public School in the Toronto District School Board, works collaboratively to develop and implement an integrated program which introduces a variety of instructional strategies, including the use of technology. The cohort uses lesson study to emphasize teaching as a cultural activity, teaching and learning through inquiry-based problem solving, and the development of a professional learning community.

Regional
The Regional cohort, located at St. Isaac Jogues Catholic School in the Dufferin-Peel Catholic District School Board, provides opportunity for collaborative work with schoolchildren, experienced teachers, and administrators, as teacher candidates think critically about the teaching and learning process. Viewing learners as builders of meaning, this cohort promotes learner-centred and reflective practices, especially the integration of teaching strategies and curriculum design.
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ABSTRACT

The “Building Bridges” project used a service-learning model to strengthen relationships between arts-based associate teachers, teacher candidates, and OISE instructors. By integrating course content with community service and critical reflection, the service-learning model enabled teacher candidates to deepen their knowledge and experience in arts education by working in extracurricular arts program across the city. The teacher-candidate placements benefited the schools through an infusion of volunteers, improved the connection between associate teachers and the Initial Teacher Education program, and improved teacher candidates’ professional experience in arts education. Service-learning has helped to build broader and deeper connections between teacher candidates, partner schools and ourselves—and should be further explored in the Initial Teacher Education program at OISE in future.

OBJECTIVES

• To implement a service-learning model—meaningful community service with instruction and reflection—in the Initial Teacher Education program, OISE
• To deepen teacher candidates’ understanding of curriculum, pedagogy, and civic responsibility through service-learning
• To strengthen relationships with arts-based teachers, in order to better utilize their expertise in the Initial Teacher Education program at OISE

Service-learning, a relatively recent addition to university courses in Canada, combines community service, course material, and reflection (Taylor, 2002). Students are offered a unique means of learning that enables them to apply course content in practical ways through community-based service. Due to the growing popularity of service-learning at the University of Toronto, the Centre for Community Partnerships was established in 2006 to actively encourage faculty to incorporate service-learning into their courses. This research project was designed to do just that—to explore the implications of service-learning in the context of arts-based courses in the Initial Teacher Education program at OISE.
Many Canadian universities have long histories of volunteerism, but few have incorporated service-learning into their formal curricula. Service-learning has a longer history in the United States, where it was included in the curricula of some American colleges as early as the 1930s (Taylor & Ballangee-Morris, 2004). According to California State University, “service-learning is a teaching method that promotes student learning through active participation in meaningful and planned service experiences in the community that are directly related to course content” (cited in Jeffers, 2005, p. 29).

Beginning in September 2006, this inquiry investigated the suitability of using the service-learning model for arts courses in the Initial Teacher Education program at OISE. And because it was a continuation of our school-university research project of 2005–06, it allowed us to continue to build relationships with arts-based teachers in partner schools. Our assumption was that the service-learning model would provide a valuable way to develop and strengthen these relationships, and in turn would improve the arts-based learning experiences of teacher candidates. Our aim was to place teacher candidates in extracurricular arts programs in partner schools or community centres so that they would learn from experienced arts teachers over an extended period of time. While teacher candidates would benefit from this hands-on experience, the teachers and students in the partner schools would benefit from an infusion of artistic skills, energy, and enthusiasm that teacher candidates could bring to their extracurricular art programs.

**STAGES OF THE PROJECT**

**Building bridges between teachers and teacher candidates**

We began to identify associate teachers, working in extracurricular arts programs, who might participate in this project: five teachers joined the study as teacher collaborators, and three additional schools and two community centres provided access to their programs. When teacher candidates arrived on campus in September, we invited them to participate in the study, and ten volunteered. We assigned teacher candidates to work with particular arts teachers according to their interest in the art program’s theme, and the suitability of its location or scheduling. At this stage, the teacher candidates and the teacher collaborators completed a pre-program questionnaire.

**Building bridges with students, schools, and community centres**

In October, the teacher candidates headed out to help run a wide variety of extracurricular arts programs in partner schools. Some went to inner-city schools or community centres, others to private schools. They were required to work for a minimum of six weeks, but some—highly engaged with their placements—volunteered to stay longer. They worked on a diversity of projects: a mural for St. Michael’s hospital, a clay club run by secondary students, the One World music program at a public high school. They worked alongside the collaborating teachers, built relationships with students, and became integral members of the clubs in which they were involved. After their involvement ended, they wrote reflections on their experience and completed a final questionnaire.

**Building bridges with the Initial Teacher Education program on campus**

We invited our teacher collaborators to join us on campus for the OISE annual elementary arts conference in January 2007. Having been asked to lead experiential arts workshops for generalist teacher candidates, they shared their expertise in the visual arts, music, literacy, and dance. This was also an opportunity for them to learn firsthand about the Initial Teacher Education program and to meet with other arts instructors in the program. In the spring they returned to campus to participate in focus group interviews that had been designed to solicit their
views on the service-learning model in the context of the Initial Teacher Education program.

DATA COLLECTION AND ANALYSIS
Data collection methods included questionnaires and interviews with teacher collaborators, and questionnaires and written reflections from teacher candidates. With these methods we focused on four research questions:
1. Can service-learning be used to deepen the educational experience of arts education majors in the Initial Teacher Education program?
2. Can service-learning projects build stronger bridges between the Initial Teacher Education program and the OISE partner schools?
3. What can service-learning offer Initial Teacher Education candidates and faculty, on the one hand, and teachers and students at partner schools, on the other?
4. What are the benefits and drawbacks of arts-based service-learning projects for the Initial Teacher Education program?

This study provided a rich set of data from the questionnaires and interviews with teacher collaborators and teacher candidates. Data from the questionnaires and focus group interviews were thematically coded and analyzed.

Data from the teacher collaborators
All of the teacher collaborators were positive about their participation in this project. They found that the service-learning model was beneficial to their extracurricular programs. They appreciated the extra set of hands provided by the teacher candidates, which meant an increased level of individual attention for their program participants. Echoing the feedback from many of the teachers, one commented: “My students were very positive and voiced on several occasions how helpful it was to receive the extra attention and support.” Another confirmed this: “The experiential nature of [our program] requires time-intensive one-on-one work with the instructor. Having the teacher candidate participate in some of these collaborations was of tremendous benefit.” Many of the teachers described the growth and learning of the teacher candidates during the program, but interestingly, they also noted their own learning. One said, “I’ve learned something myself ... [the teacher candidate] is a really fine bass player, and he was able to teach me. I learned a lot about different ways to teach bass. He made a real contribution to the school.”

Concerning their involvement in Arts Day, the teacher collaborators were delighted with the response they received to their workshops, and they enjoyed meeting others involved in arts education at OISE. One noted that “it was very beneficial delivering the training to a whole range of our teachers and teacher candidates ... I learned a lot from working with you and the other people here.” And while many described the advantages they saw in the service-learning model, none described any drawbacks or apprehensions about this approach to learning and community service, despite having been asked.

Data from the teacher candidates
The teacher candidates were also effusive about their involvement in this project. They appreciated their placements for the valuable learning they experienced, not only in practical terms of the curriculum and pedagogy but also in terms of the sustained exposure to children in a relaxed learning environment. Of this, one wrote: “This [program] allowed me to really get to know the students, as well as their interests and aspirations in video art, contributing to my overall understanding of an age group (14–18) that I have not had the chance to work with in either of my practicums. [sic] My strong rapport with the students has added to my confidence as a teacher.” Another recognized the importance of extracurricular programs in general: “I realized that a great deal of teaching occurs outside of the classroom. During these times teachers have opportunities to establish relationships with their students in order to build positive communities.”

Teacher candidates voiced few difficulties concerning their involvement in this project. The biggest challenge was one of scheduling; it proved difficult for some to reach the site of their programs on time due to conflicts with their on-campus courses. This limited the location of the programs that teacher candidates could become involved in, and it meant that some programs, which had requested candidates, had to be refused.

Teacher candidates valued the positive mentorship of teacher collaborators they worked with. One described his teacher as “an unending source of information, feedback, and support, and a connection to a number of important organizations and groups.” Because he was able to see “a teacher engaged in real action,” he found his teacher’s approach to education
and social justice “inspiring and affirming.” Many candidates were enthusiastic about the connections they found to the social justice theme promoted in the Initial Teacher Education program. For example, some candidates assisted programs—run by Arts for Children of Toronto—that build community pride in troubled neighbourhoods; others assisted school programs that aim to provide extracurricular activities for children whose families can’t afford them otherwise. One teacher candidate summarized this well by saying, “In the end, I am walking away from this project having gained just as much, if not more, than what I have given.”

IMPACT
“Building Bridges” has lived up to its name by helping to create broader and deeper connections among arts-based teacher candidates, educational partners in the community, and OISE instructors. The research project has demonstrated the benefits of the service-learning model, not only by improving connections among these groups but also by linking course material to field experiences for a greater good. Service-learning has brought benefits to all participants—teacher candidates, associate teachers, students, and OISE instructors—by enhancing learning, increasing self-confidence, and strengthening relationships. It has also helped to strengthen the social justice initiatives in the Initial Teacher Education program and to support the value of arts education programs in schools and community centres across the city. Through this process, we have shown that service-learning is a valuable addition to arts courses in teacher education.

IMPLICATIONS FOR TEACHER EDUCATION
This research project supports a growing body of literature that acknowledges the benefits of service-learning in the arts in school and university environments (Barnes, 2002; Edwards, 2001; Jeffers, 2005; Taylor & Ballangee-Morris, 2004). Having experienced these benefits, we are convinced of the value of the service-learning model in the context of the teacher education curriculum. Teacher candidates were able to participate in extracurricular school and community arts programming that had the powerful effect of developing students’ skills and knowledge and enriching their lives. For many students, these programs provide a degree of success and fulfillment that they do not find during their regular school day.

The implementation of service-learning on a larger scale in the Initial Teacher Education program could have profound implications: connections with associate teachers and their communities would be strengthened; teacher candidates would have a rich set of teaching experiences and enhanced resumes; and an emphasis on social justice would be supported more broadly in the educational community. Associate teachers could also become better connected to the goals of the Initial Teacher Education program, which would ensure a stronger connection between theory and practice. This could potentially improve the quality of teacher candidates’ experiences during their practica, as well as provide an alternative means for candidates to hone their teaching skills in non-evaluative settings where they have more latitude to experiment with different pedagogies and curricula. By supporting social justice work, service-learning provides tangible benefits to our educational community. It demonstrates the importance of volunteerism for teachers and students, which in turn better connects teachers with students and provides ways for them to develop and deepen relationships outside of the classroom. Sharing expertise and strengthening relationships is a positive step towards better supporting students, schools, and communities in need.

NEXT STEPS AND NEW QUESTIONS
Given the success of this study, the number of participating teacher candidates and associate teachers in the service-learning program will be expanded next year. Ideally, there will be access for teacher candidates to a broader range of sites, and they will remain involved throughout a full term or academic year. During the next few years we will be seeking to identify further characteristics of service-learning experiences, including the optimal length of programs.

The results of the study will be shared with other instructors in the program, with an aim to encourage them to incorporate service-learning into their own courses; this could take place in the context of regular professional development sessions. Broadening the implementation of service-learning into a range of different subject areas would help to spread its benefit beyond the arts into more facets of city life: imagine the power of sending 1300 volunteers from this program into under-serviced communities throughout the Greater Toronto Area each year! The project findings will also be shared with associate teachers in partner schools through meetings and workshops, with the aim of encouraging the development of new sites for service-learning in local schools.
Inspired by similar projects run by American teacher education programs, in future, we would like to investigate the possibility of establishing at OISE an arts education program for needy children in Toronto. We would provide leadership to create programs that could not only serve children in need in our community but also provide a rich training ground for arts-based teacher candidates. As one teacher collaborator so beautifully articulated, “These initiatives taken by OISE are paramount in reframing the way we perceive education and the arts. The arts are tools for building healthy individuals and strong communities. They are the stories, rhythms, and illustrations that make us who we are, celebrating our difference and communicating a shared experience. The arts are our common ground.” We hope that arts-based initiatives will continue to grow in the fertile ground of service-learning in the years to come.

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REFERENCES


CONTRIBUTORS

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A PARTNERSHIP OF REFLECTIVE PRACTITIONERS ENGAGES IN JAPANESE LESSON STUDY FOR THE ENHANCEMENT OF MATHEMATICS TEACHING

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ABSTRACT
This project extended a new initiative at OISE’s Institute of Child Study Laboratory School for the enhancement of the teaching and learning of mathematics through the practice of Japanese lesson study. Lesson study is a form of professional development practised in Japanese schools in which teachers jointly plan, observe, and discuss lessons in a cycle of instructional improvement. In the present study we investigated the potential of lesson study with broadened populations: (a) Within the Laboratory School, we extended the membership of the lesson study groups to include specialty teachers; (b) in the MA program in Child Study and Education, we included a formal study of lesson study; (c) in the broader community, we provided models for interested administrators and teachers from local school boards. Ten new mathematics lessons were designed and implemented with the result that both teachers and MA teacher candidates made strong gains in their mathematics knowledge, and there is evidence that students in these classrooms also made gains in their understanding of various mathematics topics. The addition of lesson study in the MA mathematics education courses has been successful and has become a model for teaching MA courses in other subject areas. Finally, the enthusiastic participation of teachers, consultants, and principals from the Toronto District School Board has enabled the planning of future extensions of lesson study in 2007–08 to inner-city classrooms.

OBJECTIVES
- Teacher development: To assess the effectiveness of lesson study as a support for teachers in gaining a deeper understanding of the mathematics topics in the elementary school curriculum, and to extend the school practice of Japanese lesson study to include specialty teachers
- Masters student development: To develop and assess the effectiveness of new models for incorporating Japanese lesson study in courses for teacher candidates
- Outreach: To experiment with finding effective ways of collaborating with district school boards in the use of Japanese lesson study
Developing teacher expertise in mathematics teaching remains a persistent challenge in university departments of education (Ball et al. 2001). Teachers require a profound knowledge of mathematics in the curriculum and an understanding of the ways that students learn mathematics. However, proficiency in mathematics teaching also entails skills in designing instruction, and in assessing how particular designs play out and impact on students’ learning (Ball & Bass, 2000; Shulman, 1987). In recent years North American educators have looked to lesson study, a form of professional development developed and practiced in Japan, as a possible support for fostering improvements in mathematics teaching and learning (Lewis & Tsuchida, 1988).

Briefly, lesson study is a professional development process that involves joint research and lesson planning under a common goal, where teachers engage with one another in designing, implementing, observing, and reflecting on “research lessons.” In lesson study, teachers work collaboratively to (a) formulate specific goals for student learning, and form hypotheses about instructional activities that will support these goals; (b) plan, conduct, and observe research lessons; (c) observe student learning, engagement, and behavior during the lesson; and, (d) discuss and revise the research lesson, and the approach to instruction, based on these observations.

Through the process of lesson study, teachers are presented with unique opportunities to reflect on their teaching and student learning. Such goals for mathematics teaching have been well articulated in the National Research Council (2001) report, *Adding it Up: Helping Children Learn Mathematics.* However, while North American researchers and practitioners have embraced the potential of lesson study as a support for enhancing mathematics teaching, they are still in the early stage of learning how this process can be adapted for, and used by, North American educators (Fernandez *et al.*, 2001). There is consensus among lesson study theorists and practitioners on the need to establish a shared knowledge base of lesson study cases in order to increase understanding of the mechanisms in lesson study that support learning (Hiebert *et al.*, 2002, 2003; Lewis *et al.*, 2006).

During the past two years the teachers at the Laboratory School at the Institute of Child Study at OISE, University of Toronto have been experimenting with the use of lesson study to achieve the two goals of enhancing the teaching and learning of mathematics, on the one hand, and contributing to the general educational knowledge base, on the other. In the first year of their work, the classroom teachers from the Laboratory School carried out two successful lesson study cycles and found that the process significantly enhanced teachers’ knowledge of the mathematics content of the topics covered.

In the current year, we expanded our lesson study practices to include a broader population of participants, including specialty teachers. We also experimented with new models and designs for adapting lesson study as part of the Initial Teacher Education MA program in Child Study and Education that is housed in the Institute of Child Study building. In addition, we included an outreach focus, by investigating effective ways of collaborating with local school boards in the use of lesson study at a district level.

Lesson study typically involves a cycle of steps and processes. The section that follows contains details of these steps and the various aspects of this research.

**STAGES OF THE PROJECT**

**October to mid-November: Identifying mathematics content, conducting research, and designing instructional unit and research lesson**

On Wednesday afternoons during a four-week period, classroom teachers, MA teacher candidates placed in these classrooms for their second year practicum (interns), and specialty teachers met to select themes and content areas of interest for the lesson study. Two teacher teams were established, and two related topics were selected. The primary-grade team chose to investigate and design lessons for the development of young students’ learning of subtraction word problems. The topic selected by the junior-grade team was on multiple methods for long division. In
preparation for the lesson design, both groups engaged in researching their chosen topic through reading developmental mathematics literature and also designing and conducting interviews to probe students’ informal knowledge of the topics to be taught. Both the readings and the results of the interviews directly influenced the overall design of the instructional unit. Over the course of the next three weeks, both teams of teachers engaged in a number of classrooms teaching trials and revisions of both the research lesson and the unit as a whole.

November 28: Full day public lesson presentation and debriefing
The public lesson day was attended by the entire school staff and invited guests—consultants, teachers, and principals and members of the math education research community. Each visitor or observer was given a full lesson plan for each of the research lessons, as well as a detailed list of observation points chosen by the teacher teams as a guide to assess students’ responses and learning while each research lesson was taught.

The debriefing session began after the teaching of the two lessons. Typically, debriefing sessions followed a set order of speakers—beginning with comments by members of the individual teacher teams, followed by reactions of the observers, and concluding with presentations by invited discussants. The discussants not only provided analyses of the lessons from the broader perspective of the math education community but also offered specific suggestions for further revisions and improvements. The presentation day ended with each teacher team meeting to make final revisions to their lessons, with the idea of implementing the revised lesson during future mathematics classes.

January to end of March: Second iteration of the lesson study cycle
Starting in mid-January, the teachers and specialty teachers in the Laboratory School engaged in a second cycle of lesson study. The topics selected were fraction operations in the junior grades, and proportional reasoning in early-years classrooms. In this second iteration, five new lessons were designed and presented.

January to April: Implementation in the mathematics methods course
A central goal of this project was an evaluation of the potential of lesson study in pre-service teaching, specifically in the Child Study and Education MA program. As an introduction, the teacher candidates read informative and critical readings on lesson study. Next, groups of five teacher candidates chose mathematics topics for their lesson study investigation. Then they engaged in the same cycle of lesson study activities described above. Finally, teacher candidates submitted detailed papers in which they described the process they had engaged in: they presented both the design and results of classroom interviews they had conducted, and a full breakdown of lessons they had designed and taught, plus a substantial section on their reflections on the process.

DATA COLLECTION AND ANALYSIS
The data, collected from diverse sources, supported specific areas of investigation. Data analysis was grounded in methods of design research (Kelly & Lesh, 2000) in order to track the development of different learning communities—children, teachers, teacher candidates, and the researcher.

Focus on teacher engagement and mathematics learning
All of the teacher meetings were videotaped and transcribed in order to track the development of teachers’ content knowledge of specific mathematics topics. Selected transcripts of teacher meetings and debriefing sessions were coded and analyzed for the participants’ use of mathematical language; videotape transcripts were also used to track teachers’ engagement with the process. Effectiveness of the lesson design was analyzed through comments and reflections of discussants and outside researchers. In addition, in selected lessons the learning gains of the children were analyzed by comparing informal pre- and post-lesson assessments that had been designed and conducted by members of the teacher teams.

Focus on master’s students and lesson study
The methods of analysis used to track the development of teacher candidates in the MA program were similar to the methods used to assess the success of lesson study for teachers. However, in addition, each of the teacher candidates teams produced a scholarly paper analyzing the processes and products of their work. As part of their general feedback and evaluation provided to the university at the end of the term, teacher candidates also rated the inclusion of lesson study in their program.
IMPACT
The overall impact of incorporating Japanese lesson study was strong. Gains in mathematics learning occurred as a result of the use of lesson study, on the one hand, and the production of artifacts, on the other. Following is a brief discussion of the impact and potential of lesson study for teacher candidates and the broader education community, and also some challenges.

Gains in mathematics knowledge
1. **Teacher learning.** Teacher self-reports indicated that the lesson study process made a significant impact on teachers’ mathematics knowledge and interest. Analysis of all discourse at teachers’ meetings and debriefing sessions revealed that teachers’ abilities to use mathematical language increased significantly over the course of the year. Specifically, teachers gained a new depth of knowledge of the different content areas that were the focus of each lesson study project. For example, as a result of the research and lesson design for fraction teaching, teachers progressed from a limited understanding of fractions as primarily parts of wholes to a broadened understanding of fractions as operators, quotients, measures, and ratios.

2. **Masters’ students learning.** As a result of the inclusion of lesson study, teacher candidates participating in the mathematics methods course showed the same kinds of gains in knowledge of mathematics as the teachers did.

3. **Children learning.** The assessment of student learning was not central to the research design. However, changes in students’ knowledge of mathematics was tracked through a comparison of student performance on assessments, made prior to their engaging in the research lessons, with their behaviour during the lessons and samples of their written work. For example, one result of a series of grade three lessons, which introduced students to fraction operations, was that the children developed a deeper and more intuitive understanding of the proportional relationships between fractions, and they became more flexible in the ways that they thought about fractions. Impressively, not only were these young students able to multiply fractions—a skill that is not taught until fifth grade—but also they were able to move back and forth between fractions with different denominators.

Production of artifacts
1. **The creation of lessons for dissemination.** During this research project, the Institute of Child Study (ICS) lesson study community created ten highly successful lessons on a range of mathematics teaching and learning topics: geometry, mathematical functions in elementary school, subtraction word problems for kindergarten children, proportional reasoning activities for children across the grades, and multiplication and division of fractions in the junior grades. These carefully designed lessons, adapted for students in different grade levels, have become part of a new series of lessons for the teaching and learning of mathematics in the Laboratory School. It is also planned that these lessons will be published in a volume on lesson study that is currently being developed.

2. **Presentations and publications.** The teachers in the lab school have prepared talks and made presentations about their work in lesson study at a number of scholarly conferences. In addition, two journal articles have been prepared and submitted to scholarly journals. Finally, we believe that our work has indeed contributed to the knowledge base of the mathematics education research community.

Challenges
While overall the process went exceptionally well, there were times during the lesson study project when the teachers felt overburdened with the challenges of finding sufficient time for all of the meetings that were required to design the lessons and to conduct research on the students’ initial understandings. Another challenge—unanticipated—was that even in the setting of the Laboratory School where teachers are accustomed to having their teaching observed, many teachers were reticent to volunteer to teach the public lessons. In addition, since our mandate is one of scaling up to include a more widespread use of lesson study, a challenge anticipated in other settings is the lack of expertise in the guidance and facilitation of the lesson study process. In the case of this project, an experienced mathematics educator was available to consult with the teachers and to guide them in gaining expertise in selected mathematics content areas. In most school settings, this kind of support is difficult to arrange.
IMPLICATIONS FOR TEACHER EDUCATION
One of the most significant findings of this research was the power of employing Japanese lesson study in the two required math education graduate courses that are part of the syllabus for the MA program in Child Study and Education. Firstly, through the rigorous process of lesson design that is part of Japanese lesson study, the MA teacher candidates were able to design lessons that were highly effective. In fact, two of the lesson designs have been submitted as parts of articles to professional education journals. Secondly, the teacher candidates in these classes appreciated the unique blend of research and practice offered by the study and implementation of lesson study. To date, lesson study is practised primarily by teacher groups. However, the results of this study on the use of lesson study in pre-service classrooms have made a contribution to the general education community.

NEXT STEPS AND NEW QUESTIONS
In the coming year, we will turn our attention to expanding lesson study into the broader educational community. Pairs of teachers from the lab school will become facilitators of lesson studies that will be conducted in ICS research partner schools. For two months teachers will travel to these schools to participate in weekly meetings. During these sessions the ICS teachers will not only teach the principles of lesson study but also support teaching staff in these schools in conducting their own lesson studies. Graduates of the ICS Masters of Education program will spearhead a second initiative: a number of graduates have expressed interest in carrying on the lesson study work in their new schools. This work will also be supported by ICS.

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REFERENCES

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ABSTRACT
This research project created a space for teacher candidates and associate teachers to engage in critical collaborative inquiry during practice teaching. The project participants met several times to share their critical inquiry projects and reflect on their collective work. Emerging cultural themes from this project reflect the following experiences: the complexities of collaboration among teacher candidates and associate teachers; the comprehensive planning required to support these partnerships; the possibilities for bridging and strengthening teacher candidates’ experiences at the university and in the field; and, the professional learning practices that honour what teachers know and want to know.

OBJECTIVES
• To strengthen the critical inquiry practices of teachers working in the elementary Midtown cohort
• To create a space to foster dialogue among Midtown teacher graduates, current teacher candidates, and associate teachers
• To explore the possibilities and challenges of critical collaborative inquiry between teacher candidates and associate teachers

Within the prevalent dialogue on professional development, support for teachers is typically conceived as access to expert advice, resource materials, and funding. Our previous research indicates that time, a common space, dialogue, and access to one another’s teaching experiences are critical factors in the creation of collaborative inquiry communities, where members are listened to, supported, affirmed, and challenged as they reflect on their practices and take action in their classrooms. (See Botelho, 2003; Botelho, Gibson-Gates & Jackson, 2006; Botelho & Kerekes, 2006; Kerekes, 2001; Luna et al., 2004.)

The process of critical collaborative inquiry challenges the popular practice of having experts (who are perceived to possess the most knowledge) answer questions that teachers did not ask in the first place. Through critical collaborative inquiry, teachers can closely examine their own personally significant questions together. They use self-reflection, observation, and
interviews, and they analyze children’s work, class curricula, and school documents. They connect their teaching experiences to broader conversations about current educational theories, and practices.

Taking action on the teaching strategies generated from teacher research is central to critical inquiry; however, the work of critical collaborative inquiry demands critical analysis of both the research literature and the process (Comber, 2001). Teachers reconsider their inquiry methods and resources, and ask themselves: What questions do I deem “askable” (Davies, 1999)? What implicit definitions of literacy, and what perspectives, are imbedded in the research literature? Which perspectives are missing? Does the research literature make sense, given what I already know about this practice? In what ways are the power relations of class, race, gender, and language implicated in how a particular research project was conducted, how the data was analyzed, and how the study was represented in writing (e.g., what kind of assumptions were made about children who are poor, or English language learners)?

Since the mid-1990s, Midtown cohort teacher candidates at OISE have explored the power of their own questioning as a means to deepen their understanding of teaching (Beck & Kosnick, 2006; Kosnick & Beck, 2000). During the past two years, the Midtown cohort has included critical inquiry in the Teacher Education Seminar, through a guided process called “Prep Steps for Action Research.” This process introduced teacher candidates to a clear, self-identified, focus for observation and inquiry during their first practica, and later required them to complete a critical reading of a professional article on a relevant aspect of teaching.

The purpose of this project was to explore the possibilities of critical collaborative inquiry between teacher candidates and associate teachers by providing time, space, dialogue, and access to each other’s teaching and critical inquiry experiences. While all Midtown teacher candidates were engaged in critical inquiry within the Midtown language arts course, this project created a context for two 2005–06 teacher candidates and three 2006–07 teacher candidate-associate teacher pairs to reflect on the possibilities and challenges of critical collaborative inquiry process as they investigated questions about critical multicultural literacies teaching within their practicum classrooms. This project also integrated four of the 2005–06 critical inquiry projects as common readings into the Midtown language arts course. These papers served as models of critical inquiry projects and facilitated the dissemination of local knowledge.

**STAGES OF THE PROJECT**

**Naming our burning questions**

After critically reflecting on the first year of creating conditions for critical inquiry in the Midtown cohort, we presented our practice during the Ontario Ministry Forum for Faculties of Education. This presentation formalized the experience and helped us name some lingering questions, which in turn became the questions that fuelled the first stage of this project. The burning questions included:

1. What are the possibilities and challenges of critically analyzing theories and practices that participants are in the process of coming to know?
2. In what ways can critical collaborative inquiry contribute to participants’ overall professional learning?
3. In what ways can a critical collaborative inquiry project invite participants to learn, learn about, and learn through critical multicultural literacies, and also to learn to critique through critical multicultural literacies and practices?
Calling for participation
Within the language arts course, we introduced the project to teacher candidates when they returned from their first practicum. They considered participation and then shared an informational letter with their associate teachers. A call for participation was sent out in December 2006 to associate teachers who had previously expressed an interest in critical inquiry. Several 2005–06 Midtown teacher graduates, whose projects exemplified critical inquiry work, were also invited to participate. During Student Teacher Experience Program (STEP) days in mid-January, teacher candidate-associate teacher pairs negotiated their participation.

Creating a space for dialogue
The main activities of this project started at the beginning of the teacher candidates’ second practicum. The three teacher candidate-associate teacher pairs, along with the rest of the Midtown cohort, became engaged in critical inquiry. The eight project participants came together at regular intervals: two, two-hour meetings—which allowed time for pairs to work together—took place on the second week of the winter practicum, and during the last week of practicum. The teacher candidate-associate teacher pairs presented their collective work during the critical inquiry conference in mid-April, along with the rest of the Midtown cohort. The 2005–06 Midtown teacher graduates, as honorary guests during the conference, provided a link to the first year of the critical inquiry work.

Negotiating collaborative inquiries
While exploring the possibility of collaboration during this project, we allowed for all kinds of collaboration to unfold, because collaboration happens on a continuum. During the project, collaboration took on many shapes and forms: one pair explored how to imbed critical literacy practices into the study of medieval times within a junior classroom; a teacher candidate explored learning centres—a primary classroom practice—within an intermediate French immersion classroom; an associate teacher inquired into her role as mentor during the critical inquiry process; another pair explored the benefits of drama for reading comprehension within a junior classroom, while the participating associate teacher also reflected on her supporting role during the inquiry process.

DATA COLLECTION AND ANALYSIS
The data collection process included digital voice recording of all meetings, including the project participants’ panel discussion and presentations during the Midtown option critical inquiry conference. We obtained copies of the three teacher candidates’ critical inquiry projects and of materials shared during the teacher candidate-associate teacher pairs’ presentations. All course materials related to the critical inquiry experience and letters to associate teachers were added to the data set.

This study was informed by critical ethnography (Carspecken, 1996); that is, qualitative research practices that endeavor to make visible the socio-political motivations and consequences of educational practice. The data were analyzed for cultural themes. A list of themes was compiled and used in the rereading of the data. Cultural themes are reflections of the counter-cultural practices of critical collaborative inquiry, practices that challenge the norms of professional learning. The emerging cultural themes were contextualized beyond classroom practice and connected to broader social factors that shape the practices of school literacies and professional learning.

The themes that emerged from the data analysis demonstrate the possibilities and challenges of critical collaborative inquiry within initial teacher education. Four interconnected themes illustrate the complexities of this work.

Posing versus imposing questions
While we encouraged teacher candidates to pose their personally significant questions as a means of exploring literacy practices relevant to their practicum experiences, the possibility of teacher candidates and associate teachers posing collectively significant questions is under-explored. The challenge is that teacher candidates’ questions sometimes emerge in the first practicum, but they are not related to the context of the second practicum; this is a dilemma that we expect teacher candidates to negotiate and resolve with their associate teachers. However, the negotiation process is difficult for teacher candidates because they feel as if they are imposing their questions on curricula and classrooms that are in full motion. In addition, the critical inquiry process is met with some resistance from the teacher candidates because they are inexperienced with this kind of learning. Some teacher candidates did not recognize the connection between critical
inquiry and critical multicultural literacies, or the value of teacher inquiry. Many teacher candidates worried about the power relationships imbedded in the teacher candidate-associate teacher partnership, a reality of all relationships. The involvement of 2005–06 teacher candidates, as well as associate teachers from the outset, helped address some of these concerns and brought credibility to this work. In the end, teacher candidates are expected to apply a strategy that is generated from their critical inquiry, and it must be meaningful for the children they teach.

The role of the associate teacher is an important sub-theme because viable expectations for critical collaborative inquiry are needed so that teacher candidates can investigate questions that are relevant to their classroom contexts. The scheduled pre-practicum days in classrooms provided opportunities for discussing the teacher candidate-associate teacher collaboration and created curricular opportunities for the application of the practices that everyone learned through these projects. The expectation for this collaborative process will be made transparent through communication with associate teachers: for example, through informational letters, onsite meetings, and the Midtown Associate Teacher Handbook.

**Time and timing**

Time is a scarce resource in initial teacher education; so blocks of time within the Teacher Education Seminar and language arts course were set aside to allow teacher candidates to explore their questions about language arts teaching. They were given time to explore critical reading of professional literature, to share their questions and critical inquiry proposals in class, and also to collaborate with colleagues as their projects were unfolding. The project findings show that the issue of setting aside time for teacher candidates and associate teachers to conduct critical collaborative inquiry within their classrooms is under-explored in the Midtown cohort experience. For example, time is needed for supervisors to facilitate meetings and to bring together associate teacher-teacher candidate pairs within partner schools.

Timing was another key theme. Some participants maintained that the critical inquiry project is best introduced at the beginning of the year to allow teacher candidates to take notice of their emerging questions. However, although the critical inquiry projects were introduced to the 2005–06 cohort in September, some of the teacher candidates claimed that the process was too much to consider at the beginning of their initial teacher education experience. The teacher candidates need to experience teaching and school literacies practices before posing questions about them.

**Planning for critical inquiry**

Time and timing are integral to the planning of critical inquiry in the Midtown cohort, but this theme speaks to the tension inherent in critical inquiry; it is not something that just happens. This process requires a lot of planning. And consideration needs to be given to the ways that mentoring and planning of this experience can become imbedded in other parts of the Midtown experience.

Critical inquiry requires that teacher candidates unlearn and learn new ways of learning, teaching, and researching. However, while protecting the unexpected learning and teaching that emerges from this work is important, the goal is to create conditions and social structures to make critical inquiry practices visible and to strengthen the partnerships involved in this experience. The goal is not to standardize the process, but to know the cohort of teacher candidates, partner schools, critical multicultural literacies (in this case), resources, and critical inquiry processes in order to be able to guide teacher candidates’ investigations.

**IMPACT**

From the outset, the participation of Midtown teacher graduates and associate teachers brought credibility to the critical inquiry experience in the Midtown cohort. The cultural themes that emerged from the data analysis demonstrate the possibilities and challenges of critical collaborative inquiry within initial teacher education.

But what does the “critical” mean in critical inquiry? How can teacher candidates be critical of something that they are just coming to know? Does critique mean finding something wrong with the research literature? The participants’ critical inquiry projects demonstrate that critique is not only about taking apart the work of others. It involves taking note of the contributions of practitioners and researchers in the field, and also being aware of the decisions that one makes. This means addressing such questions as: What practices do we permit in our classrooms? Which ones do we leave at the classroom?
door? Who benefits from the practices we privilege in our classrooms? Who loses? What are some potential problems these practices might pose within our classrooms?

Taking on a critical stance in teacher research means paying attention to definitions, assumptions, and the social implications of the theories and practices applied in classrooms. Identifying what one knows and does not know are beginning places for critical inquiry. A critical stance offers teacher candidates authority, a position that feels uncomfortable to them because they are learning to become teachers. However, this project helped teacher candidates and associate teachers to inquire into, and question, unfamiliar practices. Teacher candidates played key roles in initiating the focus of their professional learning experiences.

**IMPLICATIONS FOR TEACHER EDUCATION**

Critical collaborative inquiry in initial teacher education offers great possibilities: it can enrich current school-university partnerships, inspire new investigations, and foster critical reflective teaching within the initial teacher education community. With careful planning and mentoring at the university, and robust partnerships with schools, critical collaborative inquiry can (a) create social structures that encourage dialogue and interaction among teacher candidates and associate teachers, a dialogue that fortifies the teacher candidate-associate teacher collaboration; (b) establish purposeful learning engagements between associate teachers and teacher candidates; (c) make visible the thinking and planning associate teachers are engaged in on a daily basis; (d) connect practice teaching to professional dialogues; (e) establish practices of professional learning among teacher candidates that are critical and responsive to the teaching context; and, (f) deepen and expand teacher candidates’ and associate teachers’ understanding of subject-specific pedagogy (e.g., broadening our definition of language arts beyond reading and writing, and considering cross-curricular possibilities).

Critical collaborative inquiry creates a space for teacher candidates and associate teachers to reconsider teaching practices together. However, the issue of timing needs to be addressed. Doing so will help: the refining of a supportive framework for teacher candidates who go through this process (critically reading research literature, posing questions, writing proposal, etc.); the contact with associate teachers (informational letter); and, the way that course spaces in language arts are used to support this critical inquiry work.

**NEXT STEPS AND NEW QUESTIONS**

This research project created a moment of pause—it is easier for one to keep practicing what one knows. The cultural themes that emerged from the data analysis reflect the possibilities, challenges, and next steps for a kind of partnership that makes visible the thinking and decision making behind socially just teaching practices. What lies ahead is the re-mapping and refining of critical inquiry practices within the Midtown cohort experience. Issues include the course(s) in which the critical inquiry projects will reside; teacher candidates’ workload; a cross-curricular focus; as well as delineating associate teacher participation during practice teaching (i.e., how to strengthen communication with associate teachers and make participation expectations explicit).

An important lingering question is: In what ways can critical collaborative inquiry transform the power relationships embedded in the teacher candidate-associate teacher partnership so that their roles as teachers and learners are reconciled? These collaborations can bridge the professional learning practices between the university and practicum classrooms, with teacher candidates playing a key role in these processes.

For many of the teacher candidates, the purpose and benefits of critical inquiry did not “click” or make sense until they prepared their presentations or presented their work during the Midtown critical inquiry conference. The conference program and written projects demonstrated that the cohort learned, learned about, and learned through (e.g., multimodal representations of their learning) some critical multicultural literacies. Their conference presentations embodied many kinds of literacies and many dimensions of critical work. This research project helped to name the layers of criticality taking place across the Midtown critical inquiry projects. The next step will be to secure project samples from the 2006–07 cohort in order to make the dimensions of critical work more transparent for the next group. The question remains: What shifts in critical practice will teacher candidates experience because of critical collaborative inquiry? More work lies ahead to deepen understanding of critical multicultural literacies and critical collaborative inquiry, and the roles they each have in the critical practice of inquiry.
Critical inquiry is ongoing, non-linear, and open-ended teaching that happens through listening, observing, participating, analyzing, and reflecting. A final lingering question is: In what ways will the firsthand critical inquiry experiences of teacher candidates and associate teachers help them to invite students to engage in student-generated investigations? Creating conditions for “unexpected curriculum” (Parker, 2007) will facilitate student ownership of classroom learning as well as realize lived experience as curriculum. Critical collaborative inquiry holds great promise for purposeful, meaningful, and transformative learning and teaching in the Initial Teacher Education program at OISE and in partner schools.

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CONTRIBUTORS
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EXPLORING EFFECTIVE TEACHING STRATEGIES FOR ENGLISH LANGUAGE LEARNERS IN MATHEMATICS CLASSROOMS

Cathy Marks Krpan

ABSTRACT
With the view to support teacher candidates as they acquire skills for teaching diverse learners, this study examined the strategies that educators in the field believe to be the most effective in helping English Language Learners (ELLs) succeed in mathematics education. The research also identified the strengths and mathematical strategies that ELLs bring to their classrooms and the challenges they face with new mathematics initiatives. This study illustrates the importance of integrating a variety of instructional strategies to support ELLs in learning mathematics. It also highlighted the importance of valuing the skills and knowledge that ELLs bring to the learning process.

OBJECTIVES
• To identify key instructional strategies that can assist ELLs in the mathematics classroom.
• To explore the strengths that ELLs bring to the mathematics classroom.
• To identify possible challenges ELLs may experience with mathematics initiatives in Ontario classrooms.

Students who are new to the North American educational system bring a wealth of mathematical knowledge to the classroom (NCTM, 2000). However, this knowledge is often marginalized because students are expected to conform to North American approaches to algorithms and problem solving. As Perry and Fraser (1993) note, the social and political aspect of multicultural mathematics is a moral issue in our classrooms. It is essential that educators value and respect culturally diverse ways of thinking in mathematics teaching (Marks, 2001). With this in mind, this study focused on how to effectively support ELLs in mathematics classrooms.

Six experienced educators (including two ESL educators) from one of the OISE cohort schools embarked on an action research study to identity strategies that they believed would assist ELLs in their mathematics classrooms. The particular school was chosen because of its high ELL population. Also, for the past four years students at this school consistently scored higher than the board and provincial averages on the grade three provincial mathematics test.
In addition to examining effective instructional strategies, the action research study group identified the strengths that their ELLs bring to mathematics lessons and the possible challenges they face. Over the course of a school year, the group met to share their insights and reflect on their own practices of teaching mathematics to ELLs.

STAGES OF THE PROJECT
The beginning
The project grew out of conversations with teacher candidates and educators in the field. Many were interested to know what the educational research indicates about ELLs in mathematics education. Because there is only limited research that specifically addresses issues of ELLs in mathematics education, we decided to investigate this subject further. In addition the group explored ways to better assist teacher candidates in their efforts to support diverse learners in their classrooms.

Establishing our focus
An action research format facilitates the exploration of field-based practices from the perspective of educators (Poetter, 1997; Elliot, 1997). For this project, an action research group was created, and inquiry questions were developed related to ELLs in the mathematics classroom. Three areas of inquiry were used to guide discussions and sharing: (a) How can we support ELLs in the mathematics classroom? (b) What challenges do ELLs face in Ontario mathematics classrooms? (c) What mathematical strategies do ELLs bring to the learning context of mathematics?

Sharing the learning
Action research meetings were held five times throughout the year to explore the research questions. Discussions were recorded, and notes were kept on ideas and themes that emerged during each session. The action research approach enabled educators to compare teaching strategies and debate issues that were relevant to their experiences of mathematics instruction with ELLs. Lively discussions provided a context in which the educators could reflect on their own teaching practices and challenging educational issues (Marks, 2004; McNiff, 1995).

Bringing it all together
During the fourth and fifth meetings, the educators collated all the insights and suggestions and created a chart that summarized the key points from their discussions. This chart made it possible to cross reference the data and ensure consistency. It also provided a practical format for sharing information with other educators. (see table 1, p. 26)

DATA COLLECTION AND ANALYSIS
Four methods of data collection were used: audio taped discussions, student work samples, teacher reflections, and researcher’s notes. Each of the five action research meetings during the school year lasted two to three hours. During each meeting, participants analyzed student work samples, discussed teaching strategies, and explored different approaches to working with ELLs in their mathematics classrooms. Four main themes emerged from the findings of the project.

A different learning process
One of the main challenges that ELLs faced in the mathematics classroom was a significant paradigm shift—the difference between how math was taught in their home country and in Ontario. In many cases, students were not accustomed to explaining their own mathematical thinking, creating algorithms, or using manipulatives. Students were often surprised to learn that a quickly produced numerical answer for a word problem or computation question was not enough. They did not understand how to explain their thinking. When asked to explain their thinking in images, numbers, and words, sometimes students would include images that had no relation to the question or to their answer. The teachers agreed that they needed to take more time to support ELLs by explicitly modelling the communication of ideas in mathematics. One participant commented:

As educators we sometimes overlook the amount of risk taking it requires for some of our ELL students to create a different algorithm than the one they were taught for so many years to be the correct approach in their homeland. They move to a new country, experience so much change and then they are told that they need to explore mathematics in a whole new way! They need lots of support, time, and encouragement.

(Action research meeting, January 2007)

The group also agreed that students’ confidence and risk taking could be encouraged by building on skills they already had.
### POSSIBLE CHALLENGES

ELLs may encounter different kinds of mathematical thinking than what they learned in their homeland.

- Provide extended time for modelling using think-alouds so students can hear and see different approaches.
- Encourage students to share strategies from their homeland.
- Pair ELLs up with peers to discuss ideas—this allows them to hear different mathematical perspectives.
- Allow more time to develop a comfort level with new approaches.
- Provide opportunities for ELLs to make connections between new strategies and the ones they learned from their homeland.

ELLs may not be familiar with using manipulatives.

- Provide time for students to explore and play with manipulatives so they can become accustomed to how they feel and how the pieces work together.
- Provide lots of modelling by teacher and peers.
- Take time to explicitly model uses of each manipulative.

ELLs may not be accustomed to communicating their mathematical thinking.

- Provide opportunities for students to share ideas and listen to others explain their thinking.
- Record class reflections on chart paper so examples of mathematical writings are visible in the classroom.
- Encourage students to communicate in their first language.
- Identify key components in mathematical reflections (such as numbers, images, and words) and how they can be used.
- Use anchor papers and rubrics to clarify expectations.

ELLs may not be accustomed to cooperative learning in mathematics class.

- Invite students to work in pairs, with a peer they trust, before introducing lessons that involve larger groupings.
- Be explicit about the role of cooperative groups.
- Model cooperative talk and learning skills (e.g., how to take turns, share ideas, and how to listen and give feedback).

ELLs may need support in acquiring specific mathematics vocabulary in English.

- Incorporate mathematical images and vocabulary in a class word wall.
- Emphasize specific vocabulary that is used to communicate thinking and to describe mathematical concepts.
- Say the same thing in different ways.
- Keep in mind that geometry may seem simple for ELLs due to its visual nature, but it requires a lot of vocabulary knowledge.
- Beware of homonyms such as whole and sum that can cause confusion.

ELLs may not be used to working with multi-step word problems.

- Model how to break down problems into key parts and highlight main ideas (what we know, what we need, etc.).
- Explicitly teach how to read a word problem (e.g., unlike a paragraph, the main idea is at the end).
- Invite students to explore different word problems and identify ones that are similar.
- Avoid word problems that include unfamiliar content such as sports, games etc., that newcomers may not understand.

Parents may have a different understanding of what mathematics education entails.

- Send home examples with homework.
- Use anchor papers to explain different levels of achievement during parent interviews.
- Provide website address so that parents can access Ministry of Education documents.

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### INSTRUCTIONAL STRATEGIES

- Provide extended time for modelling using think-alouds so students can hear and see different approaches.
- Encourage students to share strategies from their homeland.
- Pair ELLs up with peers to discuss ideas—this allows them to hear different mathematical perspectives.
- Allow more time to develop a comfort level with new approaches.
- Provide opportunities for ELLs to make connections between new strategies and the ones they learned from their homeland.

- Provide time for students to explore and play with manipulatives so they can become accustomed to how they feel and how the pieces work together.
- Provide lots of modelling by teacher and peers.
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- Send home examples with homework.
- Use anchor papers to explain different levels of achievement during parent interviews.
- Provide website address so that parents can access Ministry of Education documents.
The paradigm shift in the learning of mathematics also presented a challenge for many parents. In some cases, parents found the new way of learning mathematics very confusing. They understood the mathematical processes that their children had been taught before moving to Canada. But when they arrived in Ontario, many parents continued to have their children complete student workbooks that they had brought with them.

**Different strategies**

The ELLs brought a wealth of mathematical knowledge to the classroom. Many had memorized the facts of addition and subtraction and could recall them with accuracy and speed. Some were also quite quick and effective with using the abacus to complete math questions. Even when solving mental computation questions, many students explained that they pictured the abacus in their minds to assist them with their thinking. One educator described how an English Language Learner used her fingers to solve math questions in a very unique way: she could count up to least 20 by using each segment of her fingers.

The group concurred that educators, when teaching new concepts, could build on their students’ mathematical knowledge by taking more time to value and understand the different strategies that ELLs bring to the mathematics classroom. It was also noted that ELLs were willing to assist their peers and teachers. One student, who realized that the class was confused when his teacher introduced a beginning concept of division, offered a suggestion to the teacher: “Just show how it relates to multiplication. This will help!”

**The mathematical language**

Many people may think that, from a language perspective, mathematics is easier for ELLs because it consists primarily of numbers and images. However, the educators in this study emphasized that this is not true. They stressed that mathematics involves language. The understanding of terms such as *less than*, *pattern*, *classify*, *complete*, and *prove* is necessary for learning new math concepts. And geometry is a visual topic with extensive vocabulary (angles, flips, slides, similar, identical). Also terms such as *sum* and *whole* have non-mathematical homonyms that can confuse many students.

The group found that a “word wall” was the best way to support the learning of new vocabulary in mathematics. In this way, students could readily see each new word accompanied by an image. Also by using lots of visuals and manipulatives in their teaching, the educators were able to assist the students in their acquisition of new vocabulary and concepts.

ELLs need non-threatening environments where they can practice their approximations of new mathematics vocabulary. Students find it helpful to practice mathematics vocabulary in a relaxed setting in small groups, or in pairs, using games or drama activities. The group concluded that the above strategies assisted the ELLs and all the other students to learn mathematics.

**School support**

Throughout this study there was collaboration between the grade level team and the two ESL educators. Strategies were shared and problems solved as a team, and they often met during school hours to discuss ways to support individual students. The two ESL teachers in the group were regarded as important resource people in the school: they worked in partnership with the educators and students on an ongoing basis; they taught and assisted the ELLs in their classrooms and knew each one personally. As one ESL educator explained, “We do not want to be teaching in isolation. We want to support what is actually happening with our ELLs in the classroom.” Overall, the school culture, and the organization of support for its ELLs, seemed to have had a positive impact on the ELLs and the educators at this school.

**IMPACT**

This study has contributed to the goal outlined in research literature concerning the need for educators to develop a repertoire of instructional strategies that can assist English Language Learners in the classroom (Cary 2000; Coelho, 2004). By identifying instructional strategies that benefit ELLs in the mathematics classroom, this study supports an ongoing project at OISE, known as ESL infusion, in which course instructors in the Initial Teacher Education Program examine ways to effectively support ELLs through course content and instructional approaches. Findings from this research not only provide insight into mathematics instruction but also highlight key challenges that ELLs face.
This action research study enabled six educators to discuss issues and reflect on their practices of working with ELLs in math classrooms. The findings of this study, including the chart developed by the research group will influence the delivery of mathematics education in the Initial Teacher Education program. In this way, more content focused on instructional strategies for ELLs will be infused into the program.

The findings of this study are aligned with mathematics literacy initiatives of the Ontario education ministry. They can be used to support ongoing initiatives in partnership boards. This research has been shared with consultants and administrators who work in the practicum schools, and the preliminary results have been shared at conferences and other venues across Ontario.

**IMPLICATIONS FOR TEACHER EDUCATION**

This project has several implications for teacher education: it provides educators with knowledge related to mathematics instruction and ELLs, and it has the potential to influence initial teacher education course design in mathematics education. If mathematics education courses are designed with a meaningful integration of the instructional strategies that have been examined in this study, teacher candidates may have more success while completing their practica and beginning their first years of teaching. This study provided teacher candidates with key teaching strategies and the skill development required to work with ELLs in mathematics, and these teaching strategies can be applied to assist all learners in developing a deeper understanding of mathematics concepts. The action research approach used in this study revealed insights concerning the current practices, skills, and knowledge that associate teachers use to ensure their ELLs experience success in mathematics. Knowledge gained from action research studies such as this one can strengthen field-university partnerships and also provide valuable information that faculties of education can use when designing course content.

**NEXT STEPS AND FURTHER QUESTIONS**

The opportunity for a group of educators to discuss issues related to ELLs confirmed the need for educators to implement a variety of strategies when working with ELLs. More exploration in this area is necessary in order to develop a deeper understanding of ELLs in math classrooms. Exploration focusing on how to support English Language Learners in overcoming challenges is critical. Furthermore, additional research on how ELLs are taught mathematics in the countries they came from could provide additional insight into the knowledge and skills they bring to the mathematics classroom.

**ACKNOWLEDGEMENTS**

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**REFERENCES**


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USING TECHNOLOGY TO ENHANCE LEARNING AND TEACHING IN THE YORK REGION DISTRICT SCHOOL BOARD

Krista Walford and Charmain Brown

ABSTRACT

This project developed from a school-university partnership project that showed the benefits of placing teacher candidates with associate teachers who had completed their in-service with faculty members who used similar instructional approaches (Bennett & Eldridge, 2004). In this follow-up project, we examined the impact of introducing technology, as tools to enhance literacy development, to teacher candidates in collaboration with a team of teachers from associate schools. A conference was held on the use of technology in the classroom: 110 teachers and teacher candidates learned collectively about smartboards, blogs, podcasting, moogles and video streaming software. Then, all participants engaged for two months in small groups in reflective inquiry on the impact of these technological tools on student learning and literacy development. An important outcome of this study was that participants became comfortable planning for, and modelling the use of technologies. They saw the value of the tools for increasing student engagement and improving student learning.

OBJECTIVES

• To explore technological tools and components of mentoring in order to improve teacher candidates’ effectiveness
• To develop a community of learners—new and experienced associate teachers, technology lead teachers, administrators, board consultants, and teacher candidates—in which learning about new technology fosters literacy and collaboration
• To encourage associate school teams and teacher candidates to practice reflective inquiry concerning their use of technology in the classroom and to study its impact on student learning

Since 2002, when the Doncrest cohort opened with the support of the York Region District School Board as an offsite cohort in the Initial Teacher Education program at OISE, close ties have been encouraged between OISE and the district. In the fifth year of the Doncrest cohort, the project coordinators decided that teacher candidates and associate teachers could be supported in the use of technology as a means to increase learning in classrooms.
STAGES OF THE PROJECT

Planning for collaborative learning about the use of technology

When this project began in May 2006, the coordinators met to develop a plan for a technology conference. The York Region District School Board further supported the project by funding the release time of 31 elementary and secondary associate teachers and providing the expertise and venue for the conference. We then invited schools associated with the OISE program to participate in the conference. We asked the five collaborating schools to send to the conference six teachers who were then paired with teacher candidates to form teams to learn and engage in reflective inquiry on the impact of using technology to improve literacy and learning.

Focus on technology

The teams were in place, the venue established, and the date, February 1, 2007, was set for the technology conference. Secondary and elementary teachers, administrators, and teacher candidates came together to increase their understanding of the use and value of technology in the classroom.

During the conference workshops, participants examined the integration of podcasting for oral literacy development. They learned about the value of class blogs in promoting critical thinking and communication. Teachers, consultants, and teacher candidates interacted using smart boards. Everyone became engaged with video streaming software and its potential for enhancing student learning. Consultants from the York Region School Board connected theory, research, and best practice by demonstrating the power of technology in the classroom. They also provided a framework for implementing the technologies and information about the provision of ongoing district services to support teachers and administrators in their integration of technology in the classroom.

DATA COLLECTION AND ANALYSIS

One method of data collection was an online post-conference participant survey. Another was a reflective inquiry project: each participant selected one technological tool and, for two months, engaged with a team in reflective inquiry on the impact of the technology on student learning. During the conference workshops, the project coordinators made observational notes about the participants’ engagement and reflection. The surveys, observation notes, and submissions from the reflective inquiry project were examined and analyzed for patterns, commonalities, and any changes over time.

As we examined the ways in which participants viewed their use and understanding of technology in the classroom, we identified some interesting trends. Thirty-eight out of 110 participants at the conference responded to the voluntary anonymous online survey. In response to the first survey question about their prior experience using technology in the classroom, three indicated they had experience with technology; and 22 identified themselves as having little or no experience using technology. Of the 13 people that said they had some experience with technology, 12 reported that they primarily used the Internet for research in the classroom. Of all the respondents, only 11 had used the smartboard in the classroom; two had used blogs with their students, and two had used united streaming. As mentioned previously, the aim was to have teachers understand the potential of incorporating blogs, podcasts, united streaming, and smart technology into their regular classroom teaching.

Commenting on learning during the workshop, one participant wrote, “These are amazing workshops. I wish all teachers from our school were here.” Another wrote: “This is the best professional development I’ve ever received.” In post-conference debriefing teacher candidates said that the technology conference had impacted their development as new teachers more than any other learning experience in their pre-service year. At the end of the conference, participants reviewed the framework for the group inquiry that would occur during the following two months. The post-survey indicated that only two of the respondents felt uncomfortable collaborating with teacher candidates and mentor teachers on the inquiry projects.

“Computer technology has been demonstrated to enhance classroom instruction by making learning more engaging, and by providing new ways of teaching complex concepts and critical thinking” (Packard, 2000, p.4). For the purpose of this study, technology refers to hardware such as laptops and smartboards, software such as powerpoint and smart ideas, and internet resources, including bloggs, united streaming, and moodles.
Impact of smartboards on teaching and learning
The teacher candidates felt that smartboards had clear benefits and a positive impact on student learning and engagement. The smart technology was used in different ways in subject areas such as music, social studies, math, and language. All groups concluded that students communicated and collaborated well during the smartboard lessons. The participants, as new teachers, valued the influence that the technology had on increasing student attentiveness during lessons and decreasing classroom management difficulties. Similar positive attitudes and student results have been reported by Clemens, Moore, and Nelson in a web-based publication: “100% of the participants preferred using the smartboard and other forms of technology as opposed to traditional paper and pencil methods of instruction” (2001).

Topics of teacher candidate inquiry projects
Of the fifteen project groups, ten decided to focus on the impact of using the smartboard, an interactive white board technology, on student learning. Two groups examined united streaming software. One group looked at the influence of podcasting on student communication, and one group reflected on using blogs with junior or intermediate students. Another group—with teacher candidates placed in a school with limited use of technology and associate teachers who did not attend the conference—studied the use of power point software and its impact on student learning.

In April all project groups returned from their practicum placements and presented the findings from their reflective inquiries to the university community. All teacher candidates described how the engagement of students, from kindergarten to grade eight, increased when a particular form of technology was introduced into classroom lessons on any subject.

The value of teacher candidate inquiry projects
The inquiry presentations showed that the reflective inquiry was beneficial and assisted participants in understanding the value of technology in student learning. Participants also gained appreciation for the need to have mentors and mentees collaborate when implementing new tools in classroom learning and practices. One associate teacher said,

The inquiry we undertook to examine the impact of smartboards on student learning proved to all of us that they not only provide interactive and great visuals that engage students but that by having students interact with the smartboards, we observed increased critical thinking skills and retention of knowledge by our grade 4 and 5 students. In addition to student learning, the inquiry project brought our division closer together. Being a new school, this project provided a vehicle for all of us to connect and learn more about each other.

These inquiry projects were influential in providing evidence of the benefits of using technology and of building strong collaborative relationships among teachers.

Challenges
Accessibility of the technology is always an issue for teachers. Some of the teacher candidates reported that they were eager to use the technology during their practica, but that it was unavailable in their schools. There were also reports of difficulties that some groups had using the selected technology. One example was the blogging group that sought permission from the administration for students and their teachers in the intermediate division to create blogs about their current research in social studies. The day before the class was going to post the blogs online, the administration said that they needed more information about safety concerns around blogging. Although the teacher candidates and associates gave the administration articles and websites about the value and safety of blogging, by the time permission was granted the practicum placement was finished. As a result of this experience, teacher candidates realized that teachers and administrators need to continually seek out professional development and also be supported as they increase their awareness of the value and safety of using technology in the classroom.

Mentoring should start in pre-service
McCann, Johannessa, and Ricca (2005) believe that new teachers benefit from a broad network of contacts with peers and external resource people, as well as former associate teachers. In this regard, the relationships supported during this project have laid foundations for future mentoring and collaborations between associate schools, teachers, and teacher candidates.
IMPACT
This project had impact on stakeholders in the following ways:

1. Pupils in the associate schools were able to experience groups of teachers, associates and teacher candidates, working together to engage their learning with technology. Students saw the teams communicating effectively and working closely in an inclusive, supportive culture. They were provided with technology that allowed them to succeed during their lessons.

2. Teacher candidates were mentored by well-informed, caring, and supportive associate teachers who have clear visions and well-defined goals for reciprocal relationships with their mentees.

3. Associate teachers experienced professional growth from learning in a supportive community of mentors, mentees, consultants, and university instructors who share similar goals for the integration of technology into teaching on a daily basis.

4. The York Region District School Board gained a bank of enthusiastic and knowledgeable teachers who are able to integrate beneficial technology in classrooms. The district has also deepened its connection to the university, where collaborative projects and research are highly valued.

IMPLICATIONS FOR TEACHER EDUCATION
The project affirmed what is written in the 2005 Ontario Ministry of Education document *Education for All*, which encourages teachers to use technology to differentiate instruction and support the needs of all learners in the classroom. It also helped to solidify school-university partnerships by linking the initiatives and goals of the OISE teacher education program with the York Region District Schools Board’s vision of integrated technology, induction, and mentorship. It also helped to develop a collaborative community of associate teachers who can become supportive leaders for other associate teachers, specifically the mentorship of teacher candidates on their future use of technology in the classroom. The project has assisted in the process, as proposed by Frykholm and Meyer (1999), of having mentors provide teacher candidates with the support and learning experiences that they need to develop belief structures and habits of practice that can lead to powerful teaching and learning.

NEXT STEPS AND NEW QUESTIONS
The benefits of this research project can continue to be supported and expanded. This initiative will help support participating teacher candidates during their first year of teaching. A package of training materials, developed by consultants on the use of technology in classrooms, will be shared in following academic years. The reflective inquiry projects were not only professional development but also verification of the benefits of the use of technology and the impact of collaboration between associate teachers and teacher candidates. Collaboration will continue in the next academic year with the use of demonstration classrooms where associate teachers invite teams of teacher candidates to observe how they integrate instructional strategies, technology, and balanced literacy and numeracy structures to benefit student learning. The collaborative community will also continue to be fostered with associate teachers through after-school workshops and regular communication.

New teachers require a great deal of support to be successful and to remain in the profession. It is our intention to continue the journey with teacher candidates, graduates, and associate teachers in order to offer them the collaboration, professional development, guidance, and support they need to be able to be successful in their future endeavours.

ACKNOWLEDGEMENTS
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ABSTRACT

How do you support teacher candidates and new teachers (those in their first three years of teaching) who may themselves be at risk while working with students at risk and related programming? This project was inspired by: (a) the work of the Students at Risk: Learning Pathways cohort at OISE, a group of intermediate and senior teacher candidates; (b) the experiences of first year teachers, all graduates of the Students at Risk: Learning Pathways cohort; and, (c) insights from the associate teachers. Participants shared their concerns arising from the “at-risk” label and discussed both the challenges and the opportunities for enhanced teacher preparation and professional growth. An essential finding of this project is that teacher candidates and new teachers seek informal venues for professional networking and the sharing of best practices in order to meet the needs of students at risk and related programming, even though they appreciate the formal mentoring offered by experienced practitioners and the instruction provided by the Initial Teacher Education program. Informal networks include mentoring of teacher candidates and new teachers, online forums, and research assignments for teacher candidates that explicitly address classroom management, effective communication, and special education infusion.

OBJECTIVES

• To identify the challenges and possibilities that teacher candidates and new teachers face while working with students at risk and related programming
• To identify how teacher candidates and new teachers may be supported to meet the needs of students at risk and related programming
• To empower research participants to share their experiences and, in so doing, to help inform a more responsive teacher education curriculum and professional induction process

“An ‘at high risk’ youth is one who is unlikely to graduate on schedule with the skills and self-confidence necessary to have meaningful options in the areas of work, leisure, cultural [and] civic affairs, and relationships.” (Ontario Ministry of Education, 2005, p. 3.) Although this definition remains relevant to educational policy in Ontario, for this study, risk is
defined as both academic and non-academic factors that compromise a student's ability to succeed. By extending the definition of risk beyond credit accumulation and graduation rates, the potential for both risk and student advocacy is positioned at the centre of equitable teaching and learning. This definition also implies that risk is everywhere, not simply in the inner cities or among particular demographic groups. The Students at Risk: Learning Pathways cohort invites teacher candidates, as part of the development of their advocacy frameworks, to challenge the at-risk label while working in support of student success.

How best can support be given to teacher candidates, and new teachers who may themselves be at risk, while they work with students at risk and related programming? This question guided this project. This article contributes to an emerging discussion of an under-researched area of public policy and scholarship. At-risk students, often presented as the early school leavers, are receiving significant media and public policy attention in Ontario. A number of reports attest to the reality of the disengaged student who is not succeeding in secondary school (Dei, 1996; Dei et al., 1997; Fine, 1991; Karp, 1988; O’Connor, 2003; Ontario Ministry of Education, 2005a, 2005b; OSSTF, 2005; Tanner, Krahn, & Hartnagel, 1995). There are many reasons given, including: academic challenges; insufficient credit accumulation; bullying and harassment on the basis of ethnicity, race, class, sexual orientation, and gender; violence, family trauma, illness; and, the socio-economic necessity of leaving school early. The Ontario Ministry of Education provides funds for at-risk initiatives, notably the implementation of a Student Success Teacher in each publicly funded Ontario secondary school, and the pathways program. This is an initiative to validate and highlight post-secondary options such as workplace transitions, apprenticeships, and college entrance. However, the question of how teacher candidates and new teachers can be supported as advocates of students and programs related to risk is not widely researched.

This project is inspired by the work of the Students at Risk: Learning Pathways cohort at OISE. The cohort is composed of a group of intermediate and senior teacher candidates who share a commitment to at-risk students; and at the same time they challenge the at-risk label by developing frameworks for student advocacy. This project provides an opportunity for current teacher candidates, new teachers, and experienced associate teachers to identify support strategies.

**STAGES OF THE PROJECT**

**Responding to risk**

In May 2006, as part of the annual review of the work of the Students At Risk: Learning Pathways cohort, the cohort coordinators asked the following question: To what extent does the cohort respond to the needs of teacher candidates and new teachers, themselves graduates of the cohort? This question became the catalyst for our research proposal and the basis of this project. While we considered the responsiveness of the cohort to the needs of its teacher candidates and partner schools, we also felt an underlying desire to foster enduring ties with teachers in the field, to empower teacher candidates, new teachers, and associate teachers to contribute to program development, and to share best practices. To accomplish these goals we planned to provide participants with safe spaces that offered professional community and anonymity. These would be spaces where it would be possible to name the challenges and possibilities arising from one’s work with students at risk and related programming.

**Claiming one’s voice as researcher**

Teacher candidates, new teachers, and experienced associate teachers were co-researchers, key sources of insight, and change agents in this study. Mindful of these roles, in September 2006 90 members of the Students At Risk: Learning Pathways cohort were invited to participate in this voluntary study. They were asked to complete an anonymous questionnaire. Their responses, as well as information volunteered during class discussions and through their responses to questionnaires submitted in April 2007, provided valuable insights about their experiences.

Three teacher candidates were invited to be in a focus group for a more in-depth discussion of “at-risk” in relation to this study. They were each matched with the study’s three participating associate teachers during practicum placements. The practicum helped to forge more enduring ties between the teacher candidates and associate teachers. These initial discussions ensured that the views of all participants were heard. In this way, the teacher candidates helped to inform the research process.

The teacher candidates’ involvement also raised challenges. An extensive ethical review had been completed prior to the research project, and assurances had been given that they could speak openly and honestly, without reprisal, and make
comments, both positive and negative, about enhanced support for teacher candidates. However, the anonymous questionnaire showed more critical questioning than did the face-to-face focus group, where fewer criticisms were made of the B.Ed. program. This raised a concern about the level of perceived safety felt by the teacher candidates during the project. In spite of assurances, they seemed to have perceived more security through anonymity. At the same time, it is significant to note that the three teacher candidates felt that their voices and insights had been respected as part of a larger planning process.

**Focus group dialogues**

In Spring 2007 two focus group interviews took place. The first one, intended as an informal dialogue, involved the project researchers and the three teacher candidates. This first dialogue created a space within which they could speak with candor about any aspect of the Initial Teacher Education program. The second focus group, involving two new and three experienced teachers, was an intensive daylong discussion and networking opportunity that provided a space for participants to discuss both the nature of risk and the support strategies that could aid teacher candidates and new teachers. This event had an unintended result: it helped to forge professional ties among the participants, and some of the new teachers expressed interest in completing their job-embedded learning days (part of their professional induction) with these experienced associate teachers. The coordination of schedules and the logistic of securing release time presented the largest obstacles for this aspect of the project. However, these challenges were addressed through ongoing dialogue with participants and their school administrative teams. The support of administrators proved invaluable to this study: these school leaders offered their support by encouraging the participants to attend their focus group, providing release time, and securing occasional teachers.

**DATA COLLECTION AND ANALYSIS**

This project involved a variety of data collection methods, including a questionnaire, focus group discussions, and transcripts from the focus groups. The following questions, which were included in the questionnaire, guided the project: (a) How do you conceptualize the at-risk student? (b) Recalling your own initial teacher education, how were you prepared to work with students at risk and related programs? (c) What are the strengths and challenges faced by teacher candidates and new teachers when working with students at risk and related programs? (d) How can teacher candidates and new teachers who choose to work with at-risk students and programs be supported most effectively during their training and induction into the profession?

The use of these qualitative methods of data collection provided a forum for participants to give voice to their own challenges and possibilities. The themes that emerged from the dialogue are “voices from the field” that offer compelling insights concerning the limitations and possibilities of grappling with risk, especially in relation to the support strategies needed for teacher candidates and new teachers.

**Voices from the field: Considering the nature of risk**

Participants cited a wide range of factors that create or contribute to risk for secondary students: socio-economics; English as a second language; special needs; multiple abilities; mental health issues, notably depression and addiction; family disruptions and trauma; attendance; and punctuality. One participant observed: “Any student can be at risk. We need to expand the definition from poor students or failing students to any student. To be at risk means to be at risk of not graduating and making poor life decisions.” This participant challenged the prevailing definition of the at-risk student as one who is not accumulating credits, is missing classes, or is referred to the office for infractions. By affirming the need for a more holistic approach to risk both within and beyond secondary schooling, this participant advocated that teaching and learning practices must be linked to a student’s decision-making.
making, self-awareness, and self-advocacy skills. And teachers can be role models and facilitators for these skill sets.

Another participant noted the inherent problems and bias associated with the use of the at-risk label and its ability to inform perceptions and misperceptions.

*I was bothered by the language that was used around the at-risk student as being bottom of the barrel, the classes no one wants ... By the end even the term “applied” implied something ... language is so powerful and a reflection of our culture, particularly our school culture. It upset me that new teachers and students are not even given a change when they enter a school or classroom with that culture, using that language.*

The implicit and explicit equating of goodness with academic-level courses is problematic. Through these words and pedagogy, a hierarchy is created that privileges academic achievement, and students may then internalize these attitudes. In accordance with the pathways program, students may take courses in a variety of streams, not just one. As new generations of teachers enter the profession—rather than, for example, referring to a student as an “applied student”—teacher candidates will be asked to think of the student first, not her or his course enrolments.

In opening up the definition of risk to include the larger social realm of poor life decisions, the first participant invites us to consider how we construct and apply risk as part of our own professional practice. At the same time, as the second participant cautions, opening up the definition must be done with a critical eye to the power of the at-risk label to deny opportunities to students and reinforce systemic barriers.

**Voices from the field: Effective and current support strategies**

Participants identified a wide range of effective strategies used to support both students and teachers—from building a sense of community with students to informal networking. “Rapport is absolutely the most important element when working with students at risk. Without making genuine connections with the at-risk students, there’s considerably less chance that they will respond to your assistance.” Echoing the call for a more holistic approach to address risk, this participant encourages teachers to take time to get to know their students. Rapport building fosters community in the classroom and school, assists with curriculum planning, and may help to avert classroom management issues and other conflicts. Although curriculum is one important part of the teacher-student dynamic, interaction with students must not be reduced to the fulfillment of curriculum expectations.

“I was bothered by the language that was used around the at-risk student as being bottom of the barrel, the classes no one wants ... By the end even the term “applied” implied something ... language is so powerful and a reflection of our culture, particularly our school culture. It upset me that new teachers and students are not even given a change when they enter a school or classroom with that culture, using that language.”

The sharing of best practices—including those related to holistic teaching and learning—presents challenges for new teachers. Participants commended OISE’s cohort structure for the enduring ties and sense of community that it fosters. “Networking with the other teacher candidates in the cohort has proven to be a valuable asset for the year. Not only do I have access to really good ideas and resources, but these peers have also provided me with the emotional and social support that I need to remind myself that things happen and aren’t always going to run the way I planned.”

Both formal and informal channels of communication between teacher candidates and new teachers, including the online class forums, email dialogues, and in-person visits, proved valuable in the sharing of ideas and problem solving.

**Voices from the field: Proposed effective support strategies**

Participants offered a wide range of ideas for effective support strategies. Suggestions included increased interactive and scenario-based learning, improved communication skills in teaching and learning environments, and more detailed information about professional induction. “Situations
surrounding classroom management, including modifying curriculum, assessment, effective questioning, social difficulties with students, self management (de-stressors), role play activities (i.e., what would I do in this situation?), are so useful.” Offering more advice about practical supports, another participant commented: “Provide a list of contacts of support staff that are available to speak with or come into class and sit in on a lesson. That would be more helpful to me than having someone come in and creep up on me asking if I need any help ... Have a practicum that more deliberately matches teacher candidates with at-risk and alternative programs.” Echoing the theme of practical skill acquisition during the Initial Teacher Education program, a participant noted the importance of communication techniques: “Things like writing effective overheads or creating effective handouts [are important topics]. I couldn’t believe how important something like this is and how much of a drastic change you see in your students.” All of these suggestions can—and are—being included as part of the curriculum in the Students at Risk: Learning Pathways cohort.

IMPACT
Risk, resilience, and engagement underpin the Students At Risk: Learning Pathways cohort. This project created a forum within which teacher candidates could work with students’ strengths to create possibilities for their success. Teacher candidates were encouraged to engage all learners—especially those at risk of failure—regardless of the grade level where they were working. By extension, the project revealed the participants’ desire for enduring relationships with colleagues to ensure that their own explorations of risk, resilience, and engagement could continue to be fostered through informal professional networks.

The project also provided an opportunity to forge deeper ties with partner schools and associate teachers. It created a dedicated space for participants to explore both the challenges arising from work with students at risk and related programming, but also the problematic use of the at-risk label as a source of stigma. Participants experienced a sense of empowerment from hearing each other’s voices. They became committed to using their voices as catalysts for developing more responsive models of teacher education, and their sense of empowerment also helped them to forge enduring ties with partner schools.

Participants provided timely insights about the ways that the politics of risk are reflected in contemporary schooling. They did so by highlighting the wide range of perceptions and experiences of risk, profiling the related school programming intended to meet the needs of at-risk students, and naming the challenges experienced by teacher candidates and new teachers who work with these students and programs. All of these insights inform areas for program growth and development within teacher education and professional induction programs.

IMPLICATIONS FOR TEACHER EDUCATION
All of the participants commented on the sense of empowerment they gained through their participation in this project. To ensure strong ties with Initial Teacher Education, the project partners need an ongoing dialogue, especially one that is mindful of the importance of incorporating their voices as part of enduring relationships with the field. This ongoing dialogue can be achieved in a number of ways: continued study through research partnership initiatives like this one; invitations to associate teachers to speak with teacher candidates and instructors; ongoing professional development and sharing of best professional induction practices by OISE and its field partners; and greater involvement of the associate teachers, themselves leaders in student advocacy and support, during practicum placement and supervision.

As sources of ongoing support for teacher candidates and new teachers, professional support networks are also critical. Online sharing of best practices, compilation of resources, and mentoring for teacher candidates and new teachers can be facilitated. Indeed, as of spring 2008 the Students at Risk: Learning Pathways cohort continues to implement a number of the suggestions that emerged from this study. These include invitations to field partners and recent graduates to discuss their experiences with new teacher candidates, online dialogues between current teacher candidates and recent graduates, site visits to field partners, and the linking of the latest Ministry of Education student success policies to examples from the field.

Teacher candidates and new teachers need opportunities to share their questions and concerns in professional, honest, accessible, and even vulnerable ways. This can happen by creating informal spaces for professional community and dialogue beyond the scope of official programs, notably the...
New Teacher Induction Program in Ontario, courses, and degree requirements.

NEXT STEPS AND NEW QUESTIONS
Ongoing support of teacher candidates and new teachers, especially via easily accessible and informal online forums and mentoring, can support professional community building. Further, this network can create and maintain sites within which future research questions can be explored, for example:

1. What does effective classroom management and communication look like within at-risk teaching and learning environments?
2. What are some of the best practices for infusion of special education supports?
3. How could a teacher candidate or new teacher challenge the at-risk label as a source of agency for students, their families, and professional colleagues?
4. How can we, as teacher candidates, new teachers, experienced teachers, and allies, challenge the equation of “good” with “academic” and the linking of “bad” with open, essential, and applied levels? While these are not views shared by all teachers, several project participants noted their discomfort with these implicit and, all too often, explicit equations. Participants voiced their concerns about how these equations marginalize students.
5. Reflecting teacher activism, service to the profession, and the desire to forge enduring relationships with the field, how should the Students at Risk: Learning Pathways cohort create a student support program in partnership with a local secondary school? While the particular needs of the school would inform the content and delivery of such a program, areas of potential contribution include mentoring programs, assistance with credit recovery, and transitions programming for grades seven to eight, and eight to nine. Teacher candidates could also serve as tutors in credit recovery and peer mentoring programs.

While the scope of these questions is large, the issues they raise outline areas for greater program responsiveness both within the Initial Teacher Education program at OISE and also in close cooperation with OISE’s field partners, recent graduates, and current teacher candidates. The support for at-risk students and programming demands nothing less than ongoing refinement in order that teachers can respond to the multiple ways that risk is manifest.

ACKNOWLEDGEMENTS
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CONTRIBUTORS
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INDUCTEES AS MENTORS: MEN WHO CHOOSE TO TEACH IN THE ELEMENTARY DIVISION—PHASE TWO

Larry Swartz and Jim Giles

ABSTRACT

In 2006, a research project was conducted entitled “Men Who Choose to Teach in the Elementary Division: From Preparation to Induction and Beyond.” This project considered why males choose to enter the profession and how males who choose to work in the elementary division best receive support. An essential finding of the project confirmed that one-to-one correspondence with someone who has “been there” is a significant—and necessary—mode of support and mentorship during the induction years. A new research initiative was therefore developed where the teacher candidate graduates had opportunity to support teacher candidates who were entering OISE’s Initial Teacher Education program. In phase two, “Inductees as Mentors,” five male graduates were paired with five male teacher candidates, and the inductees shared their own journey of being mentored through a partnership with a beginning teacher. This research project supported the Ontario Ministry of Education initiative: New Teacher Induction Program (NTIP, 2006).

OBJECTIVES

The research objectives were framed by three key questions:
• How might beginning teachers serve as mentors to teacher candidates?
• How might male inductees better reflect on their journey as beginning teachers by having a context for sharing their stories?
• What are the strengths and challenges of males working in the elementary division?

This project is phase two of an earlier research project, 2005–06, that was designed to investigate the professional lives of male elementary teachers, build support for male teachers during training and induction, and build partnerships between OISE and host schools.

Underlying the project was the significant educational issue of recruiting male teachers for elementary classrooms, and retaining them in the profession. This topic had also been introduced in the Teacher Education Seminar, and the School and Society courses at OISE to help candidates consider some of the issues, challenges, and successes of male teachers who...
choose to teach alongside women—who represent the majority in the field. Upon completion of the 2005–06 project, several of the teacher candidates suggested they would be interested in continuing the investigation when they became first-year teachers. As a result, phase two began.

STAGES OF THE PROJECT
Embarking on research
Five teacher candidates in the 2006–07 Central cohort were invited to be involved in this research project. It was necessary that these participants (a) were willing to do inquiry research on this topic as an assignment for their Teacher Education Seminar; (b) represented a variety of backgrounds (work experiences, instructional background, interests); and, (c) demonstrated diversity (age, ethnicity, religious background).

Early in the first semester, the focus group met to share background experiences that had prepared them for the profession. The discussion focused on reviewing, and reflecting upon, the information shared within their profile applications. The teacher candidates had submitted this information about their background and their views on social justice and equity upon applying to OISE, and the clarity of the information and the depth of understanding about teaching and learning revealed in the profile, factored into the successful admission of the applicant. The teacher candidates also shared their assumptions about being a male educator and discussed some challenges they felt they might encounter when working in the schools.

An overview of the research project was provided, and teacher candidates were asked to consider a focus question that they would like to investigate concerning males who choose to teach in the elementary division. This could be a question related to, for example, role modelling, legal issues, public image, or building relationship with parents.

An email message was sent to five male teacher graduates from the 2005–06 Central cohort who had been involved in phase one of the research project. It was necessary that these participants (a) were willing to investigate this topic and identify some of the challenges of the induction years and the support systems available to them; (b) had been hired to work full time in a primary junior classroom for a public school board in the Toronto area; and, (c) demonstrated diversity (e.g., age, ethnicity, background experiences).

Those selected as participants were invited to reflect on their experiences in a reflective journal, online communication, or focus groups. They were also asked to consider being interviewed by current teacher candidates.

Dialogue as data
The five teacher candidates were matched with former Central cohort teachers. Each pair exchanged email addresses to establish a correspondence. It was intended that a dialogue occur where participants asked questions, shared concerns, and told stories about their learning, and their teaching and learning experiences.

During the first semester, a meeting was arranged where the five male participants were invited to share data drawn from their correspondence. Strategies for building communication, including questioning, reflecting on program components, and sharing stories, were encouraged. Jim Giles, a veteran male teacher was invited to facilitate the discussion and share relevant resources.

School partnerships
Each of the male participants in the research was placed with one male associate teacher in the elementary division. This opportunity was available either in the first term or in the second. The partnering, which took place in a primary or a junior classroom, provided opportunity for five male teacher candidates to observe practice in a classroom conducted by male teachers, to interview a male teacher about his background and interests, and also to establish a support system as a guide during their teaching.
Deepening the research
Teacher candidates and former Central cohort candidates were invited to continue an online dialogue as the year progressed. In the second semester a meeting was organized with the teacher candidates. This focus group shared their discoveries to date, and central themes emerging from their investigation. Some email communications were more consistent than others. Support was given to each person to strengthen their inquiry and gather data.

Sharing the findings
Teacher candidates had further opportunity to explore and reflect in the following ways: They prepared a research paper that identified questions and discussed the data and future implications; and they shared their research with others in the Central cohort.

Reflections and implications
A final meeting was organized involving the five male teacher candidates and the five former Central cohort candidates. The meeting was videotaped as the participants discussed the following themes: (a) support received by those involved in the Initial Teacher Education program; (b) support received by those involved in the induction years; (c) common goals and concerns; and, (d) the value of the research and implications for further support.

The communication between mentors and mentees varied throughout the project. It was a challenge for the beginning teachers to find time to send email messages to their partners because of the demands of their jobs as well as other induction-related initiatives in which they were involved. Although the project was of interest to the teacher candidates, it could not be a priority because each one had additional program and practicum obligations, as well as personal commitments outside the program. The project worked best when time was set aside for meetings throughout the year.

DATA COLLECTION AND ANALYSIS
This project involved a variety of means of data collection: questionnaires on the theme of “why I wanted to be a teacher”; samples of email correspondence between project participants; videotape and transcripts of a conversation on the theme of “considering the impact of this research”; and inquiry projects submitted by the teacher candidates, which included surveys, interviews, and email transcriptions. Titles of the inquiry project included: Male elementary teachers: Are we meeting the perceived need? The profession needs men: Is it all in the numbers? Why I went into teaching: Views from a second career male.

IMPACT
Project coordinator
As project coordinator, I had the opportunity to pay close attention to a significant educational issue regarding those men who choose to enter the teaching profession and might be challenged to remain in the profession. The project design allowed me to work with a group of teacher candidates in one-to-one and small group settings to uncover assumptions about males in elementary teaching and to help them reflect on their own identities as they begin to work in the field. The project provided an opportunity to build a bridge between Initial Teacher Education and induction in order to support the professional growth of male teachers over time.

Teacher candidates from the 2007 Central cohort
Male participants had been invited to discuss issues and concerns with instructors, host teachers, colleagues, and those who had begun to teach. By raising questions and building a dialogue with partner male teachers, both online and in person, the participants became empowered to support others, and at the same time they were being supported by those with similar needs and concerns.

Beginning teachers, the 2006 graduates of the Central cohort
Ontario Ministry of Education and school boards initiatives provide opportunity for those entering the teaching profession to be mentored and supported during their years of induction. This project provided another context for mentoring: The graduate participants were able to stay connected with the OISE program, which gave them opportunity to share their stories and questions with others in the teacher education program. In this way, they had opportunity to mentor others who were going through what they had previously experienced.

In a final meeting, the ten participants discussed how successful they felt the research had been to them. Several themes emerged from the transcribed excerpts of the videotaped conversation, and the comments validate the experiences of teacher candidates and the partners who were their mentors.
**Communication**

The first theme was the importance of communication. The teacher candidates agreed that the project provided a significant opportunity to communicate with someone who has “been there,” not only in terms of Central cohort events in their teacher education program, but also in having similar anxieties and job preparation and induction challenges.

My partner’s reflections were so valuable to me because I was able to hear firsthand what it’s like to be a first-year teacher, and this kind of communication is what good mentoring should be. Also, it was good to share stories, raise questions, and discuss problems with someone who had a similar journey to mine during his year at OISE.

The research allowed me to connect. By reading articles, I’ve discovered other stories about males in the elementary program. I see little bits and pieces of myself in those guys out there teaching.

We talked about mixed messages, and I think that’s what I take away from this. I think that the expectations for male teachers are very mixed. On the one hand, we talked about having to step into the lunchroom to be the disciplinarians, and on the other hand, you have parents calling to say, “Never shout at my child again.” I think for a new teacher, you need to find your equilibrium and be true to yourself.

**A context for connection**

A second issue that emerged from the research was the importance of having a context for male-to-male professional connection, which this project provided. Several teacher candidates expressed this view.

*Communicating with Nathan has been great because it helped me to slow down and think about my role as a male in elementary. I’ve worked with young kids all my life, but now as I learn to be a teacher, I really get to think about my identity. I get to think carefully about what it means, the excitement and challenges of being a man who works alongside young people every day.*

*There are two big aspects I saw with this research. On the one hand, as we shared our personal stories about why we are choosing to teach, we were able to look at the past and future trends of why males don’t want to teach in the elementary division….The research helped me to discover our place in the culture of the school. After working in school settings and talking to other teachers, I feel there is always a comfortable social environment for males in the schools. I did get that from my partner, too. I think we understand that we are a little different by choosing this profession. We have to understand that we have to … change a little bit about ourselves.*

I was very fortunate to be able to ride the ferry back to Toronto (from Centre Island) with my partner. It was a good half hour to just informally think back on the day and think about teaching. I had questions to ask my partner, but really we were a sounding board to each other. Because he was fairly new in the profession, I think I kind of helped him too. Being in that boat gave us the time to kind of talk (or not talk) and I think over the course of the month we got far. I was thankful for that.

**IMPLICATIONS FOR TEACHER EDUCATION**

If recruiting males in elementary classrooms and retaining them in the profession is an issue for today’s educational system, then this small research project provides evidence and gives voice to a group of men who are learning and continuing to learn about teaching. When embarking on the project, the project coordinator and the participants offered opinions and stories to promote teacher excellence during the preparation and induction of teachers.

In the OISE program, there are males in each of the elementary cohorts. Although candidates can choose the geographic location of their cohort, and therefore some cohorts may have more men than others, the number of men from the Central cohort may be representative of other parts of the program. However, there is little chance for men and women in the program to discuss and debate this issue once they are enrolled in the program.

Some goals of this project were to draw attention to, and unpack, personal stories about male teachers. As a result, those who participated in the research are now able to contribute to meaningful conversations and professional learning on this subject within their own cohort, among participants in other cohorts, and with others in the field.
This can happen both formally and informally. The study could further impact those in the OISE community who wish to consider ways to partner graduates with teacher candidates as an effective induction initiative.

Finally, the project will have an extended impact in the field as the participants and project coordinator share information that has been uncovered in this project through discussion, reports, and professional writing. The research will be shared and the videotape presented with other instructors and coordinators, teaching staff, and educators involved with mentoring and induction.

NEXT STEPS AND NEW QUESTIONS
“Inductees as Mentors” is the culmination of a two-year project that examined issues of males who choose to teach in the elementary division and beyond. The research helped participants to examine their values, assumptions, and intentions from teacher preparation to induction and beyond. A third phase of this project could continue the cycle by having those who were mentored become mentors themselves—but this is not a planned next step. A more informal approach will be taken by inviting the teacher candidate graduates to visit the Central cohort in 2008 and share their first-year experiences.

Time, commitment, and consistency were some of the challenges in realizing this project. Upon completion of this project, an article appeared in Professionally Speaking, the magazine of the Ontario College of Teachers, entitled “Male Presence in Teaching Continues to Decline.” The author Brian Jamieson presents statistics that show that the percentage of English-language male teachers in Ontario dropped from 30 percent in 2004 to 28 percent in 2006 (2007, pp. 43–47). Although male teachers are a vanishing breed, Jamieson asks, “Does it really matter?” An important next step is to seek answers to this complex question from men and women in the profession.

After two years of research into this issue, it is apparent that additional investigations are needed to further uncover issues connected to the recruitment, training, and retaining of male teachers for the classrooms of tomorrow. In sum, four significant research questions emerge: If we agree that more males are needed in teaching, how can we strengthen our recruitment initiatives? How do universities ensure that more males are admitted to the program, and consequently, that more males will be teaching in classrooms? How important is the male voice and male approach in looking at the learning process? If we don’t have the voices, will there be gaps in the instruction?

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CONTRIBUTORS
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ABSTRACT
An associate teacher was filmed during pre- and post-lesson debriefing sessions with two teacher candidates during their OISE practicum placements. A digital resource created from the filmed conversations was used by the associate teacher and shared with other focus groups for analysis, discussion, and shared inquiry. By watching and discussing the filmed debriefing sessions on the digital resource, associate teachers began to examine their own questioning and feedback practices. The purpose of this study was to assist associate teachers in supporting the learning of teacher candidates by increasing their knowledge of mentoring practice. The central findings of this project, as reported by the associate teacher and others who viewed the digital resource, were an increased confidence and knowledge of ways to mentor teacher candidates, a growing awareness of a range of effective mentoring strategies, and an expanded capacity to think meta-cognitively regarding feedback conversations with teacher candidates.

OBJECTIVES
• To support the mentoring practices of associate teachers through structuring learning-focused conversations to effectively provide feedback for individual teacher candidates
• To increase school-university partnerships and capacity for inquiry through engaging in shared research related to teaching practice
• To develop a digital resource that demonstrates effective practices for providing feedback, with the aim to stimulate discussion and study with field partners across the Initial Teacher Education program at OISE

Associate teachers are key partners within the Initial Teacher Education program at OISE. They are vital mentors who help to connect, and reinforce, theoretical, pedagogical, and situated knowledge. It is in their classrooms, and with their mentoring and guidance, that teacher candidates synthesize and incorporate theoretical and research-based learning into their own teaching practices. The debriefing conversation that occurs after each teacher candidate implements a lesson is an important opportunity for learning and reflection that helps to deepen understanding and support the development of teaching practice. This particular interaction between
associate teacher and teacher candidate underlies the question that guided this project: Can collaborative analysis of filmed debriefing sessions assist associate teachers in developing successful practices in mentoring teacher candidates?

Educational research literature has identified a lack of clarity about the roles of the associate teacher. Sanders, Dowson, and Sinclair (2005) outline seven potential roles: planner, modeller, evaluator, friend, professional peer, counselor, and conferencer. However, their study reveals that very few associate teacher frame interactions as professional peers or conferencers, roles that are often associated with professional dialogue and the deconstructing of events or teaching. Further, research literature indicates a strong need for a mentor to structure an effective conversation with a new teacher focused on student learning. This conversation involves several processes: presenting evidence to a teacher, prompting reflective conversation about evidence, being able to listen to teacher thinking and being able to move a teacher’s attention into inquiry about students and their needs (Athanases & Achinstein, 2003, p. 1500).

In order to increase associate teachers’ capacity and confidence in these key areas of mentoring and feedback, our project focused attention on these processes and skills in a supportive, collaborative, and connected way.

Teacher candidates who enter the Elementary Initial Teacher Education program at OISE have a variety of experiential and cultural backgrounds, and diverse learning strengths and needs. In order to respond to the learning needs and developmental stages of teacher candidates, associate teachers need to employ skills in planning, communication, and authentic assessment, as well as strategies for supporting the learning expectations of teacher candidates. This study provided opportunity for an experienced associate teacher to inquire into his practices in these areas and to collaborate with teacher educators. The filmed sessions were shared digitally with other associate teachers in order to develop knowledge of the various roles and skills of effective mentors. The research focused particularly on the development of skills in observation and the provision of positive, constructive feedback by means of collaborative analysis of videotaped debriefing sessions. Collaborative discussion and analysis of teaching through activities such as video sharing are highly effective tools for teacher learning at all stages of professional growth (Snow et al., 2005).

**STAGES OF THE PROJECT**

The “Authentic Voices from the Field” initiative spans the continuum of teacher learning by using the knowledge of an experienced and expert associate teacher to support the development and growth of teacher candidates and colleagues. In this two-year project, associate teachers—who have demonstrated effectiveness—will use their existing knowledge about mentoring, coaching, and consulting to engage in focused professional development as a community of learners.

The first pilot phase of a multi-year project began during the school year 2006–2007. An initial goal was to collect baseline data on current practices of teacher candidates and associate teachers. To begin, there was an effort to build a safe environment for this study. The teacher educators provided information to clarify their expectations: they informed the teacher candidates about the practicum process, including lesson or unit planning; and they informed the associate teachers about the provision of feedback for both formative and summative assessments. Discussions took place with teacher candidates and associate teachers regarding effective and supportive strategies and techniques for providing feedback and guidance during the practicum.

One associate teacher offered particular leadership. During two practicum placements, he was filmed holding a pre- and
post-lesson conversation with each of two teacher candidates. The pre-lesson sessions focused on the lesson planning, and the post-lesson conversations debriefed the lesson implementation. In each instance the observations and reflections of the associate teacher and the teacher candidate were the focus of the conversations. The filmed debriefing sessions were then viewed, discussed, and analyzed by the associate teacher and the teacher educators. Particularly effective comments and questions, which stimulated reflection and insight, were identified and examined.

From the filmed sessions, a digital resource was created, and with the permission of the teacher candidates and the associate teacher, it was used with other associate teachers as a beginning tool for thinking about, and refining skills in, the provision of feedback to candidates through learning-focused conversations. This digital resource provided a model for other associate teachers to consider and assess their own practices.

DATA COLLECTION AND ANALYSIS
This pilot project utilized a collaborative action research approach (Sagor, 1993; McNiff & Whitehead, 2002) to address the guiding research question. The filmed debriefing conversations, which were closely viewed and discussed, were the data source for shared inquiry. This qualitative methodology combined the self-study method used by Whitehead and Fitzgerald (2007) and the analysis of a study group explored by Carroll (2005). Data were gathered from the videotapes, the observations made during the collaborative discussions, and the notes of teacher educators who acted as participant observers.

Additional data were collected through the documentation of focus groups of associate teachers who watched and analyzed the digital resource and their own strategies. Research articles on the role of the associate teacher were used as a frame for discussing the strategies identified in the filmed sessions. In particular, the roles and stances of mentor, coach, and collaborator developed by Lipton, Wellman, and Humbard (2003) were seen as powerful.

The teacher candidates also provided data regarding their learning through the debriefing process. These conversations focused on the themes of building trust, rapport, and engagement in the teaching and learning process. They addressed questions such as: What made the practicum experience so meaningful? What type of feedback was the most beneficial? How did this feedback change your practice? The answers to these questions provided data regarding the mentoring practices that associate teachers had developed and included as part of their repertoire.

Several preliminary themes were identified regarding mentoring skills, professional dialogue, and ways of working effectively with teacher candidates and colleagues. The effectiveness of a digital resource to stimulate self-reflection and dialogue became clear in this study. The filmed sessions provided a common experience and source of input that associate teachers, teacher educators, and other partners could use collaboratively or individually.

The power of enhanced self-awareness of skills and strategies for providing feedback emerged as an important theme. The associate teacher involved in the filming process indicated that he had developed increased awareness of his feedback and questioning strategies and developed meta-cognition regarding his work as a mentor of teacher candidates. The associate teachers and teacher educators, who engaged in dialogue while viewing the filmed sessions, began to develop a shared language and understanding of the skills and practices they used during debriefing sessions with the teacher candidates—particularly the conferencing around planning and instruction. This shared vocabulary allowed them to be explicit about the phrasing of their questions and their responses when providing feedback, and much deeper analysis and discussion of the feedback process was possible.

IMPACT
The project showed clearly the power of the debriefing dialogue as a means for assisting teacher candidates to connect their own practices with strong pedagogy and theoretical knowledge. Effective, reflective dialogue was apparent in the digital resource. The teacher candidates stated that their learning was enhanced by the feedback offered by the associate teacher. They highlighted that a key to the successful conversations was the trusting relationship and positive environment created by the associate teacher. As one of the teacher candidates said of the filmed conversation, “I think it can, at least, show how a great associate teacher can help a nervous student teacher!”

A key impact was the strengthened relationship between field partners and university teacher educators. By engaging
in a truly collaborative and reciprocal inquiry, the field and university educators have begun to develop mutual understanding, common language, and common practices. The teacher educators and the associate teacher indicated that through this project they had deepened their understanding of the effect and importance of feedback and had increased their ability to talk about the debriefing process, since their language and terminology was now shared. They also increased their appreciation of the interdependent role and connection of the field and university. The field and university partners learned about each other’s work and the contribution of each partner to the learning of the teacher candidates.

An increased opportunity for dialogue, and the analysis of a common digital resource, has begun to be of benefit to a larger group of associate teachers. Associate teachers who have viewed the resource have discussed their questioning techniques, their use of time within the debriefing session, and the composition of their comments to candidates. In future, they will be able to individually and collectively consider their teaching practices and develop understanding of mentoring practices and skills in learning-focused conversation, which can also extend to dialogue with colleagues and students in their classrooms.

Another impact has been an increased interest in self-study and inquiry. As teacher educators, we are committed to inquiring collaboratively and learning together with our school partners. The associate teachers involved in the filming and the discussions have indicated they are interested in further engaging in this kind of inquiry within their own practices. The possibilities for continued and increased shared learning are strong.

IMPLICATIONS FOR TEACHER EDUCATION
This project underscores the need to support the critical role of the associate teacher in the teacher education program. Despite research that clearly indicates that high quality field experiences are important for the development of teacher candidates’ knowledge and skill, “there is little systematic research on exactly what the most effective supervisors do” (Darling-Hammond, 2003, p. 412). A case study of one highly effective “educative” mentor suggests that effective approaches and behaviours include inviting thinking, “being a co-thinker,” being explicit, “modelling wondering about teaching,” reinforcing theory, and using effective feedback. This small pilot project demonstrates that when feedback is a focus there is significant learning potential for both associate teachers and teacher candidates. Greater attention to this pivotal role of the associate teacher will benefit teacher candidates, associate teachers, and ultimately, students in classrooms.

Through the process of shared learning and inquiry, the value of increased and ongoing collaboration between field and university partners is evident. When work that supports the professional learning of teacher candidates is truly shared by associate teachers and teacher educators, the relationship of the field and the academy is strengthened. This relationship provides greater opportunity for the co-learning of teacher educator and associate teacher, associate teacher and teacher candidate, and teacher educator and teacher candidate. And this process truly encompasses the continuum of professional learning envisioned by Feiman-Nemser (2001).

NEXT STEPS AND NEW QUESTIONS
Further digital resources are being developed by associate teachers for associate teachers as a result of the professional learning in this pilot project. The first digital resource focused on dialogue that Wellman, Lipton and Humbard (2003) define as “consultative” in providing feedback. Ultimately, a digital compilation of varied successful practices and methods for mentoring and supporting novice teachers will be made available to support OISE’s partners in the field and colleagues at OISE, and will be shared with fellow associate teachers, teacher liaisons, program coordinators, OISE’s School-University Partnership Office, and the Toronto District School Board (the Support for Beginning Teachers program). In this way, the “Authentic Voices” project will complement and reinforce the mentoring and induction programs for beginning teachers initiated by the Ontario Ministry of Education.

What has been learned during the pilot project will be expanded upon in phase two of the research, by including four associate teachers in two schools. These experienced associate teachers will be filmed in debriefing sessions, view their work digitally together and analyze it, and engage in a deepened, shared exploration of a particular model of feedback that is focused on consultation, collaboration, and the coaching of teacher candidates. We hope to discover how
such a framework for considering mentoring can impact both the critical analysis of debriefing and also the feedback practices of expert associate teachers. We are interested in the potential of making de-privatized practice available digitally for others—associate teachers sharing their own learning about mentoring by means of a digital record. We also plan to share the digital resources and processes widely with colleagues across OISE’s Initial Teacher Education program, in order to gain more feedback and broaden the conversation.

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REFERENCES

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