



Graduate Initial Teacher Education - A Literature Review

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GRADUATE INITIAL TEACHER EDUCATION – A LITERATURE REVIEW

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FOREWORD

To support the visioning process for the Master of Teaching (MT) program at the Ontario Institute for Studies in Education (OISE), we have reviewed literature regarding initial teacher education programs, pedagogy and practices, particularly searching for graduate education entry-to-practice programs around that world. In the review, we have concentrated upon studies and programs that have placed research at the centre, that have articulated conceptual frameworks, that have linked research, theory, policy and practice and that have identified practices to address persistent issues in teacher education. These persistent areas of attention include coherence, connection of theory-practice and field and academy, currency of pedagogy, and effective structures to maximize ongoing teacher learning. Additionally, we have searched for research on effective ways to support diverse learners; to consider urban contexts; to work for justice; to meaningfully incorporate indigenous knowledge and history; to use technology for teaching and learning; and to develop and implement program specializations.

Given the volume of writing on these aspects of teacher education, we have elected initially to provide a précis of literature delineating and addressing persistent issues and concerns in teacher education. We synthesize data from internationally respected, researched comparator programs, with a brief highlighting of two particular programs as a first chapter of the literature review. Additional chapters addressing the focus areas identified above will be forthcoming. We provide a more extensive list of references. An annotated listing of some articles will follow. We gratefully acknowledge the tremendous body of literature identified and contributed by Dr. Clare Kosnik and owe a further debt to the recent International Handbook on Teacher Education edited by John Loughran and Mary Hamilton. The literature search will be ongoing to address questions or needs that arise through the visioning process.

The review is arranged in response to key questions:

Why is learning to teach so challenging?

What are issues in initial teacher education around the world?

According to current research, what are important elements of program design and development?

What are structural and programmatic responses to these issues and key elements?

What are some programs or program elements that address the graduate or 'masterliness' of initial teacher education programs?

What is happening in the Ontario context with regard to teacher education and entry to practice?

CHAPTER 1

INTRODUCTION

Improving teacher preparation has been a longstanding concern in countries around the world as quality teaching is argued to be at the heart of student success, when aligned with efforts to address other factors impacting student learning such as socio-economic status, language, and geographic location. (Dinham, 2012; OECD, 2013; Hofman et al., 2004; Maadag et al, 2007). In an attempt to improve teacher preparation, ‘new generations’ of teacher education programs have been developed in a number of countries, including Canada, Australia, and the United Kingdom (Brown, Rowley & Smith, 2014; Burn & Mutton, 2015; Dinham, 2012; Hagger, Burn, Mutton & Brindley; McLean Davis et al, 2013, Maadag et al., 2007). These initiatives show a departure from traditional undergraduate teacher education programs to graduate entry-to-profession pathways with the introduction or expansion of (a) Master-level professional degrees (Australia, Canada and United States of America); (b) school-based initial teacher preparation leading to the Postgraduate Certificate in Education (PGCE) (UK); (c) workplace-based learning leading to PGCE (UK); and (d) refinement of graduate integrated teacher preparation (Finland). The introduction of these programs not only signals a move to graduate teacher preparation, but also provides an opportunity to address criticisms of teacher education raised at both national and international levels (McLean Davis et al, 2013; Dinham, 2012).

This report aims to foreground research and enable a conversation about enhancing an already strong Master of Teaching program at OISE. Our lens aims to capture the “tensions bound by culture, geography and relations” in order to look beyond what we already know, capture the grand narratives, individual stories in teacher education research (Loughran & Hamilton, 2016, p. 504), and context-specific effects of various models of initial teacher preparation (Maandag et al., 2007). As Loughran and Hamilton (2016) suggest, despite differences across contexts, categories such as program frameworks, content areas, political positioning, characteristics of teachers and/or teacher educators, can assist in understanding the power and value in differences and similarities (Loughran & Hamilton, 2016).

WHY IS LEARNING TO TEACH SO CHALLENGING?

The process of learning to teach has been recognized as highly complex, personal, life-long and fraught with challenge. It is a profession, like law, in which the learning and practice of the developing professional are public. It demands attention to multiple “clients” at any given time and is highly contextualized. Like health care and social work, it is consequential in terms of relationships and outcomes with “clients”. Teaching also builds and draws upon multiple *bases of knowledge* simultaneously. Darling-Hammond, and Bransford (2005) provide a model of knowledge areas: Knowledge of Learners and their Development in Social Contexts, Knowledge of Subject Matter and Curriculum Goals and Knowledge of Teaching. In OISE programs, the *Learner Document* (2011) was an effort to capture knowledge bases and capacities for teachers as they learn to make pedagogical decisions about their work with students that drew from several sources and was contextualized to the context of the time.

There is also a compelling body of literature concerning the *process* of learning to teach. It has long been indicated that teaching is a process of ongoing learning in which teachers must continue to learn, grow and adapt their practice in response to students, context, curriculum and research. Darling-Hammond and Bransford (2005) articulated some of the complexities of that process, which they refer to as the development of “adaptive expertise”. They cite reports by the National Research Council (2000) regarding how people learn and use these to frame principles for ongoing teacher development.

In the early stages of teacher learning, a key issue is the “apprenticeship of observation” first identified by Lortie (1975). The apprenticeship refers to the experiences that anyone who attended formal schooling has had as a student. As learners in classrooms, prospective teachers could not see the ways in which their teachers made thoughtful decisions to plan for and respond to students in the moment. As a result, as we begin learning to teach we may underestimate or misunderstand the processes that underlie teaching.

There is also the “problem of enactment” (Kennedy, 1999) which refers to the challenges of implementing teaching plans and practices when working in classrooms with actual students. Enactment requires capacities for “(a) a deep foundation of factual and theoretical knowledge, (b) understanding facts and ideas in the context of a conceptual framework, and (c) organizing knowledge in ways that facilitate retrieval and action” (National Research Council, 2000, as cited in Darling-Hammond and Brown, 2005, p.366). In teaching, there are multiple bodies of

knowledge that must be continually considered, integrated, reintegrated and adapted for use in dynamic contexts:

Developing an authoritative classroom presence, good radar for watching and interpreting what many different students are doing and feeling at each moment, and skills for explaining, questioning, discussing, giving feedback, constructing tasks, facilitating work, and managing the classroom; is not simple. (Hammerness, et.al. 2005, p. 374)

Learning to teach requires ongoing, thoughtful practice in making adaptive and evidence-based decisions in context not just as a beginning educator but also throughout a career.

The third challenge in learning to teach concerns the complexity of the tasks of teaching and the capacity to be consciously aware of the multiple aspects which are taking place at any given time. A teacher must simultaneously take into account the goals of the lesson, understanding of the fundamental concepts, content, skills and common misconceptions of the subject, and most fundamentally, the diversity of learners' varied backgrounds, strengths, particular learning needs and the context of the classroom and communities in which learning is occurring. Given these multiple considerations, teachers must be metacognitive, aware of their own thinking and able to evaluate their decisions and ensuing outcomes and make changes continuously (Lampert, 2001).

The dilemmas of supporting candidates to learn to teach by unlearning some understandings about teaching, connecting theory and practice in practice, and developing metacognitive capacities lie at the heart of teacher learning but also at the heart of initial teacher education program design. These dilemmas are also central to concerns and criticisms of teacher education programs.

WHAT ARE ISSUES IN INITIAL TEACHER EDUCATION AROUND THE WORLD?

Major criticisms of teacher preparation pertain to the ineffectiveness of teacher education programs, weak linkages between theory and practice, limited subject matter knowledge, fragmented pedagogy, disconnection between faculties of education and schools, lack of coherence, and insufficient length of field experiences (McLean Davis et al, 2013; Kitchen & Petrarca, 2016). Kitchen and Petrarca (2016) maintain that practice “refers largely to the practical application of knowledge and skills within the school settings”, while theory “is used

broadly to refer to the content of teacher education courses, including subject matter, pedagogy, human development, foundations of education and the social context of education” (p. 139). Kosnik and Beck (2011) warn that teacher educators tend to cover too much and teacher candidates have difficulty organizing the material both conceptually and physically. Darling-Hammond and Baratz-Snowden (2007) summarize teacher preparation concerns as follows:

In the recent past, traditional teacher preparation often has been criticized for being overly theoretical, having little connection to practice, offering fragmented and incoherent courses, and lacking in a clear, shared conception of teaching among the faculty. Programs that are largely a collection of unrelated courses and that lack a common conception of teaching and learning have been found to be feeble agents for effecting practice among new teachers. (p. 119)

Hammerness (2006) also argues that coherence is a major concern in teacher preparation as many teacher education programs are not integrated or well organized conceptually. Conceptual coherence tends to refer to “entwining theory and practice purposefully and deliberately ... developing a shared conception of teaching that undergirds and pervades the program ..., and attending to the linkages or disconnects between program structure and program content” (Hammerness, 2006, p. 1242). In addition to conceptual coherence, some teacher educators also discuss the organizational coherence in teacher preparation. Organizational coherence may refer to “organizing and aligning courses and student teaching placements around a particular conception of teaching and learning in an effort to construct an integrated experience, or trying to create courses that build sequentially on one another and reinforce one another” (Hammerness, 2006, p. 1242).

In many ways, efforts to reform teacher education focus on coherence-making by candidates and within programs. Linkages of conceptual and organizational coherence are frequently seen as essential when considering important elements of initial teacher education program design. In the OISE context, coherence is one of the seven principles that currently compose the Conceptual Framework for our programs.

ACCORDING TO CURRENT RESEARCH, WHAT ARE IMPORTANT ELEMENTS OF PROGRAM DESIGN AND DEVELOPMENT?

Teacher education researchers have identified recommendations for improving teacher preparation programs. After extensive research on many different types of teacher education programs, Darling-Hammond (2006), for example, provides a synthesis of the characteristics of a well-designed teacher education program:

1. *Coherence*, based on a common, clear vision of good teaching grounded in an understanding of learning, permeates all coursework and clinical experiences;
2. A *strong core curriculum*, taught in the context of practice, grounded in knowledge of child and adolescent development, learning in social and cultural contexts, curriculum, assessment and subject-matter pedagogy;
3. *Extensive, connected clinical experiences* that are carefully developed to support the ideas and practices presented in simultaneous, closely interwoven course work;
4. *Well-defined standards of professional knowledge and practice* are used to guide and evaluate course work and clinical work;
5. *Explicit strategies* that help students (1) confront their own deep-seated beliefs and assumptions about learning and students and (2) learn about the experiences of people different from themselves;
6. *An inquiry approach that connects theory and practice*, including regular use of case methods, analyses of teaching, and learning, and teacher research applying learning to real problems of practice and developing teachers as reflective practitioners;
7. *Strong school-university partnerships* that develop common knowledge and shared beliefs among school- and university-based faculty, allowing candidates to learn to teach in professional communities modelling state-of-the-art practice for diverse learners and collegial learning for adults; and
8. *Assessment based on professional standards* that evaluates teaching through demonstration of critical skills and abilities using performance assessments and portfolios that support the development of ‘adaptive expertise’ (p. 276).

Darling-Hammond and Baratz-Snowden (2007) also describe the characteristics of what they call “successful clinical training experiences”:

clarity of goals, including the use of standards guiding the performances and practices to be developed; *modeling of good practices* by more-expert teachers in which teachers make their thinking visible; *frequent opportunities for practice* with continuous formative feedback and coaching; *multiple opportunities* to relate classroom work to university course work; *graduated responsibility* for all aspects of classroom teaching; and *structured opportunities* to reflect on practice with an eye toward improving it (p. 124).

Strong partnerships between schools and universities can be fostered when there is sharing of a program's vision and understanding of a program's unique conceptual framework (Melrose et al, 2015). Kosnik and Beck (2011) maintain that courses need to teach about instructional strategies in ways that can be enacted in context, "Teacher educators need to be explicit about priorities and connections, not leaving so much for student teachers and beginning teachers to figure out on their own" (p. 155). Upon completion of a teacher education program, induction and mentoring, as well as the support of school leadership are prerequisites for the ongoing professional learning and development of good teachers (Dinham, 2012), since entry to profession is among the most significant points in assuring teacher quality, and which has long consequences (Ingvarson et al., 2014, p. xv). Craig (2016) further maintains that the quality of teacher education programs and the quality of teachers and teacher educators depend on the structures, resources and commitments that underpin their work.

As seen from the above, a shared program vision and shared vision of good teaching, inquiry-based learning, opportunity for critical inquiry and reflection and practice-oriented collaborations that foster connections between university coursework and school experiences are some of the areas that have been identified in research as key for successful teacher preparation.

WHAT ARE STRUCTURAL AND PROGRAMMATIC RESPONSES TO THESE ISSUES AND KEY ELEMENTS?

The structures of teacher education programs around that world are shaped by politics, history and culture (Craig, 2016, p.69). For example, the 1999 Bologna Accord had an impact not only on participating European countries (from 29 initial signatories to 48 states, currently), but other nations, such as Turkey (Craig, 2016). National and state policies, institutional contexts and labour markets also influence how contemporary teacher education programs are developed

and structured (Craig, 2016). Research further shows that teacher education reform initiatives do not originate only from within or at the national level. International agencies such as UNESCO, IEA, OECD, and World Bank, through their comparative research on national approaches to teacher education around the world also influence the development of teacher education reforms initiatives (Craig, 2016). Although it is not possible to make overarching claims about the structure and organization of teacher education internationally because such structures “[differ] by country and/or state/province/region and/or setting” (Craig, 2016, p. 72), there are elements that can be compared across contexts.

Ingvarson et al. (2014) describe teacher education program structure and design by utilizing systems in high performing countries (defined as such based on performance on international tests such as PISA). These authors highlight three main elements that have been the focus of in these countries: *recruitment* for entry to teacher education; *accreditation* of teacher education programs; and *transition and entry* to the teaching profession. High achieving countries address recruitment through policies that aim to (1) make teaching an attractive career option for high academic achievers and that specifically aim to build the status of teaching; (2) match supply and demand; and (3) set high standards for admission to teacher education programs (Ingvarson et al., 2014). Ingvarson et al. (2014) further maintain that high achieving countries have regulated teacher education systems and rigorous procedures for accreditation of teacher education programs. These countries also require and support a period of mentored induction coupled with rigorous assessment of readiness for full entry to the profession (p. xiii).

Craig (2016) defines the initial teacher education (ITE) structure as the “foundation on which teacher education programmes are formed” (p. 72). Program structure is also described with reference to the duration and division of learning to be undertaken by students (Melrose, Park & Perry, 2015).

Teacher education programs may follow a ‘conventional’ or an ‘alternative’ pathway (Kitchen & Petrarca, 2016; Levine, 2006; Zeichner & Conklin, 2008). Conventional teacher education is generally either traditional undergraduate concurrent programs or post-baccalaureate consecutive programs that follow the completion of a degree program (Kitchen & Petrarca, 2016; Maandag, 2007). In a concurrent structure, subjects and teacher training are integrated, while in the consecutive programs future teachers focus on teacher education courses, as they are required to

have completed an undergraduate bachelor's degree first (Crocker & Dibbon, 2008; Maandag, 2007).

Alternative certification leads to professional qualifications with limited formal teacher education. Although some studies report benefits of alternative certification such as addressing teacher shortages in areas such as mathematics and science, and serving high needs areas (e.g. inner city schools and remote schools), graduating quality teachers who engage in student learning and serving minority students (Ducharme & Ducharme, 1998; Humphrey, Wechsler & Hough, 2008, cited in Kitchen & Petrarca, 2016, p. 144), others have called it a crisis response (Stoddart & Floden, 1995). Other approaches to address underserved communities that have been identified in research are (1) attracting minority candidates or fast-tracking highly skilled university students (Humphrey, Wechsler & Hough, 2008, as cited in Kitchen & Petrarca, 2016, p. 143); (2) school-based teacher training with formal training contracted to external providers, such as School Direct in England (Furlong, 2013, as cited in Kitchen & Petrarca, 2016, p. 143); (3) conventional teacher education programs intensifying their focus on practical experiences in schools. Both 'conventional' or an 'alternative' teacher education programs vary greatly in content and structure, which leads to the conclusion that there is no 'typical' teacher education (Kitchen & Petrarca, 2016).

Many of the initial teacher education programs "push beyond categories" giving rise to a new form of teacher education, which are hybrid programs and pathways that "draw on multiple sources of expertise and experience" (Kitchen & Petrarca, 2016, p. 138; see also *The Teacher Educator*, 2011). Zeichner and Conklin (2008) state that regardless of the structure, "the evidence does not support the uniform adoption of a particular structural approach" (p. 704, as cited in Kitchen & Petrarca, 2016, p. 138).

In the following sections we focus on different structures of initial teacher education programs with examples from a number of contexts, and highlight how different structures of teacher education co-exist within one country/context.

SCHOOL-BASED ITE PROGRAMS

School-based ITE represent direct pathways to schools (Kitchen & Petrarca, 2016). They are often discussed in the same category as alternative ITE pathways, although some studies position them as longer-term market rivals to university-based ITE (OECD, 2010, as cited in

Kitchen & Petrarca, 2016, p. 148). Kitchen & Petrarca (2016), by drawing on McNamara & Murray (2013) maintain that “The most radical experiment in practice-based alternative teacher preparation is currently unfolding in England as part of the control of teacher education has shifted from universities to schools” (p. 148). This market demand-model of teacher preparation is a result of deregulation of the education system and the recommendations from the Department of Education (2010) to have more teacher training on the job (the term ‘training’ is used in this context). The model is called School Direct and it was developed in 2012. School Direct provides a school-based 1-year program that culminates with the award of qualified teacher status (QTS), and in some cases may lead to a Postgraduate Certificate in Education (PGCE). The PGCE may also be completed through a university-based model in which graduates are awarded Master-level credits as well as receiving certification. These credits can fulfill some of the credit requirements of a Master’s level program, if the applicants choose to continue their studies. The Department of Education in England describes the school-based program as having all the core elements of teacher training (national curriculum for a subject and/or age group, lesson preparation, classroom management, special education, and assessment), and benefits such as tuition support and intensive support from experienced classroom teachers. Graduates can also expect to obtain employment in high demand areas or in a school in their School District partnership.

School Direct is thus a school-led initiative in partnership with a lead school, partner schools and an accredited teacher trainer provider. It is an approach to initial teacher training that gives schools more influence over the ways teachers are trained (National College for Teaching and Leadership [NCTL], 2014). It offers a minimum of 24 weeks of practical classroom experience in at least two schools and the student teachers are assessed through observations of their teaching. Schools are able to select and recruit their own trainees; choose which teacher training provider to work with; choose the content and focus of the training program; and decide how the funding will be split between the school and the training provider. A school can decide to become a lead school or join an existing partnership. The lead school has the responsibility for requesting places from the NCTL and ensuring that the School Direct criteria are met (NCTL, 2014). Furlong (2013) states that much of the funding for teacher preparation goes to schools as opposed to university-based programs, which can then purchase services they need from a university of their choice or another accredited service provider. This initiative has been

criticized for its emphasis on teaching as a craft rather than a complex intellectual activity, for being an apprenticeship model for teacher preparation (McNamara & Murray, 201, p. 14), and a policy-driven approach that offers limited opportunities for developing critical thinking, adaptability, and creativity, child development and curriculum design (Murray & Passy, 2014).

Research that focuses on practice-oriented programs also note that such programs dismiss the complexity of teacher preparation and provide student teachers with survival skills rather than skills to help them become adaptive experts (Sykes, Bird & Kennedy, 2010; Bransford, Darling-Hamond & LePage, 2005, Kitchener & Petrarca, 2016). While more practical approaches and stronger partnerships with schools are regarded as good responses to the need for conventional teacher education programs to become more practice-oriented, a focus on practice is not sufficient (Kitchener & Petrarca, 2016). The challenge of enactment and complexity can only be addressed through a careful balance of theory, practice, and reflection (Darling-Hammond, 2006; Kitchen & Petrarca, 2016)

UNIVERSITY-BASED ITE PROGRAMS

Craig (2016) describes four organizational structures within a university-based teacher education program: (1) the integrated model; (2) the asymmetric model; (3) the matrix model; and (4) the decentralized model. The *integrated model* of organizing teacher education has an independent Teacher Education unit within a faculty or school of education. The Head of the teacher education unit is the decision maker on a daily basis, including hiring staff, despite the Dean being the overall leader of the faculty. The unit ‘buys’ course content/disciplinary knowledge from other faculties and faculty has to fulfill the requirement of the teacher education unit. While a major strength is that students identify strongly with being students of teaching, a weakness of this model is the faculty coming from other divisions.

In an *asymmetric model of teacher education*, teacher education is also a separate unit with decision powers, except in subject course content. Discipline-specific faculty are held responsible for those courses and student teachers are taught in the same class with non-education students. This model poses challenges in terms of planning due to the large number of faculties involved. As well, students are not identifying strongly with one another as students of teaching since they are part of the general student population.

The *matrix model* does not have a separate Faculty of Education, and the teaching faculty belong to the discipline-specific unit, including those who teach discipline-specific pedagogy. In this model, a Head of teacher education is appointed by the university for a number of years and consensus is at the basis of the decision making process. Although a strength of this model is that teacher education students have solid content knowledge for their discipline, the weakness is that teaching faculty have other priorities and do not place as much significance on their role as teacher educators.

In the *decentralized model*, teacher education takes place independently within each of the faculties and there is no Head of teacher education to coordinate the structure of teacher education, and thus no meetings are held in relation to teacher education. The main focus is on content knowledge and no attention is paid to pedagogy. There are appointed faculty member(s) who deal with all university and faculty matters related to education. Teaching faculty tend to be reluctant to take the role of teacher educators in this model, and teacher preparation meets only baseline standards which are weaknesses of decentralization.

Craig's (2016) analysis of program models recognizes that there are multiple structural responses to teacher education and there is not a panacea in terms of ways to structure university-based programs. The need for thoughtful and cohesive development of programs is highlighted. We next turn to a look at graduate or master degree level elements of entry-to-practice programs.

WHAT ARE SOME PROGRAMS THAT ADDRESS THE GRADUATE INITIAL TEACHER EDUCATION AND 'MASTERLINESS' OF INITIAL TEACHER EDUCATION?

A number of graduate entry-to-profession ITE programs are described in more detail in what follows. Graduate-level teacher education programs have existed in a number of countries around the world and Master's degrees have been a requirement to become a teacher in some countries, such as Finland. In other countries, while initial teacher education at the graduate level may be offered, it has not been a requirement for teacher certification, as is the case of the United States of America. Examples of graduate ITE programs outside of Canada include the Master of

Teaching at the University of Melbourne, Australia, and aspects of the PGCE at the University of Oxford, United Kingdom.

There are approximately 50 teacher education programs in Canada and they are offered through universities (Craig, 2016), with few exceptions, such as alternative programs in Indigenous Education (Crocker & Dibbon, 2008; Kitchen & Petrarca 2016). Initial teacher preparation in Canada is provided at the undergraduate level through the consecutive and concurrent models described above. Graduate level entry-to-the profession is a more recent development in Canada, currently only offered by McGill University in Quebec and OISE in Ontario.

McGill offers three pathways to teacher certification: through undergraduate concurrent and post-baccalaureate programs, and through graduate programs (McGill University). The graduate program concludes with a Master of Arts, specializing either in English Language Arts, Social Science, Mathematics, Science and Technology, or Teaching English as a Second Language. The Master of Arts in English Language Arts (MATL), for example, is described as a professional program leading to Quebec teacher certification at the secondary school level. It aims at those candidates who are already holding an undergraduate degree in a Quebec Ministry of Education identified teachable subject area. The program consists of 60 credits, including 45 credits of coursework, and two school-based internships totalling 15 credits. In addition to coursework and internships, students are expected to complete a self-directed Capstone Research Project as well as develop and maintain a Professional e-portfolio that provides evidence of professional growth in relation to the Quebec Ministry of Education's 12 Teacher Professional Competencies (McGill University). Upon successful completion of the program, students are recommended to the Quebec Ministry of Education for teacher certification.

Graduate qualifications are not usually required in the United States of America, but there is an option to complete a Master of Teaching (MAT) program as initial teacher preparation in some institutions. For example, Bard College offers a program in which teaching credentials are provided and a thesis is completed. However, in this program the thesis has a disciplinary rather than a pedagogical focus. All teacher education programs in the U.S. must be approved by the respective state. There is great variation in the provision of teacher preparation in this country, such as traditional teacher education programs offered by colleges and universities, and

alternative certification programs offered by a variety of providers, including non-profit agencies, for-profit agencies, internet providers, and independent consultants (Craig, 2016). The majority of states require future teachers to pass a test to gain a licence. The Praxis Test developed by the Educational Testing Service (ETS), for example, is required in many states. It is a standardised test in basic academic and teaching skills. In many states teachers may need to undertake professional development activities in order to renew their state licence.

There are various ways to access the teaching profession in the UK. In order to teach in the UK one needs to have a Qualified Teacher Status (QTS). In England, for example, the QTS is granted by the National Council for Teaching and Learning (NCTL) and can be obtained after teacher preparation through one of the pathways: undergraduate teacher training, postgraduate teacher training, and employment-based teacher training (Craig, 2016), and QTS assessment-only option. Craig (2016) further maintains that “Overall, British teacher education has vacillated between school-based and university-based models of preparation” (Appendix).

Postgraduate teacher training in the UK involves the completion of a 1-year course open to Bachelor degree holders and it leads to the Postgraduate Certificate of Education (PGCE). The PGCE is offered by universities and colleges and can also be completed via distance learning. Also, the PGCE may be obtained by attending a school-based program called school-centered initial teacher training (SCITT), designed and delivered by groups of neighbouring schools and colleges (UK NARIC). All SCITT courses are taught by experienced practicing teachers, and are often tailored to the needs of local schools. All of these paths lead to QTS and some non-university providers may award the PGCE, if the programs receive validation from a recognized institution of higher education. In many cases, when offered by a university, the courses in the PGCE program are considered to be at the graduate level and can be counted toward an eventual Master’s degree. However, the degree is conferred following graduation and certification and significant additional graduate requirements must be completed. This is the case in the Oxford program described later.

In Finland all teachers are required to complete a Master’s degree, according to decrees issued in 1979 and 1995 (Niemi & Jakku-Sihvonen, 2011). Initial teacher preparation has traditionally been provided through five-year integrated Master’s programs for both primary and secondary school teachers. According to the new Bologna degree structure, a combination of a three-year Bachelor (180 ECTS) and a two-year Master’s (120 ECTS; 1 ECT is about 27 hours of

work) degree will qualify teachers to teach in primary and secondary schools. It is also possible to complete a Master's degree in a subject area and then apply to "pedagogical studies" (Niemi & Jakku-Sihvonen, 2011). The status of the teacher education Master's degree is the same as other degree programs (Craig, 2016).

Teacher preparation in Finland is concentrated in a small number of well-resourced universities, with a long-term strategy to increase the status of teaching and quality of teacher education (Ingvarson et al, 2014, p. xv). Teacher preparation is offered in 8 universities and Finland has 11 practice teaching schools (Lauriala, 2013, as cited in Craig, 2016), which are normally next to universities (Snider, 2011). Practicing teachers in the practice teaching schools (also called 'Normal schools') not only teach students in their classes, but also supervise and mentor student teachers (Niemi & Jakku-Sihvonen, 2011). Teaching of subject knowledge takes place within the various disciplines' respective departments, while the Department of Teacher Education only focuses on the subject didactic aspects (Rasmussen & Bayer, 2014).

The teaching qualifications required for teaching in Finland are governed by a decree on the eligibility requirements for personnel in the teaching profession (UK NARIC). Teacher education is regulated by field-specific decrees, which lay down objectives of teacher education and the minimum scopes of different educational modules in very general terms. The Ministry of Education may issue recommendations for educational contents, but such procedures do not bind universities (UK NARIC). Universities draw up their own curricula. Craig (2016), drawing on Tarman (2010) states that "preservice teachers are not expected to produce new knowledge through their research, but rather solve a practical or theoretical issue encountered in practice" (p. 94). Craig further maintains:

Teacher education is systematically planned in Finland and deeply rooted in the teacher-as-researcher philosophy and prepares teachers for a research-based orientation towards their practical teaching work in the classroom. They are also guided to learn reflection as a way of thinking and as a tool for continuous professional development. The moral qualities of teaching are also integral to their teacher education programmes. (p. 94)

Teacher education in Finland is expected to train teachers who are able to "analyse a situation like a researcher and to make conclusions and decisions to act or to change something in a given situation" (Niemi & Jakku-Sihvonen, 2011, para 7). Teacher education for secondary

school teachers (called subject teachers) has a focus on didactics (or pedagogical content knowledge), in addition to the research orientation.

Competition for entry into teacher education programs in Finland is very high, with only about 15 % of applicants being admitted into the program (Niemi & Jaku-Sihvonen, 2011). All applicants to teacher preparation programs are tested and interviewed personally (ibid.). Furthermore, the teaching profession in Finland has a high status, “In Finland, we think that teachers are key for the future and it’s a very important profession – and that’s why all of the young, talented people want to become teachers” (Snider, 2011). Primary teachers (called class teachers) is a one of the most desired profession. Teachers exercise a great degree of autonomy in their work, since “Teachers in Finland can choose their own teaching methods and materials ... teacher are working like academic experts with their own pupils in schools” (Snider, 2011). The high results of Finland in the international standardized measurement tests have led to an increased interest in teacher education (Craig, 2016), including high results from immigrant students (Snider, 2011). Although there are not as many immigrants in Finland as in other countries in Europe, there are structures in place to help immigrant students succeed:

Normally, if children come from a very different schooling system or society, they have one year in a smaller setting where they study Finish and maybe some other subjects. We try to raise their level before they come to regular classrooms. We think also that learning one’s mother tongue is very important, and that’s why we try to teach the mother tongue for all immigrants as well. (Snider, 2011)

The main goal of teaching and learning and Finland is to make them creative and interesting for all. Teachers in Finland must be competent researchers as well as teachers.

Preservice teacher education programs in Australia are designed and offered by university faculties, “which are subsequently authorised by the states through boards, councils or institutes of registration” (Sims, 2006, as cited in Craig, 2016, p. 130). Currently, there are five accreditation bodies that are responsible for accrediting programs and there is a call to establish a single accreditation body for teacher preparation (Ingvarson et al, 2014, p. xv). The latter is because many of the teacher preparation programs are provided online to several states and territories, and some universities have campuses in more than one state, thus the blurring of state and territory boundaries no longer serves the scope of provision (Ingvarson et al, 2014, p. xv). Australia has close to 50 teacher education providers and over 400 accredited programs,

including TAFE institutes (Ingvarson et al, 2014, p. xv). We examine one of the Australian programs, which is a Master's level program, in greater detail in the following section.

TWO PROGRAM SNAPSHOTS OF GRADUATE INITIAL TEACHER EDUCATION

With the move toward graduate initial teacher education, there is an increased interest in the relationship between research and practice and the related notion of beginning teachers as researchers (Burn & Mutton, 2015). A number of studies focus on graduate initial teacher education programs and/or research-informed initiatives that recognize the potential for new partnerships between universities and schools to “provide pre-service teachers, their mentors and academics [opportunities] to engage in inquiry, develop practical knowledge and grow as reflective teachers” (Davies, 2013, p. 95). Two of these are described in more detail in what follows: the Master of Teaching at the University of Melbourne (Australia), and the Oxford Internship Scheme (United Kingdom).

THE MASTER OF TEACHING AT THE UNIVERSITY OF MELBOURNE, AUSTRALIA

An example of a ‘new generation’ of teacher preparation program that draws on research on exemplary teacher education programs (such as Levine, 2006) is the two-year Master of Teaching (MTeach) graduate program at the University of Melbourne, Australia, which was introduced in 2008 (Dinham, 2012; McLean Davies et al., 2013). The Master of Teaching has three streams: secondary, primary and childhood teaching (McLean & Davies, 2013). Depending on the stream, teacher candidates have the option of completing the program full-time in two years, part-time in three years, or in an accelerated mode of 18 months.

The essence behind the ITE model in the Master of Teaching at Melbourne is described as follows:

It is founded on a clinical practice model in which pre-service teachers are immersed into classrooms in partner schools from the first few weeks of the semester where they are supported by a network of school experts (‘teaching fellows’) and university-based experts (‘clinical specialists’) who make connections between school field experiences and academic coursework. Together the interlaced responsibilities of staff and the

integrated design of the program result in the development of the skills of clinical reasoning in graduates. (Kriewaldt & Turnidge, 2013, as cited in Burn & Mutton, 2015, p. 222)

The design of the program was influenced by the principles outlined in a study called *Teachers for a New Era* by the Carnegie Corporation of New York: the idea that teaching must be viewed as an “academically taught, clinical practice profession” and that challenged the ‘apprenticeship model’ of teacher preparation (McLean Davies et al., 2013, p. 94). The design of the program was also influenced by learnings that derived from Faculty field trips to leading institutions around the world that offered graduate entry-to profession teacher education programs, such as Stanford University and University of Virginia in the United States of America, OISE in Canada, and Queensland University of Technology in Australia (McLean Davies et al., 2013).

The Master of Teaching program was also informed by Alter and Coggshall’s (2009) study that described the key characteristics of a clinical practice profession: centrality of clients; knowledge domains; use of evidence and judgement in practice; community and standards of practice; and education for clinical practice (McLean Davies et al., 2013). The notion that teacher education needs to focus on the use of data or evidence about learners to better inform teaching practice (Darling-Hammond & Bransford, 2005) and the introduction of clinical teaching models using partnership schools resulted in a number of distinct features, including opportunities for clinical judgement. Clinical judgement, according to McLean Davies et al. (2013), is a disposition that “ultimately leads to masterliness in teaching practice, and should be a key aim of teacher education programmes” (p. 96). The philosophy of the MTeach at Melbourne is underpinned by the understanding that teaching is a clinical profession, requiring teachers to be able to assess the learning and learning needs of every student and provide appropriate interventions to move that learning forward (McLean Davies et al., 2013).

Other features of the Master of Teaching at Melbourne as outlined by McLean Davies et al. (2013) are as follows: unique partnerships between schools, early childhood services and the university; sustained practice in block rounds of up to four weeks in each semester, in addition to the two days per week in schools; local partnership groups; funding for teaching fellows in schools; presence of a clinical specialist; use of a metalanguage; utilization of a cohort placement experience for teacher candidates; targeted reflections organized by faculty for clinical

specialists and teaching fellows; seminar series that aim to bridge theory and practice; and a Clinical Practice Exam. These are described in detail in what follows.

The MTeach program aimed to create unique partnerships between schools, early childhood services and the university to support the clinical premise of the MTeach program. Teacher candidates in all the three streams attend university for three days per week for academic classes and spend the remaining two days of each week in a partnership school, preschool or childcare centre. The decision for this model was taken in part because of the geographical spread of the teacher candidates and the schools. The program also created local partnership groups (called networks in the Early Childhood stream) that aim to ensure effective collaboration between the university and its partner institutions. Each of the groups/networks incorporate 6 to 8 different institutions or centers, with one institution being the ‘base’ school in the secondary and primary streams.

The university provides funding for one staff member at the school/center to act as a teaching fellow for 50 % release time. The teaching fellow works with mentor teachers and teacher candidates across the partnership group/network to ensure consistency and coherence in the delivery of practicum. Central to this role is initiating discussions with teacher candidates and guiding them to develop abilities to use data to inform their decisions regarding learning needs of students, as well as understand interventionist practices. Furthermore, the role of the teaching fellow is to build and sustain communities of practice within and across the groups/networks. The teaching fellow works closely with the university and the mentors in schools, as well as identifies program and learning priorities of the teacher candidate and then recommends a placement. Prior to the implementation of this new model, candidates’ placements were arranged by placement officers. In the newer model, placement officers only confirm the placements.

A university-based clinical specialist joins the teaching fellow one day each week to help make connections between what is studied in university and what is happening in schools. Academic staff members who coordinate key subjects in the Master of Teaching program hold regular and targeted reflections and appraisal sessions for both the clinical specialists and the teaching fellows. Seminars, designed to bridge theory and practice, are organized by clinical specialists with help from teaching fellows. They are held at placement/network sites throughout each semester. Teacher candidates, as well as teaching staff from all participating organizations, can attend the seminars.

The MTeach claims to have a shared language – a ‘metalanguage’ – for talking about teaching as clinical practice. Notions such as ‘clinical, and ‘intervention’ that are not traditionally associated with teaching and learning, have become part of the lexicon of all participating institutions and is increasingly used to provide a framework for professional development programmes and inquiries into practice, according to McLean Davies et al. (2013, pp. 96-98). The program also introduced a Clinical Practice Exam. This is an assessment task that aims to ask teacher candidates and those supporting them to consider theory and research in the context of practice. The teacher candidates are asked to identify a student who they would like to observe, and then design, implement and evaluate a personalised learning intervention within their placement. They next present and justify the intervention to a panel of three university and school-based assessors. The assessment would not always lead to a ‘successful’ outcome; it is intended rather to allow the teacher candidate, early in their teacher preparation, to develop and show a capacity to use evidence, theory and research to make clinical judgements (McLean Davies et al. (2013, pp. 98-100). The MTeach program at Melbourne, by helping future teachers develop skills for using a specific form of evidence-based, diagnostic, interventionist teaching, aims to help these teachers in the long run achieve better student learning outcomes (McLean Davies et al., 2013).

THE OXFORD (RESEARCH-INFORMED) INTERNSHIP SCHEME, UNITED KINGDOM

The Oxford Internship Model was identified in research as a genuinely collaborative rather than complementary partnerships (Furlong et al., 2000; Burn & Mutton, 2015) and an example of an inquiry-based approach to learning (Burn & Mutton, 2015). The Oxford Internship Model was developed in the mid-1980s. It claimed to be research-informed and that claim was reflected in its founding principles based on an extensive analysis of existing ITE programs and studies of the nature of teachers’ knowledge (Burn & Mutton, 2015). At the core of these principles was the concern with integrating the distinctive contributions of schools and universities to ITE and concerns that were reflected in ITE initiatives that aimed to bring research-informed perspectives in field experiences/clinical practice. These principles were as follows:

- Partnership expressed in joint planning of the programme.

- A single coherent programme, with explicit relationships and short time intervals between connected elements in the different contexts.
- Carefully graduated learning tasks intended to permit rational analysis.
- Explicit encouragement for interns to use ideas from diverse sources.
- Explicit assertion by both partners that consensus is not expected.
- Emphasis on testing all ideas against the different criteria valued in each context.

(McIntyre, 1990, pp. 32–33, as cited in Burn & Mutton, 2015)

According to this model, university and field experiences ran in parallel. Student teachers divided their time between the university and the school each week for several months, before they went into more lengthy clinical practice. The latter was still interwoven with occasional weeks in university (Burn & Mutton, 2015). Burn and Mutton (2015) describe the idea behind this model as follows:

The insistence on testing ideas from all sources and explicit acknowledgement that consensus was not to be expected emphatically highlighted the rejection of a ‘theory-into-practice’ model which assumed neat continuities between decontextualised research-based claims about ‘what works’ and their implementation in highly diverse, individual contexts. (p. 220)

The process above was later defined as ‘clinical reasoning’ (Kriewaldt & Turnidge, 2013, as cited in Burn & Mutton, 2015) and ‘practical theorising’ (McIntyre, 1993, as cited in Burn & Mutton, 2015). The designers of the Internship saw research-based claims as ‘suggestions for practice’ and their “understanding of teachers’ professional learning led them to present teaching as a process of hypothesis-testing requiring interpretation and judgement in action, not the routinised application of learned repertoires” (Burn & Mutton, 2015, p. 221). The carefully staged introduction to teaching, accompanied by a systematic evaluation from the start, was a result of the appreciation of the complexity of the process of learning to teach (Burn & Mutton, 2015, p. 221). Current examples of similar schemes are the Scottish Teachers for a New Era (STNE) programme (Livingston & Shiach, 2010) and the Glasgow West Teacher Education Initiative (Conroy, Hulme, & Menter, 2013). The Oxford program and the University of Glasgow program both provide Master’s level content in the programs and offer program

graduates course work and research support for a 2-5 year period in order to complete the requirements for a Master's degree.

WHAT IS HAPPENING IN THE ONTARIO CONTEXT WITH REGARD TO INITIAL TEACHER EDUCATION AND ENTRY TO PRACTICE?

In Ontario, two ministries share jurisdiction over initial teacher education (ITE). The Ministry of Advanced Education and Skills Development (AESD, formerly Training, Colleges and Universities [TCU]), funds universities in part through per-student monies called Basic Income Unit (BIU). AESD also allocates the overall enrolment targets for each faculty of education. Unlike government bodies in the United Kingdom, AESD does not determine allocation of seats for particular subject areas or divisions. Individual faculties have the responsibility and authority to make decisions regarding the proportion of seats allocated to French-language and English-Language programs, divisional offerings, and teaching subject offerings.

The Ministry of Education (EDU), working with the Ontario College of Teachers (OCT), provides oversight, input and support to programming, particularly with regard to Ontario Curricula and policy documents and initiatives. Mechanisms such as the *Building Futures* program, the Ministry-Faculty Liaison Committee and an annual Ministry-Faculties Forum event are designed to foster communication and sharing of research, policy and program information. EDU also supports newly hired teachers through the New Teacher Induction Program (NTIP) and the Mentoring for All initiative.

The OCT is the regulatory body responsible for the licensing and certification of teachers, for regulation of the profession in the public interest, and for accrediting initial and continuing teacher education programs. Ontario Regulation 347/02 within the Ontario College of Teachers Act outlines the requirements that must be met by all providers of initial teacher education. This regulation also specifies the accreditation process and the composition and duties of the panel that determines if program requirements are being met. Following a 2011 election platform commitment to lengthen the initial teacher education program and increase time in school placements, EDU, TCU and the OCT undertook a consultation process to gather concerns, strengths, evidence and suggestions regarding program design and structure, program content, and practica and partnership, in initial teacher education in Ontario. Input was solicited through

invited meetings and written communication particularly from teacher federations, principals' organizations, parent and community groups, organizations representing indigenous communities, French-language communities and communities that are under-served by education.

In June 2013, the elements of the new enhanced initial teacher education program, to begin in September 2015, were announced. The enhanced program was comprised of four semester program length, 80 days of practicum working with the Ontario Curriculum and included mandatory core content in the areas of Curriculum Knowledge, Pedagogical and Instructional Strategies Knowledge, and the Teaching Context Knowledge (See Appendix 1 for a full listing of mandatory content). All 13 of the publicly-assisted faculties of education offering an entry-to-practice degree must meet these requirements. Of these faculties, only OISE offers a graduate entry-to-practice degree in Ontario. It should be noted that the OCT agreed that these changes would not require re-accreditation as they would not be viewed as substantive changes, but rather deepening and enhancement of existing content and design. Substantive changes require a different kind of accreditation and it was understood that greater changes might also lead to more protracted governance processes at the various universities.

At the same time that OCT announced these programmatic changes, AESD announced that overall enrolment in programs would be reduced by 50 per cent to address a growing oversupply of teachers. As well, the BIU funding weight provided to universities for Bachelor of Education candidates was reduced from 2.0 to 1.5 amount to fall more in line with the funds for other professional programs. The enrolment reduction was generally understood as necessary given the state of oversupply suggested to be in the 25 000 range, and in recognition that the enrolment targets would be restored once there were two cohorts undertaking the program. However, the reduction in funding weight has created ongoing challenges for the 12 faculties with Bachelor degree programs. Technological Education and Indigenous Education program offerings have been particularly hard hit.

Another unique factor affecting employment of new teachers and applications to initial teacher education in Ontario, is Ontario Regulation 274/12 *Hiring Practices*. O. Reg. 274 stipulates a particular route into the profession that is to design a transparent and consistent set of hiring practices, and to address allegations of nepotism raised by various stakeholders and particularly teacher federations. The regulation requires that all teachers wishing to apply for

teaching positions must first be successful in being placed on an Occasional Teacher Roster. Once successfully on the roster, the OT must complete 20 days of teaching and a 10-month period before being eligible to apply for the Long Term Occasional (LTO) list. Once on the LTO list, the OT can apply for LTO positions. If not unsuccessful in an LTO position of at least 80 days, the OT can begin to apply for permanent positions. In the case of both LTO and permanent positions, the 5 most senior qualified teachers on the roster or list are first offered an interview. This means that the most recent additions to the roster and list, teacher education program graduates for the most part, have the least opportunity to apply for LTO positions.

The process, while clear, has proven to be onerous and has led to difficulties for new teachers, principals and school districts. Through provincial collective bargaining in 2015, the federation representing French-language teachers negotiated exclusion from the process specified in the regulation, citing the undersupply of qualified teachers to fill positions as rationale. However, it is still the case that beginning teachers applying to English-language boards must complete 20 days in each district in which they may hope to obtain employment. Additionally, LTO status is not portable and thus when changing districts or returning from international positions, newer and more experienced teachers must begin again and fulfill the 20 days/10 months of daily occasional work. This challenging entry to the profession has been documented and has seemed to have a dampening effect upon applications to programs. The bumpy and protracted entry caused by oversupply in combination with this regulation has been reported widely, with many teachers who are not qualified to teach French or specialized STEM subjects in secondary schools, taking 5 years to find permanent employment. The most recent OCT *Transition to Teaching 2016* report which outlines survey results regarding employment, professional learning and support from a sample of teachers in their first five years following graduation shows a slightly more hopeful set of outcomes than in the three previous years, but it still portrays a very uneven and lengthy entry process for those lacking French qualifications. It also indicates that employment prospects are much stronger in independent school settings than in publicly-assisted systems. These are current realities for graduates and those who are supporting their entry to the profession, such as faculties of education.

SUMMARY

Although the great majority of the ITE programs discussed in the paper have the freedom to determine the structure and develop their curricula, requirements for accreditation as well as criteria that new teachers have to meet (e.g. competencies) that are set by regulatory bodies or government must also be considered in planning and design (Maandag et al, 2007). The nature of school-university partnerships varies across the programs. Nonetheless, their establishment is generally a requirement for accreditation. Such is the case of England where the government made a decision to more substantially involve schools in teacher preparation, and it made it compulsory for teacher education institutions to enter in agreements with schools and have school contribute to curricula decisions. In Ontario, accreditation requirements stipulate the length and nature of practicum placements, qualifications of mentor teachers and connections between field and academic components of the curriculum within the mandatory core content (See Appendix 1).

Implied in all the efforts described above is the struggle to improve the relationship between theory and practice (Kitchen & Petrarca, 2016; Burn & Mutton, 2015; Maandag et al., 2007). To resolve this major concern in ITE, countries and/or ITE programs have taken varied approaches: to increase practicum in school; implement measures to establish closer links between university and schools (top-down in England or research collaborations in Finland); deregulate ITE to allow schools to deliver curriculum (school-based or workplace-based programs in England). The changes in structures and models of delivery though lead to other issues, such as little depth or attention for broader educational and didactic context (such as England) (Maadag et al, 2007). All of these efforts show a move to increasing focus on practice and development of clinical or professional judgement, either through undergraduate or graduate or alternative pathways. Graduate level initial teacher education programs tend to see the establishment of research-based partnerships as key in making connections between theory and practice.

Models of ITE vary by country: while quite a few in England, US, Australia, and Canada, Finland seems to have one model (See Appendix 2 that provides websites for many of the programs that we examined in greater detail). Due to the limited research on the effects of the models described above on the quality of teachers, it is not possible to make conclusion about the quality of teachers based on adopting a certain model (Maandag, 2007). Instead, it may be

helpful to examine and consider certain elements and approaches related to the Ontario context. Prior research seems to point to teacher preparation that is based on strong relationships between schools and university, a shared responsibility for ITE which builds upon the strengths and contributions of schools and universities, and a shared vision for ITE amongst all partners to build research/theory and practice linkages (Darling-Hammond, 2006; Hammerness, 2009). However, many questions and possibilities for graduate level entry-to-profession programs remain.

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APPENDICES

APPENDIX 1. ONTARIO - SCHEDULE 1

Note: Adapted from the Ontario Regulation 347/02 *Accreditation of Teacher Education Programs* at <https://www.ontario.ca/laws/regulation/020347>

CURRICULUM KNOWLEDGE

1. The program provides a student of a program of professional education with knowledge and understanding of the current Ontario curriculum and provincial policy documents that are relevant to the student's areas of study and curriculum, including planning and design, special education, equity and diversity, and learning assessment and evaluation.
2. The program prepares the student of a program of professional education to use current research in teaching and learning.

PEDAGOGICAL AND INSTRUCTIONAL STRATEGIES KNOWLEDGE

The program includes the following elements:

1. How to use educational research and data analysis.
2. How to use technology as a teaching tool.
3. How to use inquiry-based research, data and assessment and the selection and use of current instructional strategies to address student learning styles.
4. How to use learning and teaching theories and methods and differentiated instruction.
5. A focus on the development of classroom management and organization skills.
6. Child and adolescent development and student transitions to age 21 and through kindergarten to grade 12.
7. How to use current strategies relating to student observation, assessment and evaluation.
8. How to teach students whose first language is not the language of instruction, whether English or French.
9. Pedagogy and the assessment and evaluation of learning in the relevant areas of study in relation to specific curriculum subjects.
10. The policies, assessments and practices involved in responding to the needs and strengths of all students, including students identified as requiring special education supports.

THE TEACHING CONTEXT KNOWLEDGE

The program includes the following elements:

1. Educating students of a program of professional education in child, youth and parental mental health issues relevant to the elementary and secondary school environment in Ontario.
2. The College's "Standards of Practice for the Teaching Profession" and "Ethical Standards for the Teaching Profession".

3. How to prepare students for learning transitions in a variety of settings and transitions to high school, college, university, apprenticeship and the workforce.
4. Knowledge of the Ontario context in which elementary or secondary schools operate.
5. Ontario education law and related legislation, occupational health and safety legislation and legislation governing the regulation of the teaching profession in Ontario and the professional obligations of members of the College.
6. How to create and maintain the various types of professional relationships between and among members of the College, students, parents, the community, school staff and members of other professions

APPENDIX 2. ITE MODELS AND LINKS TO GRADUATE ITE DESCRIPTIONS AND PROGRAM ELEMENTS

CANADA ITE LINKS

MCGILL UNIVERSITY

PROGRAMS LEADING TO TEACHER CERTIFICATION

General overview:

<https://www.mcgill.ca/dise/progs>

EXAMPLE OF MASTER’S PROGRAM LEADING TO TEACHER CERTIFICATION

Master of Teaching and Learning – English Language and Arts (MATL-ELA):

<https://www.mcgill.ca/dise/progs/matl-ela>

Information for prospective MATL-ELA students:

<https://www.mcgill.ca/dise/progs/matl-ela/prospective-students>

Information for registered MATL-ELA students:

<https://www.mcgill.ca/dise/progs/matl-ela/currently-registered-students>

MATL-ELA program overview for 2016-2017 admits (the 5 terms option):

https://www.mcgill.ca/dise/files/dise/ela_matl2016-programoverview_5_term-revised_may_2016.pdf

MATL-ELA program overview for 2016-2017 admits (the 7 terms option):

https://www.mcgill.ca/dise/files/dise/ela_matl2016-programoverview_7_term-revised_may_2016.pdf

FINLAND ITE LINKS

Teacher education in Finland with breakdown by subjects:

<http://www.theeducationist.info/teacher-education-in-finland/>

U OF HELSINKI

Teacher education program overview:

<https://www.jcu.cz/international-relations/international-week/3rd-international-week/participants-and-presentations/fi-mikko-moilanen-the-department-of-teacher.pdf>

Structure of pedagogical studies for teachers:

<http://www.helsinki.fi/teachereducation/education/subjectteacher/structure%20of%20pedagogical%20studies%20for%20teachers%202008.pdf>

Structure of pedagogical studies in adult education:

<http://www.helsinki.fi/teachereducation/education/subjectteacher/structure%20of%20pedagogical%20studies%20in%20adult%20education%202008.pdf>

Teaching qualifications in Finland:

<http://www.helsinki.fi/teachereducation/step/information/qualifications/index.html>

Subject teacher education:

<http://www.helsinki.fi/teachereducation/education/subjectteacher/index.html>

Subject teacher education overview:

<http://www.helsinki.fi/teachereducation/education/subjectteacher/>

Subject teacher education program in English:

<http://www.helsinki.fi/teachereducation/step/index.htm>

UNIVERSITY OF OULU

Description of ITE studies:

http://www oulu.fi/edu/education_programmes and <http://www oulu.fi/edu/studies>

Overview of primary teacher education:

http://www oulu.fi/edu/primary_teacher_education

Overview of secondary teacher education:

http://www oulu.fi/edu/secondary_teacher_education

Description of Bachelor and Master theses

<http://www oulu.fi/edu/theses>

UK ITE LINKS

UNIVERSITY OF OXFORD

Description of the Postgraduate Certificate in Education program:

<http://www.education.ox.ac.uk/courses/pgce/>

Description of course components:

<http://www.education.ox.ac.uk/courses/pgce/course-components/>

Course structure:

<http://www.education.ox.ac.uk/courses/pgce/course-structure/>

US ITE LINKS

BARD COLLEGE

Bard Master of Arts in Teaching Program (MAT):

<http://www.bard.edu/mat/>

Bard College MAT Los Angeles:

<http://www.bard.edu/mat/la/teaching/> and <http://www.bard.edu/mat/la/about/>

Bard College MAT New York:

<http://www.bard.edu/mat/ny/>

Bard College MAT Jerusalem:

<http://www.bard.alquds.edu/about-aqb/partnership.html>

Bard College public school partnerships:

<http://www.bard.edu/mat/ny/partnerships/>

TEACHER COLLEGE COLUMBIA

Program offerings:

<http://www.tc.columbia.edu/curriculum-and-teaching/programs/>

Programs in Curriculum and Teaching:

<http://www.tc.columbia.edu/curriculum-and-teaching/ct-programs/>

Elementary Professional Certification Program (Masters):

<http://www.tc.columbia.edu/curriculum-and-teaching/ct-programs/degrees/>

Secondary Professional Certification Program (Masters):

<http://www.tc.columbia.edu/curriculum-and-teaching/ct-programs/degrees/professional-certification-in-secondary-education-cusd-ma/>

The Master of Arts program in curriculum and teaching (MA-CURR):

<http://www.tc.columbia.edu/curriculum-and-teaching/ct-programs/degrees/master-of-arts-in-ct-curr-ma/>

AUSTRALIA ITE LINKS

UNIVERSITY OF MELBOURNE

Description of Master of Teaching from the Melbourne Graduate School of Education:

http://education.unimelb.edu.au/study_with_us/courses/become_a_teacher

The Master of Teaching (Early Childhood):

<https://handbook.unimelb.edu.au/view/current/MC-TEACHEC> and

<https://coursesearch.unimelb.edu.au/grad/1576-master-of-teaching-early-childhood>

Master of Teaching (Primary) Course structure:

http://education.unimelb.edu.au/_data/assets/pdf_file/0007/2062537/Primary-Course-map_2.0.pdf

Master of Teaching (Secondary) Course structure, accelerated option:

http://education.unimelb.edu.au/_data/assets/pdf_file/0007/2062546/Secondary-Accelerated-Map_2.0.pdf

Master of Teaching (Secondary) Course structure, full-time option:

http://education.unimelb.edu.au/_data/assets/pdf_file/0019/2062540/Secondary-full-time-Map.pdf