Preschool Education Training:
Skills for Adapting to a Changing Society

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Foreword

The report contained in these pages falls under the second theme of the symposium, *Role of Teachers/Teacher Education: Role of Educators/Educator Training,* chosen by the Council of Ministers of Education of Canada (CMEC) as part of the general framework of the 2001 conference on *Training teachers and educators: priority topics and issues/related research subjects.* More specifically, our report deals in a Canada-wide perspective with the issue of societal conditions that have prompted government agencies in North America, and especially in Canada and Quebec, to develop and offer preschool education services to ever-younger segments of the population.

We first deal briefly with the background history of preschool education to the extent that this history is situated first and foremost in a twofold perspective of the government's response to women's need for access to the job market and the need for compensatory intervention in materializing equality of opportunities for educational success among low socio-economic communities. Subsequently, we deal briefly with the status of teaching-specific training at preschool level, for classes of four- and five-year-olds (*maternelle* in French, *pre-K* and *kindergarten* in English-language systems) as part of current teacher training programs in most provinces in Canada. We particularly highlight the variability of the degree to which the mission of kindergarten teaching is taken into consideration, depending on teacher education faculty and programs. Thirdly, we draw a quick overall portrait of the penetration of computers into Canadian and North American homes, then describe the situation of school computers in kindergarten classrooms, and the issue represented by ICTs. Lastly, having described the hybrid status of the mission that has fallen to kindergarten teaching and traced a brief portrait of practicing teachers' specific qualifications for the task, we suggest a number of avenues for adapting pre-service and continuous teacher education to new social and technological demands faced by practicing teachers.

1. The origins of preschool education

1.1 *Introduction*

Among the consequences of socio-economic and demographic changes in Canadian society has been a high demand for preschool education services, and with it increased training needs for teaching staff in that area. Preschool education is generally defined as an educational intervention situated upstream of schooling properly speaking, before children enter elementary school, and hence, in theory, involving children from birth to age six. In fact, the term preschool education is generally used more often to describe this intervention in the age period of 2 to 6 in many countries, and in a more limiting manner in Canada, from 4 to 6.

Preschool education is indeed a still poorly defined area in many education systems. In certain countries, particularly in Europe, it is built on the school model and is under the exclusive jurisdiction of Departments of Education, while in others, especially in North America, it is also based on the child care service model, and may come under different government departments (Education, Family and Child Services, Health and Social Affairs, even Status of Women). This ambivalence is related to the history of preschool education, fairly recent all in all, and the growth of divergent social needs to which it attempted to respond in the early days of its development, essentially in 19th century industrialized countries, continually swinging back and forth between the child care and the education roles. A brief outline of the history of preschool education would thus appear to be indispensable in understanding current problems.

1.2 *History of preschool education and kindergarten*

In every society, the education of young children has long been the exclusive job of the family, essentially of women. The appearance of a structured form of preschool education outside the family is inseparable from the development of industrial societies where both parents work outside the home.

The first forms of preschool education appeared initially in Europe, in industrialized countries. In France, women working in factories necessitated the creation in 1770 of classes for children aged 2 to 6 that were called "salles d'asile" (asylum rooms). These arose in the hundreds and taught initial concepts of order, discipline and instruction. Academic subjects such as arithmetic, reading, singing and drawing were already being taught in those schools (Pougatch-Zelcman, 1980). In 1848, the label "salle d'asile" was replaced by "école maternelle" (nursery school). These preschool institutions, which previously offered mainly safety and protection, gradually lost their character of family assistance through child care in favour of accessible education for all children, regardless of their place of origin, and hence equality of opportunity in education for the entire population. In 1881, kindergarten classes became free of charge and were integrated into elementary schools. Early childhood education is now an integral part of public education in France. The government advocates grouping children in nursery schools or kindergarten from the age of 2. These schools have their own educational program enabling them to acquire an independent field of instruction. They are closely dependent on the national Ministry of Education (MÉN), but have gradually freed themselves from traditional forms of teaching to create schools focused instead on children and their needs.

In Great Britain, similar educational institutions were opened beginning in 1816 under the name of "infants schools". They took in the children of working people and were inspired by military discipline. At the same time, early childhood services developed primarily in the 1970s. Public nursery schools were administered by the Department of Education, and day nurseries by the Department of Health and Social Services (Lall and Lall, 1983). Nursery schools are funded only 65% by the government and are still few in number, although their role in social integration and child development is acknowledged. Currently, about 10% of children aged 2 to 4 attend nursery schools, half of those part-time (Lelaidier, 1992). There is no common, compulsory program, but most nursery schools offer educational activity programs that differ from one school to another (Lall and Lall, 1983).

In Germany, Froebel founded the first nursery school in 1837, calling it a "kindergarten", for children six and under. In it he promoted child development through play and various discovery-oriented activities (active teaching). Schools of this type subsequently opened their doors throughout the country, and then across Europe (Brewer, 1992). Since 1945, children under age three can attend "crèches" (day nurseries) free of charge, full-time. The latter were integrated into the education system and became preschool institutions during the 1960s. In 1985, the Ministry of Public Health proposed an educational program developed on a scientific basis that incorporated early childhood education. Starting at age 3, children were admitted to nursery school, but primarily began to attend usually toward age 4. In 1986, over 71.4% of children aged 4 attended a nursery school, while only 38.2% of children aged 3 did so (Olmstead and Weikart, 1989).

In Belgium, early childhood services have been in existence since 1830. Designed on a model similar to the one in France, the "salles d'asile" of the time took in children aged 3 to 6 from the working class. Unlike the practice in France, however, these institutions were administered for the most part by religious communities or local municipal authorities (Olmstead and Weikart, 1989). Beginning in the 1850s, nursery schools inspired by the Froebel model grew massively in

Belgium. In 1880, the government published the first draft legislation on preschool institutions attended by children aged 3 to 6. Initially, the legislation integrated *"écoles gardiennes"* (nursery schools) into elementary schools, and brief training was offered to teachers working in these institutions. Subsequently, the government tabled an initial preschool education program, inspired by Froebel's pedagogical model (Olmstead and Weikart, 1989). Today, young children are taken on from age 2½, with the purpose, among others, of taking some of the educational load off the family during early childhood, promoting early detection of learning or adaptation difficulties in children, and early intervention. Almost 98% of children aged 2 to 6 attend nursery school (Olmstead and Weikart, 1989).

In Italy, preschool education and child care services developed primarily with the creation in 1907 of *"la Casa dei Bambini"* ("children's house"*)* by Montessori. Established in a poor neighbourhood of Rome, the school promoted the child's health, cleanliness, sensory training and individual learning through handling objects (Hendrick, 1993). By the 1900s, there were already almost 320,000 children attending a preschool institution, and the figure rose to 501,000 by 1920, 25% of all children aged 3 to 5 (Olmstead and Weikart, 1989). In 1960, the government published draft legislation allowing for the creation of the first public nursery schools, and subsequently a whole network of early childhood educational services under both the public and private sector was put in place. Children from birth to age 3 enjoyed child care, children aged 3 to 5 had access to nursery schools. By 1989, over 1,633,000 Italian children aged 3 to 5, 90% of children in that age group, attended nursery school (Olmstead and Weikart, 1989).

1.2.2   *In North America …*

The first kindergarten in the United States inspired by the Froebel model was founded in Wisconsin in 1856. They subsequently experienced considerable growth, and the first public kindergarten opened its doors in 1873 (Seefeldt and Barbour, 1994). Day care centres, however, had been created starting in 1850 for children aged 2 to 6 from disadvantaged socioeconomic communities where mothers were working in factories. These day care services were integrated into child care centres, and complemented by family child care centres.

By 1892, there were already almost 90 child care centres, and over 200 by the turn of the 20th century (Gensberg, 1978, quoted by Seefeldt and Barbour, 1994). Nursery schools began to open around 1920. Like the kindergartens, nursery schools provided educational services for children, but in a more relaxed, flexible setting. They promoted a warm atmosphere to replace the mother's presence, hence the use of the term "nursery". (Seefeldt and Barbour, 1994).

Lastly, a parallel structure developed in the early 1960s as part of a vast program of compensatory education for children of preschool age from low socioeconomic communities (LSCs). This program, introduced at federal level throughout the country and in every county, was intended to reduce the effects of poverty and prevent academic failure among children from economically disadvantaged backgrounds, particularly ethnic minority children. A multitude of early intervention projects appeared as a result, under various auspices (Education, Social Affairs, Health, etc.) particularly the Head Start program (Bissel, p. 171).

The first kindergartens in Canada were created in 1883 by the Toronto Public School Board. Toronto thus became the second city in the world to integrate preschool education into a public

school structure. (Boily, Gauthier, Tardif, 1994). By 1920, Ontario already had 1,500 kindergarten classes for children aged 2 to 5, at a time when Quebec had none (Larivée and Terrisse, 1994). The "salles d'asile" that opened in the late 19th century are regarded as the first preschool education services in Quebec (Baillargeon, 1989, quoted by Boily, Gauthier and Tardif, 1994). These were set up by the Grey Nuns religious order to aid mothers from disadvantaged communities who were working outside the home (Dumont-Johnson, 1980, quoted by Boily, Gauthier and Tardif, 1994). Some poor families even abandoned their children to the "asiles", turning these institutions into orphanages of a sort.

The first public kindergartens were founded in Montreal as part of the Protestant system in 1892, but the first French-language, private kindergarten didn't open until 1931 in Quebec City; the first two public kindergarten classes began only in 1950 in French-language Catholic schools in the Lachine school commission (Boily, Gauthier and Tardif, 1994). The disparity in preschool education and child care services between Quebec and other Canadian provinces and other countries only became wider in the 1960s. While at least two-thirds of children aged 3 to 5 attended kindergarten in France, Great Britain and English-speaking North America, barely 10% of French-speaking Catholic children in Quebec aged 5 attended kindergarten during that period (CSEQ, 1989). One of the reasons for the gap rests with the still very rural lifestyle and distinctive outlook in Quebec at the time.

While some countries provide early childhood educational services starting at age 2, francophone Quebec parents, under the influence of the Catholic church, regarded the education of young children as the exclusive responsibility of the family, and more particularly, the mother. In the early 1960s, changes in Quebec society, and because of that changes in the family, brought about new needs and prompted the government to intervene to support them. An awareness of early childhood educational needs and publication of the Parent Report (Royal Commission of Inquiry into Education in the Province of Quebec, 1964) strongly moved the government to set up a network of public, part-time kindergartens for children aged 5 (Gauthier, 1996). Beginning in the 1970s, economic and social changes in Quebec gradually worked in favour of the development of preschool education services. The International Year of the Child (1979) also resulted in renewed interest in early childhood education needs. Preschool education, which previously was almost exclusively under the jurisdiction of private education, gradually became the responsibility of public authorities.

1.2   *Preschool education: tracing the path*

This brief "historical" overview of the growth of preschool education in different countries reveals certain points in common (and also some points of divergence) that may help explain the current problems it is encountering. It should be noted first that in most industrialized countries, preschool education services, even if they offer teaching services and activities, grew initially as family assistance and child care services for families from low socioeconomic communities where mothers were working outside the home. It was only later, generally speaking in the 20th century, that a distinction appeared with respect to child care for very young children (birth to age 2, 3, or even 4) and educational services for older children (3 to 6).

The age of children involved in either of these two types of service is highly variable depending on the country. In Europe, the educational intervention, which comes under Departments of

Education, and hence teachers, is directed toward children aged 2 and up, most often 3, while in North America, and Canada in particular, it begins only at age 4. Services for children younger than that are primarily child care services, which come under other government departments (Family Services, Social Affairs, Health, etc.). They involve workers whose occupational status is distinct from that of teachers, and in this case from educators or paraprofessionals (home child care services).

Nonetheless, "facility" child care centres are increasingly adopting or developing educational activity programs for children aged 2 to 4 in most Canadian provinces. In Quebec, this trend is being seen with the introduction of the "*Jouer c'est magique"* ("Play is magic") program (Gariépy, 1998) as part of the educational role policy of the Department of Family and Child Services, more particularly with respect to the directives imposed on Early Childhood Centres.

In a number of countries, preschool education is completed when the child reaches the age of five. After that age, children are admitted to elementary school. This is the case in Canada, and Quebec in particular. Nevertheless, while various Departments of Education recognize a special role for preschool education, especially a compensatory role to counter the effects of socioeconomic or sociocultural disadvantage (nursery school at age 4), we are witnessing a hybridization of end purposes of the educational intervention being achieved in preschool education, which is not without its effects on the task of teachers working in that area.

2. Current directions in preschool education: new mandates?

2.1 *Mandates reaffirmed*

The preceding section reveals that preschool education is distinguished from elementary education to the extent that it has not only an educational, and sometimes even instructional, role, but also a socialization, mothering and child care role. The kindergarten classroom is generally designed for all children as a transition between education in the family and education in the community (Terrisse, 1998), and hence must prepare the child to become socialized and develop before facing elementary school, as well as for the discipline requirements of the latter, by stimulating the child's cognitive, conative and socioaffective development.

This twofold role is also reflected increasingly in parents' expectations. While they all favour their children's socialization and emotional development during the preschool period, according to a survey conducted by the Quebec Department of Education (MÉQ, 1993), 48.2% of parents wanted their children to benefit from an educational activity and school readiness program starting at age 3, while 56.6% expressed the same expectation for their 4-year-old children. To this mandate, which applies to all children, there are added special mandates.

This is the case for the compensatory education mandate, which has reaffirmed itself increasingly since the 1970s. It first materialized with the creation of part-time school for four-year-olds (pre-K) and full-time school for five-year-olds (kindergarten) from low-income socioeconomic communities both in Quebec (cf. *Opération Renouveau*, CÉCM ☞Montreal Catholic School Commission☜, 1973) and in the rest of Canada. In Quebec, with amendments to the *Public Instruction Act* (MÉQ, 1997), kindergartens for five-year-olds went from part-time to full-time for all children, and attendance at free educational child care in schools, in addition to the half day of kindergarten, is accessible on a complementary basis for children from low-income socioeconomic communities.

This specific role for preschool education is part of the steps taken in early educational intervention intended to prevent massive academic failure and dropping out among children from these communities, as well as behavioural disorders and social adaptation difficulties later on. In this light, preschool education attempts to compensate for eventual educational stimulation deficits among children considered to be at risk (Terrisse, 2000; Terrisse and Larose, 2001). This implies that teachers or educators have gained skills in their training (knowledge, attitudes, abilities) needed for intervention with children from vulnerable backgrounds and working with their families. A number of studies both in North America and elsewhere in industrialized countries demonstrate that these skills are not part of the pre-service training register for teachers at preschool level (Connell, 1994; Dent and Hatton, 1996) and that, on the contrary, they are not acquired other than on an experiential basis when teachers intervene in kindergarten classrooms (Rimm-Kaufman, Pianta and Cox, 2000; Terrisse, Larose and Lefebvre, 2000).

Society confers a second important mandate on preschool education. This is the function defined in the 1980s in applying the principles arising out of the philosophy of integration and standardization of social roles (Wolfensberger, 1972) that prevails in the Canadian education system: optimum development of the abilities of children with special needs, so as to be able to

integrate them later into elementary education at as normal a level as possible. Hence, beginning with junior kindergarten (age 4), deficient or disabled children are integrated into regular kindergarten classes. Those working with these children generally do not appear to have any particular training that would prepare them for the task, except if they have taken additional training in special education as part of their continuing education.

Finally, kindergarten classes in urban centres accept more and more immigrant children from other countries and cultures, speaking languages other than Canada's two official languages. In some kindergartens in Toronto, Vancouver or Montreal, over 50% of students were not born in Canada or are from recently immigrated families. Kindergarten classes are a special place inasmuch as they form the first line of intervention in promoting social integration. Once again, with the exception of certain pre-service training curricula in preschool and elementary teaching, as is the case, for example, with the teacher training program offered by the University of Alberta, the syllabus outright excludes any compulsory courses on educational intervention in a multiethnic context.

Changes in the structure of the Canadian family, and particularly the ever-increasing participation by working mothers in the labour market has resulted in an increased demand for child care services and educational intervention for young children, which has led provincial governments to develop a sizeable network of diversified, but often overlapping, services. Kindergarten is currently no the first place the child is socialized outside the family; this role is frequently filled by child care services, as the majority of children have attended day care before they were admitted to kindergarten at age 4 or 5.

Moreover, as mentioned previously, most "facility" child care centres have adopted educational activity programs for children aged 2 to 4. These programs generally share the same objectives as kindergartens, i.e. the child's harmonious and integral development, and thus are concerned with all areas of child development. Special mandates granted to child care services are also very similar to those of kindergartens, i.e. compensatory education and early intervention, the child's social and academic integration, early stimulation of deficient or disabled children, and finally, social integration of immigrant children.

2.2   *New mandates*

The penetration of computers, particularly network technologies (ICTs), into society is now an ineluctable reality, at any rate in industrialized societies. According to Dickinson and Ellison (2000), there has been an observed sustained growth in the home computer market in Canada for nearly six years. This trend is not, of course, limited to Canada, but is observed in the United States and western Europe as well (European Round Table of Industrialists, 1995; Larose, 1997; Nakhaie and Pike, 1998).

Penetration of computers and telematics is occurring unevenly, depending on the socioeconomic status and educational level of the head of the family, and hence of parents. For example, Dryburgh (2001) notes that heads of low-income households in Canada, when they have home computers, regard connection and subscription costs as a major obstacle to Internet use. In households of low socioeconomic status where the parents do not have a high educational level, the rate of growth of penetration of computers and telematics remains marginal. Once again, this is a stable trend internationally (Becker, 2000; Bucy, 2000), even when, as is the case in some Italian municipalities, the government assumes the total cost of Internet connection and subscription for middle- and lower-income families (Bertolini, 1999; Tarozzi and Bertolini, 2000).

While socioeconomic disparities affect the pace of penetration of computers and telematics into households of low socioeconomic status, this penetration is not negligible. When children of preschool or elementary school age have access to a home computer, whether wired or not, they tend most often to use it for entertainment purposes, rather than for activities with potential in terms of learning, even if only game-type activities. CD-ROM or downloadable games remain by far the most frequent type of computer use (Kafai and Sutton, 1999). Children who use the home computer systematically tend to do so in a solitary manner. Among children inclined to be socially isolated, this propensity is reinforced by the use of home computers. These children favour the playing of games installed freestanding on a workstation. Conversely, children who seek out social interaction tend to develop a profile of more systematic use of networking technologies, enabling them to engage in real-time role play games such as MUDS (Multiple User Dungeons) or games of an educational nature (Orleans and Laney, 2000).

When children have access to a home computer, whether wired or not, exposure time to the medium accumulates on top of exposure time to other media such as television. Hence there is no transfer effect of the time the child is occupied with one medium, but rather a cumulative process, regardless of the child's age or social community of origin (Roberts, 2000; Subrahmanyam, Kraut, Greenfield and Gross, 2000). Generally speaking, available research on the impact of ICTs on families, among children of preschool or elementary school age, suggests that when these technologies are accessible at home, they do not alter parent-child interaction structures, but tend rather to reinforce those structures.

Hence, children who have little interaction with their parents see the latter a little more diluted than those children who live in families that make use of conventional media (television, video console, etc.) in an educational manner or who tend to use them as a context to promote parent-child interaction, reproducing the same pattern of social interaction as when using computers or

telematics (Pasquier, Buzzi, d'Haenens and Sjoberg, 1998). A number of research studies, notably among populations of preschool age from low-income socioeconomic communities, tend to demonstrate that the frequency and quality of parent-child interactions act as risk factors, or conversely as a protection factor in terms of the child's social and academic adaptation; the quality and frequency of these interactions tend to diminish with the mother's educational level and marital status (Hastings and Rubin, 1999; Hemphill, 1996; Terrisse, Lefebvre, Larose and Martinet, 2000).

Recent research, notably research conducted in the United States, insofar as it bears on the medium-term impact of exposure to home computers and telematics on academic performance, highlights the urgency and importance of early intervention, starting with preschool, in computer literacy for children of low socioeconomic status or who do not have access to ICTs. The scientific literature suggests the existence of direct relationships between children's socioeconomic status, exposure to the concomitant use of computers in learning environments and at home, and students' likelihood of academic success (Attewell and Battle, 1999; Kafai and Sutton, 1999).

Students from the "middle classes", who have early and lasting access to computers both at school and at home are more successful in learning their first language (reading, writing) and math than their peers who have access to computers only at school. Available North American data indicate that the impact of computers and network technology on academic adaptation among students who have concomitant access to ICTs at home and at school once again shows itself to be variable, depending on the socioeconomic environment (Attewell and Battle, 1999; Selwyn, 1998).

Conversely, several research studies conducted among children attending kindergarten tend to demonstrate that systematic instructional use of ICTs are of great benefit to the children, both compensatorily and developmentally. To this end, several recent studies suggest that instructional use of computers in kindergarten classes, especially when used in a context of adult mediation, stimulates the child's cognitive development and promotes the construction of suitable social behaviour (Hutinger and Johanson, 2000; Klein, Nir-Gal and Darom, 2000). Instructional use of ICTs proves effective in terms of acquiring preacademic type skills (prior to exploring academic subjects) as well as compensatory development of communication skills, notably in terms of reading readiness among children with mild deficiencies or cognitive disabilities (Fallon, Light and Paige, 2001; Hitchcock and Noonan, 2000; Mioduser, Tur-Kaspa and Leitner, 2000; Raskind and Higgins, 1999; Whitehurst and Lonigan, 1998).

3. The ability to respond to current directions in kindergarten education: a look at pre-service training

Current situation in Quebec and Canada

In all Canadian provinces, certification for qualification to teach kindergarten is identical to the certification legally authorizing a teacher to teach at elementary level. The English-language scientific and professional literature in both the United States and English-speaking Canada deals generally with the curriculum realities in a unified fashion when it comes to kindergarten, junior or intermediate elementary level teaching.

An exploration of pre-service teacher training programs offered by universities in the ten provinces reveals that with a few exceptions, there is little consideration of specific skills in preschool, at any rate in terms of structure or content of courses offered. Some programs, however, such as the elementary education curriculum offered by the University of Brandon in Manitoba or the program at Queen's University in Ontario (Early Primary Education program track), acknowledges the existence of specific features of the development profiles and sociocognitive needs of pupils situated at the transition between early childhood and childhood (Brandon: K-4; Queen's: K-2). Training profiles are thus distinctive depending on whether the future practitioner wishes to teach pupils at junior level (including K-4, junior K, and K-5) or rather at intermediate elementary level.

Taking into consideration the special, non-specific needs of early childhood teaching, is also the subject, marginally so, of specialized streams within regular training curricula in elementary education, or in complementary programs equivalent to advanced studies certificates or diplomas in Quebec. The very existence of these specialized streams or programs at the transition point between pre-service training and continuing education generally depends on the presence of a relatively stable "market" for faculties offering them. This market is, in turn, highly derivative of the weight carried by certain social realities in the province's political discourse. We need only mention, by way of illustration, the specific training streams of teaching in native communities (Queen's University, University of Brandon, University of Alberta).

The situation in Quebec is not much different from the one that prevails in the rest of Canada. As is the case in Ontario and Manitoba in particular, pre-service teacher training is intended as well to qualify teachers for practicing the profession with children of preschool and elementary school age. That, at any rate, is reflected by the actual title of the certification awarded by universities in the Quebec system, the B.Ed. in preschool and elementary teaching, which is recognized by the teaching permit that follows the degree.

However, despite a major reform of pre-service training curricula imposed on educational institutions by the provincial Department of Education in 1994, the integration of compulsory training content relating to preschool intervention has remained marginal. In faculties of education, both French- and English-speaking, the number of courses specific to early childhood, in terms of both instructional requirements for readiness subjects and social or family "new realities", varies by two to three credit units, thus representing less than 10% of the total course structure offered to future practitioners of the teaching profession. In theory, in all of the faculties concerned, courses of instruction in academic disciplines must incorporate a dimension of awareness to teaching children aged 5-6. In reality, the components of content or method are the ones most often eliminated.

It may thus be considered that, generally speaking, two pre-service training profiles for teaching pupils of preschool age coexist in Canada (Table 1). The first does not involve any particularly qualifying structure in terms of specific training in the dynamics and problems affecting students attending kindergarten, especially when these dynamics are linked specifically to the effects of being disadvantaged or having a physical or intellectual deficiency. This component proves to be particularly important for the practitioner who is called upon to intervene with four-year-olds (junior K), to the extent that the very existence of these classes is most often the result of a logic

of compensatory or preventative educational intervention with "at risk" children from backgrounds of early academic or social maladjustment.

Table 1
Level of concentration on dynamics of preschool education
Pre-service qualifying training for teaching preschool and elementary)

Bachelor's degree (B.A. or B.Ed.) qualifying teachers for preschool and elementary; Specific profiles for teaching kindergarten relatively lacking	Exclusive profile in Quebec; majority profile in the Maritime provinces
Bachelor's degree (B.S. or B.Ed.) qualifying teachers for early childhood at preschool and elementary age; Specific profiles for teaching at transition from kindergarten to junior elementary	Majority profile in Ontario and central and western Canada

The second profile, the majority profile in central and western Canada, recognizes the specificity of educational intervention with young children (preschool or junior elementary). It thus involves exposure to content of pre-service training which, while not centred specifically on empowering teachers to respond to the multitude of facets of the compensatory mission that has fallen to preschool teaching, still offers greater consistency in terms of taking into account the sociocognitive needs of children aged 4 to 7 or 9.

Specificity of training in instructional use of ICTs

With respect to pre-service training, socioeducational workers in early childhood have highly uneven levels of training in the instructional use of computers. The majority of kindergarten educators, trained in undergraduate programs (B.A. or B.Ed. in English Canada) for preschool and elementary teaching prior to 1995-1996, had no access to training in the instructional use of ICTs. Those who did receive such training did so voluntarily through one of the various continuous education programs available.

In the majority of universities in Canada and Quebec, pre-service training in the instructional use of ICTs amounts to one compulsory course for the whole curriculum. When future practitioners do a practicum at preschool level (generally in kindergarten with five-year-olds), they are only rarely exposed to practice in the instructional use of computers. Hence, a recent study conducted among students in pre-service teacher training at the Université de Sherbrooke (N=967) suggests that fewer than 25% of them had an opportunity to experience a practicum in which associate teachers used the computer. When they did, the use was reduced most often to free access by pupils to game software (preschool and junior elementary) or surfing the Internet, which was limited to exploring predetermined sites as part of researching a project (elementary). Only 8% of the kindergarten teacher trainees found themselves in classes where students had practice in accessing and using instructional computers or telematics (Larose and Grenon, 2001).

Professionalization and modelling

There is an observed trend everywhere in Canada, in both teaching and government circles, toward recognizing the professional status of the teaching act (Tardif and Lessard, 1999). The logic of professionalization recognizes a major role for the modelling dimension and for the reflexive restructuring of professional experiences, and hence the systematization of knowledge from experience, among both future practitioners and seasoned teachers (Schön, 1996).

This modelling function is especially important in the framework of pre-service teacher training that the model's professional quality, the experienced teacher, is recognized even in the curriculum structure of some institutions (Larose, Lenoir, Grenon and Spallanzani, 2000). This is particularly the case at York University in Ontario, which incorporates teaching professionals into the teaching staff of its Faculty of Education on a regular basis for a three-year period, in this way certifying both the contribution of knowledge gained from experience to professional training and the collaborative nature of its pre-service and continuous teacher training programs. It is also a recognition of the importance of regular exposure to actual teaching intervention contexts, which has also led faculties of education collaborating on the TACT program to favour practical training in a collaborative perspective to optimize the likelihood that future teachers will incorporate ICTs systematically as part of their entry into the profession.

There is a risk, however, in basing the achievement of learning proper to the specificity of kindergarten teaching on practical training. As mentioned previously in this study, the major portion of experienced teachers who intervene at this level of teaching have developed competencies specific to the socioeducational needs of their clientele on a random basis, "on the job". The importance accorded to training in a practical context, particularly in that it may allow for compensation for the non-specific character of university training with regard to teaching an age 4-5 kindergarten class, often reflects the outburst of practices constructed or acquired in a random, experiential manner.

4.   By way of conclusion: some paths for action

It is implausible that pre-service training qualifying teachers to teach at kindergarten level can prepare the future professional in any absolute way. This being so, the concept of continuous training forming part of the very definition of professionalization of the teaching trade (Tardif and Lessard, 1999), it is not certain that aiming for conceptualization is desirable in itself. Nonetheless, pre-service training for preschool and elementary teaching, as it is currently done in most provinces in Canada, cannot pride itself on preparing the future preschool practitioner for the effective exercise of his or her many functions.

In this sense, the adoption of specialized profiles, qualifying teachers for the teaching of *matières d'éveil* and leaving room for a larger share of training in new family and childhood realities in low socioeconomic communities or groups of different ethnic origin may prove desirable. Existing models in the curriculum framework of some English-language universities in central and western Canada could readily be adapted to the urban or rural realities that characterize other provinces. The development of curriculum structures based on school-university-community collaboration would also seem to be an interesting path to explore.

The integration of specific training toward collaboration with other socioeducational workers in early childhood, particularly those working with children in low-income socioeconomic communities, would be desirable. In this sense, developing areas of articulation between training offered child care workers and the training that characterizes intervention of a pedagogical or psychosocial nature by future teachers is unquestionable. Are these paths of action realistic? In any case, the context of curriculum reform and, from that, restructuring of pre-service and continuous training programs for the teaching profession seem to fit well with this approach.

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