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Exploring teacher education in the context of Canada and China: A cross-cultural dialogue

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Abstract This article compares teacher education in China with Canada, with the aim of fostering a cross-cultural dialogue between the two systems. Using case studies the article attempts to address the following questions: What can the two countries learn from each other? Can Canadian teacher education be a possible alternative model for China? Can Canada's teacher education curriculum be used to enhance greater pedagogical preparation and more pre-service teaching practice for China? Is Canada's move towards strengthening professionalism in teaching of value to China?

Keywords teacher education, comparative education, cross-cultural dialogue, Canada, China

摘要 比较加拿大与中国的教师教育有助于推动两国间教育的跨文化对话。通过个案研究,旨在回答如下问题:两个国家能从这个比较研究中彼此间学到些什么?加拿大的教师教育是否可以成为中国教师教育选择的模式之一?是否可以运用加拿大教师教育的课程设置来加强中国教师的专业训练和职前教学实习?对中国而言,加拿大的教学专业化有何借鉴意义?

关键词 教师教育, 比较教育, 跨文化对话, 加拿大, 中国

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1 Introduction

The topic of teacher education has seen a plethora of literature that has arrived at a general consensus of what makes “good” teacher preparation (Smith, 2005). Effective teacher education incorporates an abundance of content knowledge, pedagogical and didactical methodologies. Proficient teacher education thus incorporates a range of subject knowledge content, an understanding of learning styles and methods, and how to translate such knowledge into effective instructional methods while developing an ability to comprehend and nurture the unique person that is every child and student (Darling-Hammond, 2006; Kennedy, 2005; Korthagen, 2004). Reflection and (self) assessment are also acknowledged elements of professional teacher education and practice (Darling-Hammond, 2006; Labrie, Brdarevic and Russell, 2000; Smith and Van der Westhuizen, 2000).

With such an array of necessary teacher skills “there is an emerging consensus that teacher quality makes a significant difference in children’s learning and in overall school effectiveness” (Cochrane-Smith and Zeichner, 2005, p.40). Teacher quality can be defined in terms of their pupils’ performance or in terms of teacher qualifications. Cochrane-Smith and Zeichner argue that the characteristics of teacher preparation that most effect student achievement should be identified and policies need to be tailored towards this. However, although Canadian students perform near the top in mathematics in comparative international tests such as PISA 2003 (Programme for International Student Assessment)¹, it would be simplistic to assert that Canadian teacher education is a main factor in causing high performance. Nevertheless, it is plausible to say that teacher performance is one of the many factors contributing to achievement, besides foremost socioeconomics (Bacon, 1995), cultural factors, and possibly parental involvement (for example see Vallez, 2002). And, another note of caution from Bacon about using formal testing for accountability measures is that not all educational outcomes, such as character development, can be easily measured. The development of professional competencies through the development of a pedagogical knowledge base (teaching methods and foundations), professional standards, and fieldwork, within the framework of university or college based teacher preparation play a vital part in the development of quality teachers and teaching environments (Zeichner, 2006). The move towards teacher training within university level undergraduate or graduate degree programs, coupled with more or less intensive field preparation is an international phenomenon (Howe, 2006). Viewed in this light, how has

¹ Statistics Canada (n.d.). First results from the 2003 programme for international student assessment. Ottawa: Statistics Canada.

teacher education in Canada and China progressed and met the challenges of professionalization?

In Canada, there has been a movement towards the professionalization of teachers, as defined by the Bachelor of Education degree requirement within the context of university faculties of education (Young, Hall and Clarke, 2007) and by having a monopoly over teaching in provincial schools. Canadian teacher education has focused on academic disciplines, pedagogical training, and an emphasis on field experience to enhance professional competency. The recent accord by the Association of Canadian Deans of Education (ACDE) enumerated a number of principles of teacher education in Canada that defined the teacher as a professional who critically observes, assesses, and acts through inclusive pedagogies and practices and sees teacher education as providing in new teachers an understanding of student and child development, learning methodologies, subject knowledge, and knowledge of pedagogies (Collins and Tierney, 2006). It also upheld university-school partnerships, which incorporated theory, research, and practice. However, in the Canadian context, while there is an increased focus on university preparation, professionalism, and an undergraduate bachelor degree as the minimum entry into practice requirement, an ambiguity exists between teacher education that highlighted discretionary judgment, critical thinking, reflection, and collaborative practice and increasing government imposed curricula and assessment regimes, which restrict teacher autonomy and create tension between the ideals of teacher education as practiced in education faculties and the notions of accountability and standard tests assessment as mandated by government (Hall and Shulz, 2003).

In China, teachers and education have had a long and honoured tradition since the era of Confucius. Great progress has been made in the area of teacher education since the early 20th century. There are a variety of qualifications for teachers ranging from normal school certificates for primary school teachers to university degrees for senior secondary school teachers. In recent times teacher education has become the focus of a well-organized and structured system aiming at developing professional, qualified, and skilled teacher candidates. There has been a new emphasis on professional development to improve teacher qualifications, and on the treatment and respect accorded to teachers (Li, 1999). Despite the recent progress and new emphasis, challenges continue to persist in regards to the quality and direction of teacher preparation and its relationship to the reputation of education in general (Guo, 2005; Li, 1999).

A number of studies have documented challenges facing teacher education in China (Guo, 1996; 2005; Li, 1999; Paine, 1990; Zhang, 1995). One such challenge pertains to people's attitude toward teacher education. Some teacher education students believe that good teaching was innate, and that some

teachers would never teach well even though they had received formal teacher training (Guo, 1996). A second challenge relates to the focus of teacher education. Many researchers maintain that the current teacher education programs are narrowly designed, with rigid curriculum, excessive focus on subject training, and insufficient emphasis on methodology and educational practice (Li, 1999; Paine, 1990; Zhang, 1995). Furthermore, the current teacher training courses are theoretical and abstract, and teaching practice is too short to provide adequate preparation for the field (Guo, 1996; 2005). Often lecturers focusing on methodology were taught by those who could not teach a specialization subject very well. Some lecturers may not have had training themselves, although they were assigned to teach methodology, and since methodology had a low status, anyone would be able to teach it. However, professional competencies are seen by many as the core of the development of quality teaching (Cochrane-Smith and Zeichner, 2005; Zeichner, 2006). To some extent, such factors have led to China's teacher education programs neglecting to educate their student teachers in actual teaching skills, with many teachers arriving in the classroom with little teaching experience (Guo, 2005). This is also reflected in the little time given to reflective and collaborative practices and the social foundations of education. The pre-service teacher is simply seen as an apprentice to the master teacher (Li, 1999). Zhou (2002) has called attention to the outdated system of post-secondary education built on the Soviet model, and he calls for more internship, and new curricula, a call mirrored by Qi et al. (2004) who argue for new models based on initial post-secondary schooling (three or four years) followed by one year of teacher education. Paine (1990) sees the need for teaching to become less teacher-centred and more interactive. Curriculum and program changes are not the only solution, however. The social status of the teaching profession once so highly thought of and respected (Li, 1999) needs to be reclaimed through renewed professionalism (Zhou, 2002).

This paper compares teacher education in China with the Canadian situation, with the aim of promoting understanding between the Canadian and Chinese systems. It attempts to address the following questions: What can the two countries learn from each other? Can the Canadian teacher education system be a possible alternative model for China? Is Canada's teacher education curriculum able to act as a model for greater pedagogical preparation and more pre-service teaching practice? Is Canada's move towards strengthening professionalism in teaching of value to China? It is hoped that this study will shed new light on the current reform in teacher education in China.

2 Teacher education in Canada: Two case studies

Canada has fifty faculties of education. Universities took over the sole responsibility of teacher education at the end of World War II from normal schools (Sheehan and Wilson, 1994). The University of British Columbia (UBC) and the University of Alberta (U of A) are such universities, which host two of the oldest and largest teacher education programs in Canada. The programs provided are also very comprehensive. Hence, we chose them as two case studies for this article. Differences exist in the requirements and programs of these two Canadian universities. The U of A provides Bachelor of Education (B.Ed.) degrees, combined degrees, and after-degrees in various specializations in the elementary (kindergarten to grade 6) to secondary (grades 7 to 12) and adult routes. Diplomas are also offered to enrich qualifications. It is one of the only universities still offering B.Ed. degrees without the requirement for prior degrees. The UBC offers elementary (kindergarten to grade 7), middle years (which varies from 10 to 14 years olds), and secondary (grades 8 to 12), post-degree programs, as well as diplomas in education, performing the same function as at the U of A.

2.1 Admission criteria

First of all, the UBC and the U of A have different admission criteria (see Tables 1–3). The UBC requires an existing arts or science degree besides work experience with children or youth for the B.Ed.² This is equated to having the academic background in subject areas that prospective teachers will operate in, allowing for a concentration on teaching theory, methodology, and the practicum in the B. Ed. It is explicitly stated that a summary of work experience with children or youth, a personal essay based on teaching experience, and two confidential reports are a part of the non-academic requirements. “Non-academic qualifications are an integral part of admission requirements for the UBC Teacher Education Program. An applicant will normally be denied admission to the Teacher Education Program if one or more of the above is determined unsatisfactory even if academic requirements are met”³. In addition, English language competencies are required at both universities.

²University of British Columbia (2007a). How to apply. Retrieved Nov. 30, 2007, from <http://teach.educ.ubc.ca/applications/index.htm>; <http://teach.educ.ubc.ca/bachelor/elementary/12-month/english/requirements.html>.

³University of British Columbia (2007b). Admission: Additional requirements. Retrieved Dec. 5, 2007, from <http://teach.educ.ubc.ca/bachelor/requirements2.html>.

Table 1 Admission requirements for elementary year options

University of British Columbia	University of Alberta
A 3 or 4 year bachelor degree in the arts or science or acceptable equivalent.	One year of pre-professional study with recommended courses.
A total of 90 credits of coursework in the arts, music, visual and performing arts, or human kinetics (physical education) must have been gained prior to admission to the B.Ed. Program, including:	Completion of at least 24 transferable credits. Satisfactory standing in the faculty from which the transfer occurs.
6 credits in English literature and composition.	An admission GPA of at least 2.0 on all transferable credits.
3 credits in mathematics.	Recommended coursework in the following:
3 credits relating to Canadian content (e.g. anthropology, sociology, art history, political science, etc.).	6 credits in language/literature.
3 credits in a laboratory science (e.g. biology, chemistry, astronomy, etc.).	3 credits in computing.
3 credits of Canadian history or geography.	3 credits in health education.
18 credits from art, biology, chemistry, earth and ocean sciences/geology, English, French, geography, history, mathematics, music, physics. OR	3 credits in fine arts.
18 credits from anthropology, Asian studies, astronomy, biochemistry, botany, Canadian studies, Chinese, classical studies, creative writing, dance, drama, economics, family studies, first nations studies, German, Italian, Japanese, kinesiology, linguistics, microbiology, oceanography, philosophy, physical education, physiology, political science, psychology, Punjabi, Russian, sociology, Spanish, statistics, women's studies, zoology. OR	3 credits in health education.
18 credits from any combination of the above 2 lists (no more than 12 credits in any one discipline).	3 credits in mathematics.
A GPA of at least 65% based on the 36 stipulated academic credits (not based on the entire degree).	3 credits in natural science.
Demonstrated experience working with children and youth.	3 credits in physical education.
Applicants who have taken all or part of their first degree in a non-English language institution need to demonstrate English competence through a recognized English Language test.	3 credits in social science.
	3 credits in an open option.
	A minimum of 60 credits from another post-secondary institution may be allowed as a transfer credit.
	Students with 24 credits enter the Bachelor of Education program in year 2. Students with 60 credits enter the program in year 3.
	Recommended previous experience working with children.
	Demonstration of English language proficiency.

Table 2 Admission requirements for middle year option

University of British Columbia	University of Alberta
<p>A 4 year bachelor degree in the arts or science or equivalent.</p> <p>A total of 90 credits of coursework in the arts, music, visual and performing arts, or human kinetics (physical education) must have been gained prior to admission to the B.Ed. Program.</p> <p>6 credits in English Literature and composition.</p> <p>3 credits in mathematics.</p> <p>6 credits relating to Canadian content (e.g. anthropology, sociology, art history, political science, etc.).</p> <p>3 credits in a laboratory science (e.g. biology, chemistry, astronomy, etc.).</p> <p>3 credits of Canadian history or geography.</p> <p>18 credits from art, biology, chemistry, earth and ocean sciences/geology, English, French, geography, history, mathematics, music, physics. OR</p> <p>18 credits from anthropology, Asian studies, astronomy, biochemistry, botany, Canadian studies, Chinese, classical studies, creative writing, dance, drama, economics, family studies, first nations studies, German, Italian, Japanese, kinesiology, linguistics, microbiology, oceanography, philosophy, physical education, physiology, political science, psychology, Punjabi, Russian, sociology, Spanish, statistics, women's studies, zoology. OR</p> <p>18 credits from any combination of the above 2 lists (no more than 12 credits in any one discipline).</p> <p>A GPA of at least 65% based on the 36 stipulated academic credits (not based on the entire degree).</p> <p>Demonstrated experience working with children and youth.</p>	N/A

Table 3 Admission requirements for secondary year options

University of British Columbia	University of Alberta
<p>A 4 year bachelor degree in the arts or science or equivalent.</p> <p>6 credits in English Literature and composition.</p> <p>Concentration on one or two subject areas identified as commonly taught in B.C. secondary schools. This element can be broken down into 1 major subject, 1 major subject and 1 subject of concentration, or 2 subject concentrations (see below). There are 28 identified teachable subjects divided into:</p> <p>General subjects (e.g. art, English, mathematics, music, physical education, French, English as a second language)</p> <p>Modern languages (e.g. Chinese, German, Italian, Japanese, Punjabi)</p> <p>Science (Biology, Chemistry, Physics, Earth Sciences)</p> <p>Social studies (History, Geography, Social Science)</p>	<p>One year of pre-professional study with recommended courses.</p> <p>Completion of at least 24 transferable credits.</p> <p>Satisfactory standing in the faculty from which the transfer occurs.</p> <p>An admission GPA of at least 2.0 on all transferable credits.</p> <p>Recommended coursework in the following:</p> <p>12 credits in the applicants teaching major.</p> <p>6 credits in the minor teaching area.</p>

(Continued)

University of British Columbia	University of Alberta
Career preparation.	6 credits in Language/Literature. 3 credits in Computing.
Not all subjects are allowable as teaching majors and some need to be taken in tandem with another subject.	3 credits in an open option.
A subject major contains a minimum of 42 credits in the subject (including at least 30 in the third/fourth years of study). Some subjects such as social studies and science require an additional 12–18 credits at the introductory level.	A minimum of 60 credits from another post-secondary institution may be allowed as a transfer credit.
A subject concentration requires 12 less credits at the senior (third/fourth year) level.	Students with 24 credits enter the Bachelor of Education program in year 2. Students with 60 credits enter the program in year 3.
A GPA of at least 65% (usually an applicant needs higher) based on the senior credits in the subject majors and/or subject concentrations.	Recommended previous experience working with children.
Demonstrated experience working with children and youth.	Demonstration of English language proficiency.
Applicants who have taken all or part of their first degree in a non-English language institution need to demonstrate English competence through a recognized English Language test.	

At the U of A, for the transfer route (Tables 1 and 3), one year of pre-professional study is required with recommended courses and required credits before the three year B.Ed.⁴ Just like at the UBC, it is suggested that applicants gain experience working with children or youth. Grade point average (GPA) is the only determining factor in admitting students at the U of A, for experience is intended to “assist applicants in confirming their choice of education as a career”⁵. After-degree applicants (Table 4) also have to meet certain stringent admission requirements⁶.

⁴ University of Alberta (2007a). Undergraduate admission: Faculty of Education. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Admission/Requirements-by-Faculty/15.6.html#15.6>.

⁵ University of Alberta (2007a). Undergraduate admission: Faculty of Education. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Admission/Requirements-by-Faculty/15.6.html#15.6>.

⁶ University of Alberta (2007a). Undergraduate admission: Faculty of Education. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Admission/Requirements-by-Faculty/15.6.html#15.6>.

Table 4 Admission requirements for the University of Alberta after-degree route

Elementary option	Secondary option
3 or 4-year degree from an accredited postsecondary institution. GPA of at least 2.0, or equivalent, based on the most recent 24 credits. Completion of 12 credits from at least 3 credits of the following areas (minimum of 3 credits must be from Language and Literature field): Computing Fine arts Health Language and literature Mathematics Natural sciences Physical education Social sciences	3 or 4-year degree from an accredited postsecondary institution. GPA of at least 2.0, or equivalent, based on the most recent 24 credits. Minimum of 48 credits in a major and minor subject teaching area: 30–36 credits in a major subject teaching area such as: Art Biological sciences Career and technology studies (e.g. business and technology) Drama English language General sciences Mathematics Music Physical education Physical sciences Second languages (e.g. Cree, French, German, Italian, Japanese, Spanish, and others) Social studies 9–18 credits in a minor subject teaching area such as: Art Biological sciences Career and technology studies (e.g. business and technology) Chemistry Drama English language English as a second language General sciences Health sciences Intercultural and international education Mathematics Music Native education Physical education Physical sciences Physics Religious and moral education Second languages (e.g. Cree, French, German, Japanese, Mandarin, and others) Social studies

2.2 Curriculum design

The B.Ed. program at the UBC (Tables 5 and 6) requires the completion of 60–62 credits (the equivalent of approximately 20 courses) with pre-practicum and orientation school prerequisites. These include courses related to teaching principles, learning, assessment and instruction, educational foundations, development theories and special education, school organization, communication skills and social aspects of education. In the elementary and middle years routes, curriculum instruction and method courses are mandatory in the major subject areas (e.g. reading and language arts, mathematics, science, social studies, and physical education), approximating 30% of the total course weight and the field placement is of four months duration, accounting for a further 30% of the whole program⁷. Due to the more specialized nature of secondary schooling, students in the secondary option focus on curriculum and instruction courses in a first and second subject area. A further 15% of the course load is made up of electives related to the area of concentration or subject major with a practicum extending the full school term and totalling 30% of the program's credits⁸. The UBC also offers a five-year Bachelor of Education program designed for students who are members of Canada's Aboriginal population. The focus of the program is to include Aboriginal perspectives and abilities towards the teaching of elementary and secondary level students⁹. In all three options a degree of emphasis is placed on coursework that focuses on childhood and adolescent development factors and on education within a social context. These credits add up to about 17% of the total course weight. A diploma program aimed at qualified teachers who have completed their Bachelor of Education is also a feature of teacher education at UBC¹⁰.

⁷ University of British Columbia (2007c). Student handbook: 12-month elementary option. Retrieved Nov. 30, 2007, from http://teach.educ.ubc.ca/bachelor/handbook/Req_elem.html.

University of British Columbia (2007d). Program description for B.Ed. Middle Years Option (12 months). Retrieved Nov. 30, 2007, from <http://teach.educ.ubc.ca/bachelor/middle/program.html>.

⁸ University of British Columbia (2007e). Program description for B.Ed. Secondary option (12 months). Retrieved Nov. 30, 2007, from <http://teach.educ.ubc.ca/bachelor/secondary/english/program.html>.

⁹ University of British Columbia (2007f). Welcome to the Native Indian teacher education. Retrieved Nov. 30, 2007, from <http://teach.educ.ubc.ca/bachelor/nitep/index.html>.

¹⁰ University of British Columbia (2007g). Diploma in education program. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Undergrad/Education/Programs/75.3.html#75.3>.

Table 5 Required courses: Elementary and middle route

Route	University of British Columbia	University of Alberta
Elementary	Principles of teaching; pre-practicum assessment; communication skills in teaching; introduction to elementary reading & language arts; educational application of development theories; analysis of education; orientation school experience; school organization in its social context; learning, measurement teaching; development and exceptionality in the regular classroom, one of educational anthropology, sociology, history, social foundations, and philosophy; curriculum and instruction in language education, art, music, science, mathematics, mathematics, social studies, physical education. Extended teaching practicum of four months.	Non-education credits (24) from seven subject elements: language/literature, mathematics, natural sciences, social sciences, fine arts, physical education, and health education. Core courses in education psychology, inclusive education, education assessment, managing the learning environment (classroom management), and ethics and law in teaching. Method courses in language arts and mathematics are required. Students choose a further four methods courses in art, music, science, social studies, or physical education. A computing course is also mandatory. Practicum consists of a five-week placement in the Introductory Placement Term and nine weeks in the Advanced Professional Term. Minor subjects include early childhood education, education psychology, English as a second language, fine arts, language and literacy, mathematics/science, music, native education, physical education, second languages (Arabic, Cree, French, German, Italian, Japanese, Mandarin, Spanish, Ukrainian, Other), social studies, visual studies in which non-education and education classes are needed. Further coursework outside of the Faculty of Education (preferably directed towards the minor subject areas or the seven elements) is also required.
Middle	Similar to above but added to the curriculum and instruction courses are home economics, French as a second language, and design and technology. One elective in the subject area of concentration (language arts, mathematics, science, social studies, art, home economics, music, French as a second language, physical education, design and technology), education during the adolescent years.	N/A

Table 6 Required courses: Secondary route

University of British Columbia	University of Alberta
<p>Similar to Middle years but only courses in curriculum and instruction relating to subject specialization. Electives to be related to this subject major or subject concentration(s). Language across the curriculum in multilingual classrooms added. Practicum extending through the full school term.</p>	<p>Core courses in education psychology, inclusive education, education assessment, managing the learning environment (classroom management), and ethics and law in teaching. A computing course is a requirement. Courses in the major and minor subject areas of specialization including non-education subject courses (36 credits for major subject areas, 18 credits for minor subject areas) and secondary education curriculum courses (two for major subjects, one for minor subjects). Practicum consists of a five-week placement in the introductory placement term and nine weeks in the advanced professional term. Major and minor subjects of specialization include art, biology, career and technology studies (business and technology, human ecology, resources, technology education), chemistry, drama, English language arts, general sciences, mathematics, music, physical education, physical science, physics, second languages (Cree, French, German, Italian, Japanese, Spanish, Ukrainian), social studies. Special education is also offered as a minor subject.</p>

The U of A B.Ed. program is philosophically similar to the UBC's with an academic core and educational theory and practice, as well as the teaching practicum (Tables 5 and 6). However, as the U of A requires one year of pre-professional study for the transfer route more subject courses are required, including non-education electives, over the course of the three years¹¹. As at the UBC, the elementary education route is designed to prepare teachers to provide instruction in all subject areas within a multicultural setting while the secondary route involves students selecting a major and a minor subject for specialization. Minor specializations require 18 credits of coursework in the field of specialization (usually outside of the Faculty of Education) and a curriculum and instruction course in the subject area in the Introductory Professional Term (IPT) taken during the third year. The major subject area of specialization requires 36 credits towards their major teaching area as well as relevant education courses to be taken before the Advanced Professional Term (APT) during their fourth year. Both elementary and secondary options stress subject knowledge, pedagogical learning, critical and analytical skills, ethical considerations, and understanding and respect of children's and adolescent's developmental and socio-cultural

¹¹ University of Alberta (2007b). Elementary education route. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Undergrad/Education/Programs/75.3.html#75.3>.
 University of Alberta (2007c) Secondary education route. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Undergrad/Education/Programs/75.4.html#75.4>.

contexts with extensive course work designed to facilitate a widespread grounding, including credits in education psychology and ethics and law in teaching.

2.3 Field experience

The University of British Columbia field experience model (Fig. 1) is designed to help student teachers put the theory they have learnt into practice. The emphasis is on a gradual familiarization with teaching in an actual school environment. At the elementary and middle levels, student teachers begin with weekly seminars and school visits for a total of eight half days. Following this initial period of acclimatization, student teachers are assigned to a school advisor by a UBC faculty advisor and a school coordinator at the host school. The next stage is a gradual taking on a greater course load over a two-week period. The student teachers are expected to teach a minimum of six to nine lessons and teach one hour per day. At the secondary level, the initial school experience involves a series of seminars followed by the two week school orientation phase where they are expected to observe classroom settings and practices, in cooperation with their assigned school advisor, in the first week followed by the assumption of responsibility for planning and teaching lessons in their second week. The last stage for all levels is the extended practicum. At this stage, student teachers are expected to take responsibility for independent lesson planning, gradually taking on more teaching responsibilities and a greater course load up to the required 80% of the teaching load, with the option of up to 100% of the workload and work closely with their school advisors in reflective and inquiry practices. At the UBC the main players in the practicum are school advisors who mentor the student teachers, the school coordinator or administrator, who are charged with administrating the program from the school end, and faculty advisors, who are the bridge between the school and the university¹².

Field experience at the U of A (Fig. 2) is designed to facilitate similar ends and follows the Collaborative Schools Model¹³. The Introductory Professional Term (IPT) lasts a total of five weeks. The first week is a period of orientation prior to assignment to a school and mentor teacher. During weeks two to five, teaching time is increased to 50% of the teaching load and student teachers are required to teach three to four connected lessons in a curriculum area. The Advanced Professional Term (APT) lasts a total of nine weeks and student teachers teach

¹² University of British Columbia (2007h). Bachelor of Education program handbook. Retrieved Nov. 30, 2007, from http://teach.educ.ubc.ca/bachelor/handbook/2007-08_bed_handbook_june%208-07.pdf.

¹³ University of Alberta (2007d). The collaborative schools model. Retrieved Nov. 30, 2007, from <http://www.uofaweb.ualberta.ca/fieldexperiences/nav02.cfm?nav02=25775&nav01=25772>.

incrementally up to 80%. They are gradually immersed in the full responsibilities of teaching lessons, planning, and the assessment of students. Reflective practice is stressed in the practicum. The U of A field placement model involves several major actors. At the school there are mentor teachers, who provide the front line guidance for student teachers and are actively involved with assessment, and school coordinators who select mentor teachers and provide support for mentors and student teachers. University facilitators are liaisons between the school and the university, acting as mediators, allowing for open communication channels. Field experience associates are responsible for ensuring that all levels of the field placement model are functioning properly and working together¹⁴.

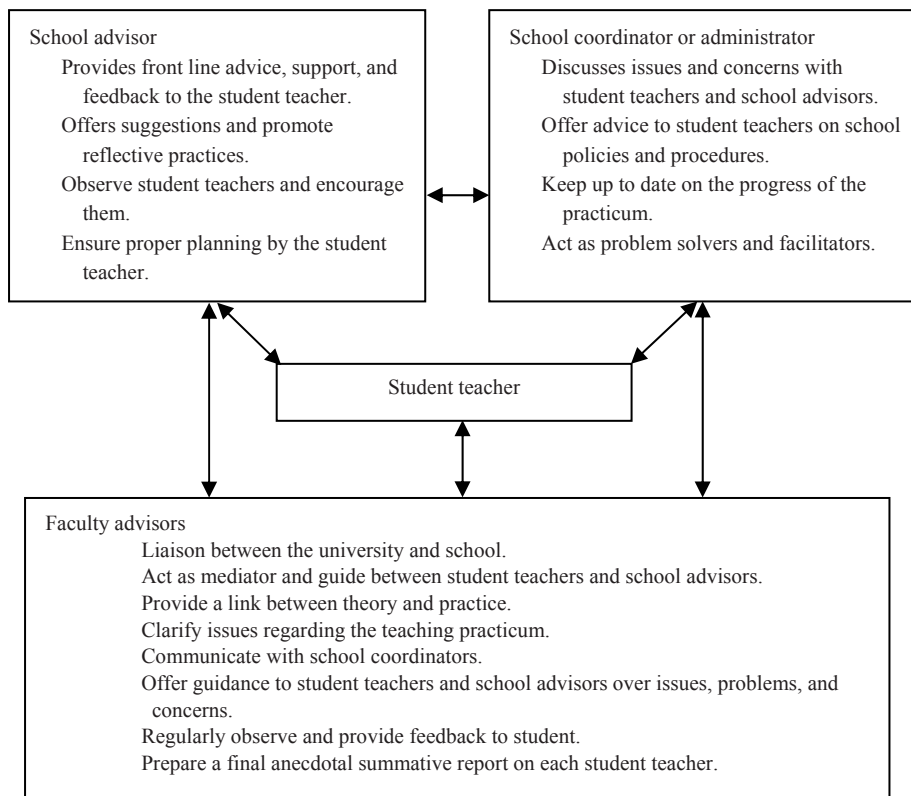


Fig. 1 The UBC Field Experience Model

¹⁴ University of Alberta (2007e). Overview: Role of field experience participants. Retrieved Nov. 30, 2007, from <http://www.uofaweb.ualberta.ca/fieldexperiences/nav02.cfm?nav02=25787&nav01=25772>.

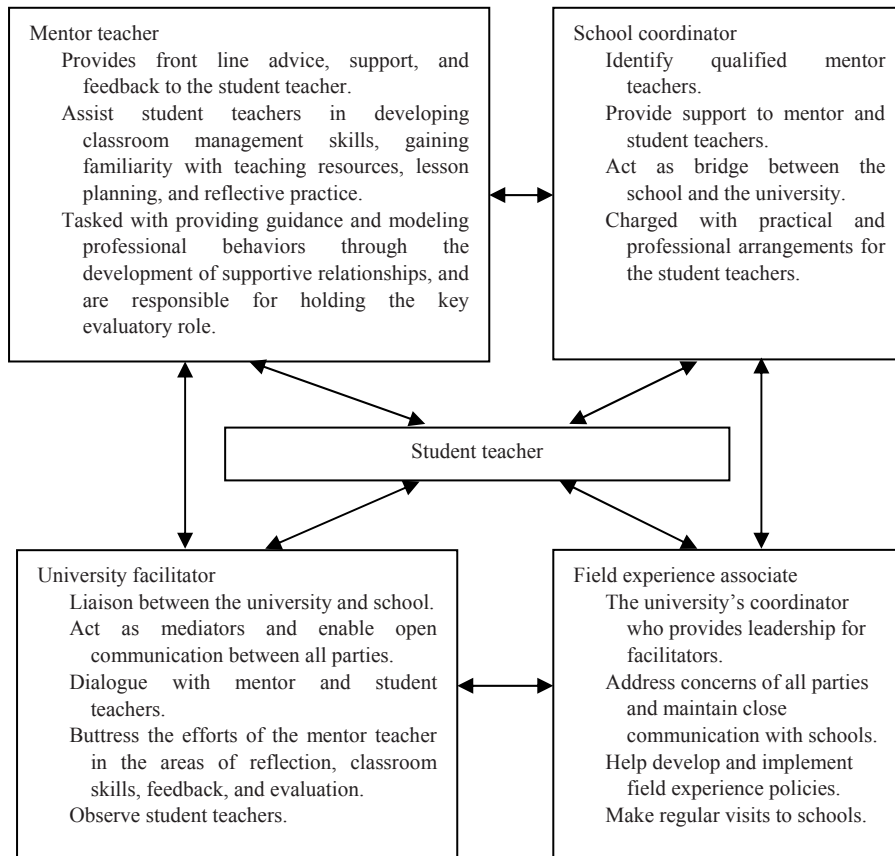


Fig. 2 The University of Alberta Field Experience Model

2.4 Licensing and certification

Although provincial bodies certify teachers, as education is under their jurisdiction, it is the universities that recommend individual teacher graduates that have completed Bachelor of Education degrees, who are Canadian citizens or permanent residents, after undergoing a criminal record check. In British Columbia, the BC Teachers' College licences teachers who are evaluated by designated evaluators who analyse transcripts as well as character references and teaching observations¹⁵. Ontario's teacher college regulates the teaching profession in that province and is also responsible for setting and overseeing

¹⁵ British Columbia College of Teachers (2004). Certification-an overview. Retrieved Jan. 27, 2005, from <http://www.bcct.ca/certification/default.aspx>.

ethical and professional standards amongst its members. In order to teach at a publicly funded school in the province, a teacher must be a member of the college¹⁶. In Alberta, the provincial government evaluates and certifies teachers. Teachers, upon graduation from an accredited teacher education program, are issued with an Interim certification, to be followed, after a minimum of two years full-time teaching in an Alberta school setting, with a permanent certification¹⁷. Other provinces such as New Brunswick, Nov Scotia, Prince Edward Island, and Saskatchewan have similar systems. What all jurisdictions have in common is the necessity for the completion of an accredited teacher education program at the post-secondary level (usually a Bachelor of Education degree) and the requirement that the candidate be deemed fit to hold the position of teacher. A formal evaluation and assessment are integral to the certification process. In order to teach in a province or territory of Canada, teachers must be certified by the relevant provincial or territorial certification authority (government or teacher college). Therefore, out of province teachers need to apply for certification when desiring to teach in a different jurisdiction even if they hold a certification from another jurisdiction in Canada. Teachers from outside of Canada must also apply for certification. This may require further professional study. For example, the Ontario College of Teachers states that teachers who do not meet Ontario standards will need to acquire additional qualifications from an Ontario teacher education faculty before they can be licensed to teach.

3 Discussion: Strengths and weaknesses of the Canadian and Chinese models

3.1 Focusing on pedagogy and practice

Compared to the Chinese model, Canadian teacher education is more standardized at the university level. The structure and courses strike a balance between subject area and pedagogy. A broad range of subject grounding, combined with pedagogical theories and reflective practice are the lynch pins of Canadian teacher qualifications. Although theoretical courses do play a role in Canadian teacher education programs, there seems to be a need for more practical pedagogical courses that relate to such areas as planning and classroom management. Moreover, teaching methodologies (methods courses) provide

¹⁶ Ontario College of Teachers (n.d.). Thinking about becoming a teacher? Retrieved Jan. 27, 2005, from <http://www.oct.ca/en/CollegePublications/PDF/becoming.pdf>.

¹⁷ Government of Alberta (2007). About teachers certification in Alberta. Retrieved Dec. 4, 2005, from <http://education.alberta.ca/teachers/certification.aspx>.

specific tools for teachers from which they can draw upon. A body of research exists on teaching strategies. Canadian universities encourage a variety of teaching methodologies be they child-centered (co-operative learning, jigsaw, individualized learning, mastery-based learning, inquiry learning) or teacher-centered (lecture, didactic method). Student teachers can incorporate different teaching methods into their field experience and have a base of knowledge from which to continue their life-long learning.

Expanding pedagogical theory and practice in China would better prepare teachers, distinguishing them from other professions and areas of concentration. Further, the model provided by the UBC, by requiring a prior degree in the arts or science, allows for grounding in subject content prior to admission into the B.Ed. This allows greater use of time in teacher education for pedagogical and methods courses. In addition, the field experience component places an emphasis on collaboration between universities and schools, with key players in place to ensure that the experience is beneficial and meets the needs of ensuring a quality student teaching experience. Canadian field experience models are highly elaborated, organized, and valued for the preparation they offer to student teachers in actual teaching practices. China could examine these field placement models as a method for increasing teaching skills in real world applications.

3.2 Emphasizing social foundations of teaching

Socio-economic considerations can assist teachers in understanding contextual variables that affect their students' lives. The Canadian teacher education places an emphasis on the social foundations of teaching through coursework in educational philosophy, sociology, history, anthropology, and the social context of learning. Council of Learned Societies¹⁸ stressed that social foundations of education allow for the critical understanding of education within diverse contexts and offer interpretation and meaning to the effects of schools and schooling while providing teachers the resources to develop an ethical and value oriented stance towards education. Such grounding can help guide the creation of educational goals and the means employed to achieve them and "contains a prescriptive as well as a descriptive dimension" (Standard I, para. 1). The U of A, in its program description, remarks on the importance of understanding and respecting all children and their socio-cultural settings. Schooling does not exist in a vacuum but needs to be understood in terms of the students' entire

¹⁸ Council of Learned Societies (1997). Standards for Academic and Professional Instruction in Foundations of Education, Educational Studies, and Educational Policy Studies (2nd ed). Retrieved Feb. 1, 2005, from <http://members.aol.com/caddogap/standard.htm>.

background¹⁹. For example, both the U of A and UBC offer teacher education courses that deal with individual and group differences amongst children and emphasize childhood development issues and special needs concerns (see Table 5 and 6 for a complete list of courses in this area).

3.3 Professionalization and teacher autonomy

In effect, teacher education in Canada has been moving towards professionalization. Normal schools, without research faculties, predated Faculties of Education. Currently, in British Columbia and Alberta, and across Canada, a Bachelor of Education and or an After-Degree are offered. Russell, McPherson, and Martin (2001) found that there is a movement towards two-year teacher-education programs across Canada. For example, the University of Calgary has a two-year Master of Teaching program instead of the older Bachelor of Education. Community Colleges offer introductory and transfer courses, but universities, some of which were recently upgraded, have a monopoly over teacher education, and in turn, teachers alone are licensed to teach in provincial schools (except in cases of exceptions under the authority of the Minister of Education). Teacher education is usually structured to be a mix of subject academic courses and pedagogic courses. In general, “Teacher education has developed over the years as a balance between liberal education, field experience, and pedagogy”²⁰. Courses are theoretical or abstract, with a practicum contingent where teaching skills are stressed. However, unlike professions like medicine, teachers have not gained the credibility of having a distinct body of knowledge (Fris, 1996). Since the 1980s, education reform documents have included suggestions for teacher education. Therefore, faculties of education are “caught in a maelstrom of political, public, and internal pressure to improve teacher education” (Cole, 2000).

In general, teachers in Canada have professional autonomy to choose pedagogic methods but have limited input into curriculum development, which is authorized by provincial governments. An Alberta Education survey (Council of Ministers of Education, 1996) suggested that a large majority of teachers and administrators felt they had sufficient authority in choice of teaching methodology but less than 20 percent felt that they had a constructive influence

¹⁹ University of Alberta (2007f). Programs, Faculty of Education: Elementary education route. Retrieved Nov. 30, 2007, from <http://www.registrar.ualberta.ca/calendar/Undergrad/Education/Programs/75.3.html#75.3>.

²⁰ Council of Ministers of Education, Canada (1996). A report prepared for the Council of Ministers of Education, Canada, for the 45th session of the International Conference on Education. Retrieved Dec. 5, 2004, from <http://www.cmec.ca/international/teacheng.htm#9>.

on curriculum decision making²¹. As well, Canada has highly motivated politically active teacher federations and associations that actively highlight teacher concerns and challenges to education. Although concerns about the political, economic, and social conditions of teaching in Canada persist, teachers have become active in giving voice to these problems and have achieved a measure of solidarity and public presence. As admission requirements increase the qualification of teachers, compensation and benefits have reflected this. However, the position of teachers in Canada, while it has improved, still faces challenges that in some ways reflect those in China.

3.4 Weaknesses in the Canadian context

Criticisms exist of Canadian teacher preparation. One is that new teachers sometimes feel unprepared with some parts of the job, namely classroom management, evaluation, yearly planning, parent and peer relationships (Russell et al., 2001). The initial survival phase can lead to newly qualified teachers thinking that their university degree was inappropriate or irrelevant (Olson and Osborne, as cited in Russell et al.). Studies reveal a gap between theories and practice, as university courses are often considered too theoretical while the practicum is considered 'real learning' (Russell et al., 2001). Innovative teacher programs include some commonalities: making student teachers' experiences and issues important in dialogue so as to tie in theory to reflective practice; collaborative environments (student cohorts, with school boards and university, within university departments, between teachers, mentors and student teachers) with inquiry practice; overt explanations of teachers' actions, thinking while planning, implementing and evaluating (Russell et al., 2001). Another avenue for continued teacher education are the induction programs that exist in some North American jurisdictions, as those with mentor teachers have reported an easier start into teaching. Russell et al. (2001) explain: "Just as restructured pre-service programs attend to a candidate's beliefs, understandings, and experiences, within a collaborative setting, so successful induction programs set expectations with a novice's level of experience and pedagogical knowledge" (p.14). Induction leads to lower attrition. Further, life-long learning, such as diplomas offered by the UBC, in addition to existing degrees, benefit teachers in enabling them to be experts in more subject areas and gain greater mastery while meeting professional development goals.

²¹ Council of Ministers of Education, Canada (1996). A report prepared for the Council of Ministers of Education, Canada, for the 45th session of the International Conference on Education. Retrieved Dec. 5, 2004, from <http://www.cmec.ca/international/teacheng.htm#9>.

Further difficulties arise over the general treatment of teachers in Canada. Teachers have not caught up to other professions in salaries, and teacher unions continually fight for better teacher conditions. Statistics Canada and the British Columbia Teachers' Federation (BCTF) contend that teachers' salaries are not keeping pace with pay in other professions. This has led to concern over retention. For example, it was noted that because British Columbia's teachers are considered amongst the best in the world, recruiters from many U. S. states and England have been attempting to entice them through attractive benefits packages as well as higher salaries²². In Alberta, following provincial cutbacks in the early 1990s, the Alberta Teachers' Association (ATA) formed a task force to promote public education (Flower and Booi, 1999). Some money has trickled back by the 2000s. However, issues of inadequate educational funding remain for stakeholders, as do high-class sizes, lack of assistance in the classroom, deficient planning and collaboration time with peers and for professional development, and extensive paperwork (Alberta's Commission on Learning, 2003). In British Columbia similar issues have been voiced by the BCTF with concerns about school closures, increased class sizes, lack of resources, and downsizing²³. Teacher demand is an important issue that is affected by the world and domestic market, by attrition, and by the paradox of high teacher demand in some subject areas while there is underemployment in others.

4 Potential applications of the Canadian experience

In examining Canadian teacher education models, are there constructive benefits that can be translated into the Chinese context? As previously noted, certain reforms in Chinese teacher education would be beneficial. As Zhou (2002) and Guo (1996) wrote, the Chinese system is test-oriented, is outdated and it does not produce innovative thinkers. Their solution is to educate teachers as professionals, with more internship and courses, increased collaboration between teachers and university students, and between schools and teacher education institutions, and to make the curriculum flexible. When analysing the two systems, it is apparent that in Canada, at least for elementary and junior high teachers, the degree requirement points to higher qualifications. Canada's system of teacher education has mirrored that of other nations, such as the United States,

²² British Columbia Teachers' Federation (2001). News release: Teachers present wage proposal urge government to invest in education. Retrieved Dec. 5, 2004, from <http://www.bctf.bc.ca/newsReleases/archive/2001/2001-09-13.html>.

²³ British Columbia Teachers' Federation (2004). Education funding success for every student: Funding B.C.'s future. Retrieved Dec. 7, 2004, from <http://www.bctf.ca/action/cuts/EdFunding/index.html>.

which have transferred responsibility for teacher education from normal schools and colleges to universities (Sheehan and Wilson, 1994). This has facilitated professional development in terms of providing teachers with a broader education and in bringing the benefits of research conducted at universities to bear on the teaching profession, despite concerns related to the ivory tower complex amongst academic faculty (Sheehan and Wilson, 1994). This, together with reflective, collaborative practices as existing in Canadian programs and the stringent certification regulations required by Canadian jurisdictions, can help address the need for greater professionalization of teachers and reform of the curriculum. The trend in Canada towards pre-professional education reflects the reform of curricula modelled by Qi et al. (2004). Canadian universities' greater emphasis on pedagogical training and social foundations would help in the movement away from the dominant Virtuoso model (Paine, 1990) and allow for flexible teaching processes when based on the teacher's professional assessment of the learning environment. Although there is upgrading of institutional levels in China, continued progress would no doubt raise teacher qualifications and, arguably, social standing.

It is not the intention of this paper to idealize Canadian teacher education, as there have been criticisms that newly qualified teachers (NQTs) have not been adequately prepared. To compensate, induction mentoring programs can be put into effect and existing induction programs for NQTs should be expanded (Yang and Wu, 1999). Moreover, professional development, as exist in Canadian jurisdictions can be formalized. Further, collaborative practice mechanisms can be opened up in the form of school-university partnerships, collaboration between schools, as well as within schools for planning and growth supposes.

5 Concluding thoughts

This paper has presented two case studies of teacher education in two provinces: the U of A and the UBC. At the latter, a B.Ed. requires a first degree while the former model could be used as a transitory model towards the goal of raising teacher education. There are costs involved in raising post-secondary education levels, but for progress and development, it is assumed that this would be beneficial. The potential for research and professional development gained by the transfer of teacher education to the university level is highly desirable and has demonstrably improved teacher professionalism and social status (Sheehan and Wilson, 1994). An increase in professionalization can also be traced to the strict certification and assessment of teachers, which is designed to ensure confidence

in the profession²⁴ and make certain that all teachers are qualified and fitted to their responsibilities. China's concern with qualifications reflects this and is a vital step in the development of the teaching profession. As Zhou (2002) noted, a primary emphasis in the development of teacher education is certification as this has the benefit of helping make teaching a true profession. This may be overstated, as Canada's experience has not made teachers equal in status and compensation with other professions like law and medicine, but it has ensured greater accountability and ethical and professional standards.

The transfer of teacher education to university education faculties has also reinforced pedagogical training. Education faculties in Canada, whether following the UBC or the U of A model, allow for a great deal of subject orientation prior to admittance to the B.Ed. (Tables 1 to 3), granting more weight to the teaching of pedagogical and educational principles. Although there are complaints in Canada about lack of teacher preparation, such a grounding is crucial towards making teachers better able to understand real world situations, flexible in their outlooks and methodologies, and more responsive to students' needs. This may be seen as a challenge to the virtuoso model of teaching as practiced in China. However, the Chinese model, in its turn, offers much to Canadian teaching practices, namely the disposition towards teaching, not simply as a profession but as an art and ingrained character trait (Paine, 1990), which, allied with Canadian teaching models, should be extremely beneficial in creating truly well rounded and committed teachers. It is clear that with China's longstanding teacher tradition, any system change must fit into the specific cultural traditions and political climate.

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²⁴ British Columbia College of Teachers (2004). Certification. Retrieved Jan. 27, 2005, from <http://www.bcct.ca/certification/default.aspx>.

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