
Winners and Losers: Literacy and Enduring Labour Market Inequality in Historical Perspective

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Winners and Losers: Literacy and Enduring Labour Market Inequality in Historical Perspective

Gagnants et perdants : alphabétisation et maintien des inégalités sur le marché du travail dans une perspective historique

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Introduction

- 1 Creating a literate population has been an ongoing concern for policymakers and educators in Canada since Confederation. Originally there were attempts to give the most basic of literacy skills to first create moral, Christian citizens and, later, a skilled workforce. After WWII, literacy and education programs were established to help create a less stratified workforce as governments became cognizant of more broadly defined equality and rights issues surrounding literacy, education and the equalization of opportunities. By the end of the 20th century, conceptions of literacy and education had expanded further to include (multi)literations, life-long learning, re-skilling and the need to create a flexible and knowledgeable labour force that understands the world in more complex ways. This broadening of definitions of literacies and education has paralleled the increasing policy emphases placed on a knowledge-based economy and information society. While knowledge and information are not synonymous, they do go hand-in-hand. As Roberts (2009) succinctly puts it: “Knowledge creation is dependent upon information, yet relevant information can only be collected with the application of knowledge” (p. 299). The importance of knowledge and information work to post-staples economic progress was acknowledged by Peter Drucker in 1959, Fritz Machlup in 1962, and Robert E. Lane in 1966, yet it was not until the 1980s and 1990s that the Canadian government began to explicitly include the concept in policy announcements.

- 2 The recent Government of Ontario (2012) Commission on the Reform of Ontario's Public Services, known as the Drummond Report, points to the need for employment and training services to meet Ontario's labour market challenges. The recognition of the need for such training tacitly acknowledges the social inequities within the labour market, with youth, recent immigrants, older workers, female single parents, and those with disabilities being particularly affected by labour market shortages. While the need for such training programs across Canada is clear, the underlying problems of literacy and basic skills attainment are relatively invisible as these problems are rarely present in the minds of policy makers, employment counsellors and the like. In other words, "the lack of literacy and basic skills in the population is an invisible problem being tackled by invisible practitioners."¹ However, implementing efficiencies in the labour market is not simple. For instance, there is debate surrounding the reasons for poor access to the labour market. In addition, there are disconnects between literacy levels, educational attainment, and the actual skills required for labour market attachment and adaptability. Indeed, Hanushek and Woessman (2008) make a strong argument for the role of cognitive skills in improving economic development; in doing so, they highlight the complexities of attempting to determine connections and causalities between education and economic development. The importance of cognitive skills is clear, but their measurement is no more straightforward than measuring the quality of schools and education, literacy skills, and so on. The surveys used by Hanushek and Woessman (2008) are not without problems. For instance, they only focus on the skills acquired by teenagers by aged 15 years. In addition, the ability to complete those surveys requires a level of functional literacy. Most of the skills measured are those generally acquired through schooling. Therefore, there is a link between the quality of education provided by a country's schools, the number of years of school attendance, and the cognitive skills scores. All of these factors are also correlated to social economic class, which is in turn related to literacy levels. The standardized surveys, such as Programme for International Student Assessment (PISA), have been critiqued for their lack of attention to social economic class, among other issues (MacRuairc 2011).² For the purposes of our paper, however, one finding regarding cognitive skills in particular stands out: "both basic and top dimensions of cognitive skills seem to have independent positive effects on economic growth" (Hanushek and Woessman 2008, p. 646). As aspects of cognitive skills, therefore, the importance of functional literacy and (multi)literacies skills are validated as factors in strong economic development.
- 3 In this paper we argue that improved support for (multi)literacies training will provide a building block for greater equity in both the social and labour context. To ground our argument, we will discuss definitions of literacies within the Canadian historical context demonstrating ongoing connections between literacies, employment and social inequalities. While the primary focus of this paper is on English-speaking Ontario, we attempt to draw connections with literacy programs and policies across Canada. The broad strokes of the underlying reasons for the development of education across Canada is fairly consistent, but there are some significant regional variations due to differences in power structures and the timing of the entrance of particular provinces into federation. In addition, minority language rights, particularly in Quebec, have an impact on policy issues and the acquisition of (multi)literacies skills by individuals. Because employers and government tend to see this training for (multi)literacies as optional, labour market inequality is increased. The model we propose recognizes that polarization

in the labour force damages economic growth and, as a result, requires targeted government investment in literacy and basic skills training. This investment involves both acknowledgement that such training is necessary for economic growth and recognition of the centrality of meaningful employment to the dignity and rights of those in the labour market.

- 4 Literacy and illiteracy are not a dichotomy, but rather parts of a continuum (Walker 2008; Taylor et al. 2011). The need to address literacy training is therefore not a matter of making someone “literate” but instead a matter of giving someone the ability to achieve their potential. The need to address literacy training is a fundamental issue of equity and dignity for those who are trying to integrate themselves into society and the economy in a meaningful way. The shifting nature of the economy and the move to a more contingent work force places increased responsibilities on the various levels of government to deal with the question of (multi)literacies and basic skills. If, as T. Scott Murray et al. (2009) have said, key production inputs such as raw materials, financial capital, advanced production technologies, and leading-edge research and development are available to competitors at the same prices on global markets, the skills of the workers in a country and their adaptability to knowledge and information-rich environments then become even more vital.

Education & Literacy: A Historical Context

- 5 For the purposes of this paper, literacy and basic skills training is being narrowly defined. Our focus is on the formal education-oriented programs, excluding more informal methods of dealing with illiteracy such as libraries, development of the book trade, and ‘self-improvement.’ In the early part of Canada’s history, literacy training and education were in essence the same; however, there were tensions between developing literacy skills and employability skills. The lure of factory jobs drew young people out of the education system and reduced the acquisition of basic literacy skills. Most jobs in the 19th and early 20th centuries required little formal education and literacy. By the early 20th century, literacy training began to be separated from general education; in most provinces, both citizens and governments began to see literacy training as key to social and economic improvements. Yet, it is not until the late 1960s and early 1970s that the government became involved in supporting various literacy programs (Taylor et al. 2011). This coincides with the new government focus on an information or knowledge economy. Our concern with literacy in this paper is primarily focussed on policy and its implications for labour market accessibility, which is, admittedly, a rather narrow perspective in that the voices of those who have participated in such literacy programs are not heard. We are also not addressing the debate over the numbers of Canadians who were literate at any given period of time, beyond the general trend that, over time, more Canadians have become literate.
- 6 In Canada, literacy – and education in general – long has been tied to moral development and self-improvement; being literate meant that one could read the Bible and could thereby benefit from its Christian values and mores. Indeed, many of the first schools were founded to provide basic biblical instruction and were supported by the Anglican, Catholic and Methodist churches (Prentice 1977; Houston & Prentice 1988; Selles 1996; Axelrod 1997; Walter 2003; Brunet 2007). Education was understood as having two main functions: preparation to maintain one’s existing place within the social order and the

inculcation of denominational religious beliefs. As a result, children from poor families were given only rudimentary literacy training, while those from richer families were extensively schooled so that they could take their rightful positions as leaders of the community and nation (Curtis 1988; Houston & Prentice 1988; McKillop 1994; Barman 1995; Brunet 2007). In other words, literacy and basic education at the end of the 19th and start of the 20th centuries were focused largely on good citizenship (Graff 1987; Luke 2008) and based on the idea that children belonged to the state as future workers in a segmented and hierarchical labour market (Houston & Prentice 1988; Dehli 1990; Heathorn 1996).

- 7 Since the mid-nineteenth century, Canada has experienced a trend towards mass education. Despite this trend and government efforts to increase participation through mandatory attendance laws, many people were unable to benefit for a variety of reasons. Public education, literacy, and labour, particularly child labour, have overlapping histories and are tied to the age for mandatory school attendance. In Canada today, students must stay in school until age 16, except for Manitoba, New Brunswick and Ontario where the school leaving age is 18. Until the mid-20th century, males in particular often left school without graduating because they were able to find jobs in the primary industries (such as fisheries, mining and forestry) or in factories. Economic motives for families were strong for keeping children out of school to work on farms, in factories or in the fisheries. Families weighed the short-term economic benefits of employment against the delayed advantages of higher earning power through extended schooling (Heron 1995; Oreopoulos 2005). In some instances, such as with the Newfoundland fisheries, illiteracy was a symptom of economic participation because all family members, regardless of gender, were needed to participate in the family fishing economy (McCann 1988). In Quebec, both the curriculum and access to education were tightly controlled by the Catholic Church until the Parent Report in the 1960s helped to liberalize the system (Wade 1968; Corbeil 2006). In addition, many children and youth had only minimal access to schools due to geography, weather and finances. Today, some of these trends continue, particularly in Alberta where the oil patch draws young people out of school earlier than in other provinces, leaving the province with some of “the lowest growth rates for human capital and labour productivity” (Coulombe 2011, p. 1).
- 8 The linkages between prosperity and literacy are also evident, but it is a circular relationship. Education for literacy cannot occur until there is a level of prosperity both for the nation as a whole and for the individual and his or her family but achieving that prosperity is difficult without education for literacy. Once a basic level of financial security has been reached and literacy is made a priority, increased literacy among the general population is linked to further increases in both national and personal prosperity. Compulsory attendance laws were gradually introduced as Canada and its provinces became increasingly industrialized and prosperous. However, the lack of teeth in the early attendance laws played a role in low attendance rates, as well as the other barriers to education, contributing to a relatively low literacy rate among adult Canadians until the post-WWII period (Adamson 1966; Brunet 2007).
- 9 In the period prior to the Quiet Revolution, formal education in Québec was set up along denominational and language lines with English Protestant and French Catholic school boards. During the 1960s, Quebec education was democratized with education becoming accessible at both the secondary and postsecondary levels. Although later modified, the enactment of *Bill 101*, the *Charter of the French Language*, in 1977, caused Quebec education

to change dramatically again because only those students “whose parents had received most of their elementary education in [English] in Quebec or whose brother or sister had been educated in [English]” were allowed to enroll in an English school (Corbeil 2006, pp. 18-19; Oreopoulos 2005). Disparities in educational attainment continued to be high in Quebec at the start of the 21st century. In eastern Quebec, for example, 26% of Anglophones had less than a grade 9 education; in the Montreal area, this number was 6% for 2001. For all Anglophones in Quebec, 5% had a grade 9 education in 2001 (compared to 15% in 1971). Greater success was had improving the education levels of Francophones: in 1971, 44% had not attained grade 9; by 2001, this rate had improved to 15%. A similar situation is seen in Quebec when literacy levels are examined (Corbeil 2006). It is important to note here that when literacy levels are available, as Coulombe et al. (2004) argue, literacy scores provide a better measure of human capital than number of years of schooling.

- 10 Issues of (multi)literacies and basic skills will continue to be important to discussions of the knowledge-based economy. Indeed, in a knowledge economy, as Graham (1999) argues, thought, language, ideas and the like become commodities: “In the knowledge economy, the products of human imagination, including particular types of thought, the language used to convey these, and the perceived value of these two socially inseparable phenomena, are commodities” (p. 487). Just as certain skills are more valued in the knowledge economy, so too are perceived levels of literacy and types of language (or dialects). The key word here is ‘perceived’: even though various literacy tests have ranked over a third of Canadians as having low literacy skills, other surveys have found that most Canadians see their own literacy skills as adequate for their needs (Livingstone 2009). Livingstone (2009) concludes that while literacy in relation to job requirements is not declining, there is evidence of underemployment (i.e., workers have more educational qualifications than a particular job requires). In addition, when the extent of underemployment is examined by economic class, inequalities continue to persist. If those workers with high levels of credentials and academic achievements are underemployed, does this mean further marginalization for those who struggle with traditional schooling because of low literacy skills?

Literacy for Equity

- 11 The three main organizations prior to WWII that provided some form of literacy training and adult education were Mechanics Institutes, local school boards, and the Workers Education Association. Mechanics Institutes, which first opened in Canada in the 1820s and 1830s, provided the foundations of adult education and, later, public libraries. The Mechanics Institute movement arose out of the need to provide further education for the thousands of artisans and factory workers created by the Industrial Revolution. Founded in England in the 1820s, the Mechanics Institutes initially provided technical instruction. Their role gradually changed to a social one combined with a programme of general education. English colonists brought the first Mechanics Institutes to eastern Canada in the late 1820s and early 1830s where they were opened in Quebec, Ontario and Nova Scotia. Workers could attend evening lectures after work in order to ‘improve’ themselves (Johnson 1964; Friesen 1994; Kuntz 1993). By the 1860s, the school boards in Kingston and Toronto had established night classes for adults, a concept that soon spread across the country. As with the Mechanics Institutes, it was hoped that young men who

worked during the day would attend these classes rather than going to “places where temptations for spending for spending money and acquiring bad habits are almost irresistible” (British Columbia 1875, p. 18). Although the moral dimension was prevalent in the 19th century, the emphasis shifted to education’s vocational function by the 1900s. In the Victoria school board’s 1909 pamphlet, *Prepare for Promotion*, new courses were introduced to teach working men about new technologies, such as the gasoline engine, while women could learn cooking, dress-making or physical culture. Similar programs were created across Canada (Johnson 1964; Rowe 1976). The Workers’ Education Association (WEA) was formed in Canada in 1918 to provide education for citizenship for working people. The underlying motives of its founders and the businessmen who supported it, however, were more elitist, based on concepts of imperialism and providing a “University culture to the labour man” (Friesen & Taksa 1996, p. 178). Although created well before his birth, by the 1930s, the WEA programs echo Paolo Freire’s pedagogy of the oppressed in that the workers controlled the courses, appointed the teachers, and administered the agency. The WEA of the interwar years was one of the great successes of the labour movement. By 1945, however, the advent of the Cold War and other changes in social conditions led to its opposition by business and ultimately the demise of the WEA (Friesen & Taksa 1996; Friesen 1994). During the interwar years, the first national organization, the Canadian Association for Adult Education (CAAE), was created. It was a key part of the increasing awareness of illiteracy and adult education (Kidd 1951), along with many other groups, in the post-war era.

- 12 While these early examples of programs addressing the literacy of Canadians were positioned as general education for adults, they were the forerunners to later literacy-specific programs. Such programs, both literacy-oriented and more broadly adult education, were often viewed as essential to the training of good workers. Implicit in human capital theory, particularly popular in the post-war period, was the idea that as the use of technology grew, it was important to invest in education and training. Education, as such, was viewed unproblematically, as was the “competitive, meritocratic society where individual characteristics are recognized and rewarded by employers” (Gaskell & Rubenson 2004 p. 4). By the end of World War II, the general population was relatively well-educated as a result of fairly strong provincial public education systems and the question of literacy became one of shame: the stigma of illiteracy is seen as something to be overcome. In the immediate post-war era and into the 1970s, those classed as illiterate were still able to earn a living wage in factories and the trades. Once those labour-oriented jobs begin to disappear in the 1980s and 1990s, however, workers who were unsuccessful in moving closer to the literate end of the literacy continuum faced increasing challenges in finding and keeping well-paying jobs. The statistics show much of what one would intuitively expect looking at the history of adult literacy and education programs: older Canadians who may have had limited amounts of schooling are more likely to score lower on the literacy continuum; younger Canadians who have benefited from a longer time in school score higher; those with post-secondary education score higher than those without. Related to this, Canadians with more schooling and higher literacy levels are usually more successful in the work force, in terms of both wage levels and job attainment (Statistics Canada, *Building*, 2003; Riddell 2004; Livingstone 2009; Oreopoulos 2005).
- 13 The nature and quality of the literacy, adult, and basic education programs has significant impacts on the acquisition of (multi)literacies skills and subsequent earnings potential.

Formal education, for example, is more effective in improving literacy skills when compared to programs providing labour market experience. While work experience programs have a positive impact on earnings growth, there is usually no improvement in cognitive skills. Work experience programs may show benefits as long as a worker is employed, but formal education usually has a greater long term benefit in a worker's ability to find and adapt to new jobs. Indeed, a "twenty-point increase in the literacy score – equivalent to one-third of a standard deviation of the literacy score distribution – produces an increase in earnings equal to that associated with an extra year of formal schooling" (Riddell 2004, p. 47). Livingstone (2009) argues that while "there has probably been an overall gradual upgrading of both entry credential and performance requirements for jobs in advanced market economies since the 1970s" (p. 40), there is little information about the relationship between individual workers' formal education and their jobs, nor about their overall general knowledge and abilities.

Table 1. Canadian workforce by literacy proficiency level, population aged 16 to 65, 2003

	Level 1		Level 2		Level 3		Level 4	
	Number	%	Number	%	Number	%	Number	%
Not in the labour force	1,714,000	40.3	1,457,000	34.3	910,000	21.4	169,000	4.0
Unemployed	592,000	37.2	606,000	38.2	323,000	20.3	68,000	4.3
Employed	4,027,000	26.0	6,213,000	40.1	4,349,000	28.1	908,000	5.9
Unemployment rate*	12.8%		8.9%		6.9%		7.0%	

* Unemployed/(Unemployed+Employed)

Source: Derived from Colombe et al. Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey, Statistics Canada, 2003.

- 14 While those with low literacy skills are more likely to be unemployed compared with those with higher literacy scores, there are significant numbers of employed Canadians who are considered illiterate according to the International Adult Literacy and Skills Survey (IALSS) in 2003 (Table 1). Such Canadians are more vulnerable to economic fluctuations and during these fluctuations those with high literacy skills and academic attainment are able to take jobs usually held by those who are illiterate or have minimal educational qualifications (Song and Webster 2003). As the nature of jobs continues to change in the 21st century, how will those Canadians with low literacy who are employed cope with the shifting labour landscape? The historical record suggests that they will be further marginalized by the segmented labour market into even poorer quality jobs or pushed out of the workforce altogether. The 'problem' of illiteracy will not disappear as the KBE continues to grow and as workers begin to work beyond the traditional ages of retirement by choice, need, or as a result of the recent Conservative omnibus budget bill C-38 that allows for the gradual extension of the age of qualification for Old Age Security benefits.³
- 15 Measuring literacy rates over long periods of time is impossible since records are either unavailable or inaccurate; however, it is possible to measure educational attainment. Although not a perfect measure of literacy rates – some people manage to graduate from university with minimal literacy skills – educational attainment is usually an indicator of

literacy levels, as seen in Table 2 (Riddell 2004). The results of the 2003 Adult Literacy and Life Skills Survey indicate that some 40% of Canadians do not have the minimum level of literacy skills needed for survival in the knowledge-based economy, a proportion that is unchanged from the 1994 International Adult Literacy Survey. Yet, over that same period of time, high school drop-out rates have declined and more Canadians have enrolled in post-secondary education (Canadian Council on Learning 2006, 2009).

Table 2. Distribution of prose proficiency levels, by highest level of educational attainment, Canadian-born population aged 16 to 65, 2003

	Level 1	Level 2	Level 3	Level 4
	%	%	%	%
Less than high school	27.4	39.2	27.1	6.4
High school	8.4	30.5	44.8	16.3
Non-university post-secondary	5.2	26.3	47.2	21.3
University	2.4	16.3	44.4	36.9

Source: Derived from Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey, Statistics Canada, 2003.

- 16 What it means to be literate is socially constructed – it means different things in different countries, but also at different points in time. Given the fact that there has been a significant amount of credential inflation over the last twenty-five years (Livingstone 2010), the literacy requirement – literacy in the traditional alphabetic sense – may serve as a form of oppression. Formal education systems privilege alphabetic literacy (and numeracy) over other forms of knowledge and communication. Informal learning tends to be undervalued, even denigrated, even though access to literacy is mediated by class, gender and race. Literacy has become a credential, “an externally imposed measure of the individual that conditions educational and life trajectories, rather than a tool for the literate person to make sense of the world” (Sears 2003, p. 90). It is the vocational perspective of literacy that limits the ability of individuals to develop the broad-based problem-solving and critical thinking skills that will be needed for the knowledge-based economy to be successful – and for individuals to succeed in it. The nature of testing in Ontario’s current education system rewards individual results and “treats learning as an individual acquisition” (Sears 2003, p. 91). Literacy is one indicator of the ability to understand “codified knowledge embedded in the written word” (Roberts 2009, p. 296); much of the activity in the KBE occurs through the written word. While some aspects of literacy are individual in nature, collaborative learning, team work, and communities of practice are already important in the knowledge-based economy. Without the ability to participate in such collaborative groups, individuals and nations are restricted in their participation in the knowledge economy (Roberts 2009; Howells, et al. 2012).
- 17 There are those who see the information society and knowledge-based economy as inextricably linked to the welfare state rather than as parallel elements of society. Castells and Himanen (2002) argue that the Finnish model gives an example of how a successful information society can finance a welfare state and a welfare state can in turn produce a well-educated populace who can facilitate the continued success of that

information society. The history of basic skills and literacy training as well as the history of labour segmentation and exclusion is the history of marginalized groups being excluded from the economy and the labour market. What history shows us, however, is that the welfare state has been changed to decrease the ability of marginalized groups to rely on it for labour market integration and development. Castells and Himanen (2002) warn that “as different types of exclusion are on the rise, the global trend has also brought into question the idea of inclusive development, which was the task of the welfare state” (p. 79). The trend of growing income polarization and labour segmentation shows that the withdrawal of the development functions of the welfare state has dire consequences. At its core, the welfare state provides a collective protection of the labour force and the rights of labour; now, this protection is becoming more fragile and restricted (Castells and Himanen 2002).

- 18 The Drummond Report (2012) pointed to the need for greater labour and basic skills training in Ontario and that support for that training is necessary for economic growth and development. One recommendation is to “develop a labour-market policy framework to link planning for employment and training services more strongly to economic development initiatives led by ministries such as Economic Development and Innovation; Agriculture, Food and Rural Affairs; and Northern Development and Mines” (p. 285). The Report (2012) makes it clear that employment and training services are necessary in both efficiency and equity terms. It acknowledges that training programs help to raise skill levels and make them relevant to jobs available in the labour market. It is also clear that “government training programs help reduce the skills gap for many of these displaced workers and can increase their re-employment earnings” (p. 277). In terms of an equity and human dignity argument, it claims that “government intervention includes the promotion of equal opportunity, social mobility and more equal distribution of economic rewards” (p. 277).
- 19 The lack of on-the-job training can be seen at all levels, but is most evident in the low-paid occupations. Statistics Canada’s Workplace and Employee Survey data shows that less than a quarter of low-paid workers received on-the-job-training, although to what extent that training was ongoing or helpful is unknown, and only one-third of higher-paid workers received such training (Zeytinolglu et al. 2008). These data demonstrate that the most vulnerable and lower wage workers, who are more likely to have lower literacy levels, will not increase their literacy in the workplace. For all workers, skill training and upgrading is needed to maintain a competitive employability profile; it is even more important for vulnerable workers who find this training and upgrading critical not only to develop skills in order to progress in the labour market, but also in maintaining dignity in the workplace (Zeytinolglu et al., 2008, p.6). Employers are also under-investing in training, further increasing the vulnerability of workers (ibid.).

Literacy for Economic Growth

- 20 Governments need to address the development of broad-based (multi)literacies among all Canadians for a number of reasons, including the lost potential of workers’ knowledge and societal contribution which is part of both an equity argument and an economic growth argument. When Murray et al. (2009) conducted a cost-benefit analysis of Canada addressing its literacy challenge, they found that the cost to the provinces and the federal government of delivering requisite literacy programs would be offset by the increase in

aggregate income tax and decreases in Employment Insurance and Social Assistance benefits. They estimate the total net benefit to be at least \$16,083 million per annum, excluding “a range of indirect economic benefits associated with lower health, social and educational costs and increases in consumption taxes” (p. 58). These benefits would also be accompanied by a lowering of poverty rates which in turn lowers crime rates and raises social capital. These factors make a strong case for increased government investment in broad-based literacy programs. The history of basic skills and literacy education and the enduring segmentation of that education in Canada, demonstrates that some sectors of society are relegated to little or no labour mobility and security despite official commitments that a knowledge-based economy will be beneficial for all workers.

- 21 Although formal education is not a guarantee that workers will become more productive, when employers invest in their employees, a virtuous cycle is created “whereby better workers gain jobs where complex skills matter and are subsequently improved through work experience and on-the-job training, while the remainder of the labour force is relegated to more mechanical or routine jobs” (Webster 2001, p. 259). This cycle further strengthens the position of the KBE winners and makes the position of others more precarious and marginalized, polarising the labour market as demand increases for workers with the skills and ability to deepen their knowledge and decreases for manual labour. It is clear that formal education helps workers to cope with technical change as they improve their problem-solving abilities and develop the flexibility to transfer skills from one job to another (Webster 2001). Furthermore, Webster (2001) concludes, most short labour market programs aimed at improving workers’ skills do not provide the necessary training to make the deep changes in knowledge and creative thinking that lead to flexible workers. As a result, “there appears to be restricted mobility between sectors even when educational attainment is allowed for” (Webster 2001, p. 269). This means that we need to create a model that supports meaningful systemic investment rather than short term or ineffective solutions.
- 22 Labour segmentation and structural barriers are part of systemic inequality in society. Theories surrounding labour inequalities are difficult to separate from theories that deal with underlying societal privilege in general. The current marginalization of certain segments of the labour market shows the continuation of inequalities and the creation of further polarization of incomes. Social inequalities are exacerbated by the knowledge-based economy (KBE) and taken to a new level. While blue collar workers are often set up in a dichotomy with white collar workers, there are now gold collar workers who are displacing the white collar workers with less adaptable literacies and basic skills. There is a need for workers who can more easily adapt to change as a result of their flexible skill base and high level of technological knowledge. Knowledge is the greatest resource of the 21st century and the “multi-skilled, knowledge based, gold-collar worker, using information to solve problems and create solutions is highly valued and likely to become even more so” (Wonacott 2002, p. 6). The gold-collar worker needs a high level of multiliteracies skills, is a self-managing strategic thinker and will understand technology, business and science, as well as how these areas intersect (Wonacott, 2002). It is this type of worker who is sought, while the blue collar and white collar workers are further segmented rather than integrated into the workforce. Indeed, Song and Webster (2003) studied the dual segmented labour market in Australia and they found that “the rate of downgrading of skilled job seekers is sensitive to labour market conditions but not the rate of upgrading of unskilled job seekers. This implies that there is more mobility of

skilled workers rather than unskilled workers between segments” (p. 340). In other words, unemployed skilled workers can usually find jobs in the unskilled sector, further marginalising unskilled labour.

- 23 Labour has long been segmented by gender, race and education level. Up until the mid-20th century, most Canadian men who were not farmers were employed in the staples (primary resources) industry or in the emerging factories. In 1871, for example, 51% were farmers, lumbermen, or fishermen. Those in manufacturing and handicrafts constituted 13%, while 36% were evenly distributed between services and construction and unskilled labourers. By 1931, the ratios had not changed significantly. Among Canadian men in 1931, approximately 52% were employed in agriculture or primary (i.e., logging, fishing, trapping, mining, and quarrying) and unskilled labour (Porter 1968). It is not until after WWII that these numbers begin to change. In 1951, the proportion of men employed in these categories had dropped to 32.7%. After another ten years, the proportion had dropped again, to 22.2% (Porter 1968). Once women were included in the employment statistics, they were clustered in personal service and in clerical types of jobs. In terms of race, Germans, Dutch, and Scandinavians dominated in agriculture, while Italians, French, Native Canadians, and other Europeans were more likely to be found in the primary industries and unskilled labour. British workers were spread more evenly across all categories (Ashton 1988).
- 24 Up to and throughout the 1980s, ethnicity continued to be an important determinant of labour market opportunities (Ashton 1988), and the segmentation of the labour market continued well into the 1990s with “men and women of color ... frequently locked into the least-paid, least-secure jobs” (Hiebert 1999, p. 364). In 1961, statistics from the Census of Canada suggested that level of schooling and occupation were connected. For example, 69% of men employed in the primary industries had grade 8 or less. Similarly, 55% of those in blue collar work had completed grade 8 or less, while 44.1% of men in the professions had a university degree (Porter 1968). By this time, there was an increasing awareness that continued reliance on the staples industries would lead to a “staples trap” (Wellstead 2007). At the same time, the problem of illiteracy was starting to be highlighted by educators, employers and government: in 1961, almost 110,000 people between 15 and 29 years had four years of schooling or less and were no longer attending school (Adamson 1966); among male workers of all ages, only 7.1% or 334,091 had completed grade four or less (Porter 1968). During the 1960s, governments began to pay more attention to the types of education that would move Canada out of the staples economy and into what, at the time, Drucker called the knowledge economy and Machlup named the information society (Kenway et al., 2006). With the advent of the Cold War and the space race, focus was turned to the creation of a skilled workforce. Students were required to stay in school longer and were provided with more postsecondary education choices through the newly designed community college systems that targeted those looking to work in the burgeoning technological industries. During the 1960s, awareness of the vocational need for adult basic education programs also increased, resulting in the 1960 Technical and Vocational Training Assistance Act and the 1967 Adult Occupational Training Act (Stamp 1982). There was little direct attention paid to literacy until the 1970s, in spite of the International Literacy Day being declared by UNESCO on 8 September 1965.
- 25 In recent years, literacy has become an international issue with literacy levels closely linked to economic progress. This has come with an emphasis on the human capital

economic perspective and has pushed governments to focus policies on retraining unemployed workers for the knowledge economy. This need for a constant “re-skilling” is part of a globalizing and rapidly shifting KBE, and the concern about remaining competitive puts pressure on workers:

[An encompassing, broad-based] definition of literacy and the increasing focus placed on it can be seen as part of a rapidly growing global concern with lifelong learning. ... Being able to engage creatively and adeptly with new technologies is increasingly becoming crucial, with a non-trivial number of jobs requiring certain skill sets and mastery of and/or familiarity with certain technologies. As a response to a perceived gap between people’s skill sets and those necessary for survival in the job place or to function in society, an atmosphere of crisis has emerged pervading public discourse with the call for citizens to engage in lifelong learning (see Field 2001, Martin 2003) and to shape-up their ‘inadequate literacy skills’, especially for those at the bottom of the pack. (Veeman et al. 2006 quoted in Walker 2008, 465)

- 26 Those who participate in building the economy need to be supported in the demanding labour market. Efforts by governments and institutions to promote adult literacy are based in the concept of competition: “Individuals are not only engaged in a competition to ensure their own success but also that of their country” (Walker 2008, p. 465). Because labour competition emphasises the role of the individual, “the need to be both unique as well as better than others” (Walker 2008, p. 478) increases the pressures and levels of anxiety at an individual level. This competitive model is in opposition to more collaborative approach seen as necessary to a strong KBE (Howells, et al. 2012); in a similar vein, “Preece (2006) argues for the idea of a ‘learning world’ rather than distinct learning societies” (Walker 2008, p. 477). A more collaborative approach would improve the abilities of marginalized workers to participate in the KBE.
- 27 In addition to the increased competition, the technological skill bias undoubtedly impacts anxiety about competition and lifelong learning. According to Goldin and Katz (2008), during the twentieth century in the United States, changes in technology resulted in an increase in the demand for skilled workers, but did not always increase economic inequality. Rather, any rise in inequality was the result of “an education slowdown” in the last part of the twentieth century (pp. 7-8). Looking at these issues from an economic perspective, researchers such as Lavoie et al. (2003) have tracked continuous trends of the substitution effect, the productivity-lag effect and the demand effect and have examined these effects to shed some light on Canadian labour market and skill gap trends. They found that these effects vary according to the nature of the knowledge involved in these different groups of occupations, thus reflecting not only the importance of the technological change ‘skill bias’ but also the increasing complexity of controlling and managing new and innovative economic activities. This bias towards those who are highly skilled in technological terms reveals the nature of the economy in which Canadian workers must find their place. Not only do traditional literacy skills matter, but so, too, do the multiliteracies skills related to the new technologies of the KBE and information society (New London Group 1996). The effects of literacy skills go beyond national growth and make Canada more competitive internationally. Willms and Murray (2007) argue that:

Finally, there is a significant amount of evidence that human capital will become an increasingly important input, one that allows Canadian firms to adopt the more knowledge and skill intense technologies and work organizations that will keep us competitive in the global economy (Brink, 2002; Krahn and Lowe, 1998). There is

considerable evidence that the rate at which Canadian workers will be able to adopt productivity-enhancing information and communication technologies will depend upon their literacy levels. (Statistics Canada and Organisation for Economic Cooperation and Development, 2005, 10)

- 28 Linking literacy to economic growth and competitiveness is necessary in order to argue for a firmer government policy commitment to literacy funding.

Disconnects: KBE Policies and the Labour Market

- 29 The latter quarter of the twentieth century saw significant changes in the labour market as a result of the introduction of new technologies and policy changes. Between 1971 and 1996, the proportion of goods workers dropped by 15% (Lavoie et al., 2003). The introduction of computerized processes (such as CAD/CAM) made manufacturing more efficient and productive, while decreasing the need for workers who mainly have routinized expertise. Following traditional economic thinking, it was anticipated that the impact of technology would not negatively affect employment in the long term. Technology would improve production levels and decrease prices; some jobs might be lost, but lower prices would increase demand; increased demand would increase employment levels in order to meet the higher production needs (Lavoie et al., 2003). However, this causal relationship has not been demonstrated in recent years. Investments in new technologies have tended to result in shifts in employment to service-oriented jobs rather than simply job decreases or increases. In other words, there has been a trend towards de-skilling labour needs alongside credential inflation (Livingstone 2010). In addition, factors such as interest rates and fuel costs have impacted discretionary income which has reduced consumption of luxury and non-essential products and services. In 2007, spending on personal consumption was the primary driver of the U.S. economy, even as personal consumption grew at the slowest rate since 2003 (Richards 2008). Between 1980 and 2000, consumer spending grew at a rate of 3.4% each year, higher than the growth in gross domestic product (GDP). This higher rate of consumer spending was the result of the wealth effect of increasing stock market prices and a declining savings rate. This consumer spending generates employment, but such increases are spread unevenly across all occupations (Toossi 2002).
- 30 In the 1980s, the Mulroney Conservative government began a more purposeful shift to a knowledge-based economy, marking the reduction of industrial incentives, and the promotion of Free Trade and a knowledge-based industrial strategy (Wellstead 2007). The increased emphasis on the knowledge-based economy coincided with a transformation of forms of employment. Since the 1980s, increasing numbers of Canadians have been employed as contingent workers recruited from outside individual firms (i.e., the external labour market [ELM] rather than from the internal labour market [ILM]). Before the 1980s, many companies developed strong ILMs in order to reduce turnover and promote from within (Rutherford 2006). In doing so, there was more incentive for such firms to provide internal training programs or to subsidize employees' professional development. Once employers began to recruit from outside (in the ELM), responsibility for training and upgrading shifted to the individual. The rise of the contingent workforce undermined the commitment of employers to their employees. In order to remain competitive in the ELM, workers had to anticipate the needs of employers and market themselves. For low income workers with low literacy skills, such upgrading becomes

even more challenging. The promotion of the 'nimble', knowledge-based economy by the federal and provincial governments has encouraged employers, including the government sector, to hire workers at all levels on an as-needed basis rather than developing a stable and experienced workforce (Rutherford 2006; Heisz and Picot 2000).

- 31 Some labour market theorists argued that the earlier strategy of promoting from within (i.e., the ILM) encouraged labour segmentation based on race and gender because ILMs were dominated by white men (Rutherford 2006). Women and workers of colour were often (and still are in many fields) segmented into lower skilled jobs or secondary firms. Shifting to the ELM has had the effect of shifting labour segmentation from one based primarily on sector, to one based on core versus periphery workers (Rutherford 2006). Although high level jobs are just as vulnerable to outsourcing as other lower level jobs (Rutherford 2006), those workers with low literacy skills and limited education are particularly vulnerable because they have little access to training or advancement. More recently, some firms have turned their attention to developing continuous learning environments, which shifts attention from technical skills to communication skills, in an effort to reduce the turnover rates of highly skilled workers (Sears 2003; Rutherford 2006). In addition, while employers continue to look for required technical skills, they are more interested in hiring those who have "learned how to learn" (Crouch et al. 1999, p. 6, qtd in Rutherford 2006). As a result, new forms of segmentation are created based on the "ability to be trained" (Rutherford 2006). Rutherford (2006) found in one case study of workers in Kitchener, Ontario, that nearly three quarters of all training was focused on managerial and technical/scientific staff, who constituted about one-third of the workforce. If overall educational attainment levels in general are rising, what is the incentive for employers to hire or train workers with low levels of literacies when it is a "buyers' market"?
- 32 The staples industry continues to be important for the Canadian economy even though it employs a relatively small proportion of workers. In 2002, the natural resources sector employed only 7% of Canadian workers; at the same, exports of natural resources grew from \$72 billion to \$167.5 billion between 1990 and 2001 (Wellstead 2007). Given that those employed in the staples industries have historically tended to have lower levels of education, it is likely that many of these workers also score low on the literacy scale. Indeed, Frontier College's target population for most of the 20th century was those employed in the staples industries (Cook & Robinson 1990; Walter 2003). Although many of these workers may not be literate, their experiential knowledge may still be relevant in strengthening the knowledge-based economy. Even though early efforts at developing a knowledge-based economy emphasized industries such as computer games and software development, much of knowledge-creation has been focused on classic staples "such as agriculture (genetically-modified foods), forestry (new pulp and paper techniques, biologically enhanced silviculture), fisheries (aquaculture), mines (enhanced reclamation) and energy (hydrogen fuels, renewables, offshore drilling and tar sands production)" (Hutton 2007, p. 9).
- 33 Beyond the staples industries, other occupations have been significantly transformed by information and communication technologies (ICTs). As Lavoie et al. (2003) argued a decade ago, jobs that use and manipulate information in routine ways (i.e., clerical and technical work) are more susceptible to being replaced or supported by electronic devices. Similarly, those jobs that create goods in ways that can be codified and routinized are also easily transformed by technology. These are the occupations that are

arguably suitable for those with lower levels of literacy as they may not require much use of traditional literacy skills once the worker learns the routine. Occupations that require the creation of knowledge and ideas, however, are not conducive to being routinized or codified in ways that allow technologies to replace workers. Similarly, the service industries continue to grow because many of those activities, such as personal service, require expertise built on experience rather than tasks that are routinized. None of these types of jobs involve the creation of ideas or the use of ingenuity and, therefore, do not fit with the discourses about jobs in the knowledge economy. Although the shift to more knowledge-based employment has occurred within all occupations, not simply in a narrow category of knowledge industries, most knowledge workers are only a small part of the workforce in Canada (Gibb & Walter 2011). Nonetheless, the shift has occurred within the staples industries, data occupations, and goods production, with the result that as more knowledge workers and new technologies become part of these fields, workers who cannot adapt are pushed out.

- 34 In addition, the on-going increases in levels of education attainment – the proportion of workers with “higher education qualifications has grown by 50% over the past 25 years” (Livingstone 2010, p. 208) – have resulted in “apparent surpluses of workers in relation to compatible jobs” (Livingstone 2010, p. 208). If there are more workers with higher qualifications than needed for available jobs, the potential for credential inflation increases. In difficult economic times, workers with few (multi)literacies skills and educational credentials are pushed aside even if they have the skills and knowledge appropriate for a particular job. The disconnect between the skills and abilities of the worker and the required skills of particular occupations results in the exclusion not only of the worker, but also the knowledge he or she brings to society. In a true knowledge-based economy and society, all types of knowledge must be supported and nurtured. This interpretation of the knowledge economy and information society is one that values all members of society. Indeed, Livingstone (2010) argues that sustainable economic production would result “if the current labour force were more highly valued for capabilities to develop and use reserves of abilities” (p. 228). During the 1990s, particularly in Ontario under the Harris Conservative government, adult education and literacy programs were being cut at a time when elementary and high schools were increasingly required to test for those same skills (Gidney 1999). In 1996, the funding formula for adult education was changed so that school boards were forced to make deep cuts to those programs. Similar cuts to adult basic education and literacy programs were also made in other Canadian provinces (see Centre for Literacy 2012; Walker 2008). Ironically, the acknowledgement of the importance of literacy and numeracy skills by Harris and his government was only directed towards children rather than those currently in the workforce or looking for jobs (Sears 2003; Dare 1997). These changes increased polarization in the labour market and marked a move away from the traditional welfare state development model. These cuts created more polarization in the labour market because of the combination of less government investment in education and less welfare protection for workers affected by these cuts and economic fluctuations. Similar program cuts were seen in other provinces. In Quebec, the government’s focus on the economy, the creation of jobs, and the development of business competitiveness has led to warnings that “the diverse learning needs of individuals are at risk of being marginalized” (Centre for Literacy 2012, p. 29). In order to meet the needs of Quebec employers and businesses, educational institutions may end up inadequately serving individual learners. In addition, the Quebec government’s funding formula for adult

education and caps on literacy service has had the effect of limiting the number of literacy and essential skills classes being offered (Centre for Literacy 2012). In British Columbia where literacy education funding is also unpredictable, competition for funding among literacy service providers has been exacerbated by the shift from core funding for programs to project-based funding, leading to increased instability in programs, barriers for at-risk groups, and potential of the deprofessionalization of literacy workers (Walker 2008). Stable funding and support for broad-based (multi)literacies programs are essential components in the creation of stable economies and societies.

Conclusions: Modelling Equity in the KBE

- 35 What we argue is that we need to develop a model that sees (multi)literacies and basic training as a necessary investment and a strategy for not only economic development and growth, but also social welfare. This is a model with which to develop an action plan on greater accessibility to labour markets that includes government support for (multi)literacies training and on-the-job training. This support includes increasing funding to educational institutions and literacy programs, as well as to individuals. What underpins the model is the need to reconcile the importance of education for economic and social progress with the cuts that have come in the areas of literacy and education. There must be a steady state commitment to literacy education and basic skills training. As Walker (2008) notes, “economic development through education is being promoted as a patriotic duty. Under a knowledge economy, literacy is considered a reflection of a healthy citizenry who can contribute to the financial well-being of the nation-state” (p. 477). If this is true and this health is to be promoted, it is governments that must take the lead in doing so (McCracken & Murray 2010).
- 36 The complex connections between literacy, labour and the knowledge-based economy are important ones. Looking at the relationship between these things give us insight into enduring social inequalities which were more glaring 100 years ago but are no less pervasive today. We are dividing workers into winners and losers in the knowledge-based economy based on literacy skills in the same way that they have been divided throughout Canadian history into those who had class and labour mobility and those who did not based on access to education and training. There must be public and political recognition that investment in literacy and basic skills training is key in creating more winners and, ultimately, developing the Canadian economy. As McCracken and Murray (2010) assert:
- [L]iteracy skill affects many aspects of individual, societal, and national well-being. This includes health status, crime reduction, motivation, reliance on welfare, job satisfaction, employment, and the country’s overall economic performance and competitiveness in the global market. Overall, government policies need to recognize the key role of literacy as an economic driver, and to shift toward encouraging a balance between the supply and demand for skills. (McCracken and Murray, 2010, 50) This acknowledgement of the importance of literacy skills to all aspects of the economy and the labour market will help to create support for educational programs as an investment.
- 37 The creation of greater equity in employment and the integration of more people into the economy are both necessary in order to meet the challenges of innovation and flexibility inherent in the knowledge-based economy. A development model needs to be embraced by Canadian policymakers in order to provide dignity for those in the labour market and

to foster greater political will to invest in ongoing literacy and basic skills education. Skills need to be used and updated in order to keep them relevant because, as the Literacy Council of Durham states, literacy is a “use it or lose it skill.”⁴ Access to such ongoing education helps to equitably distribute employment opportunities and to integrate as many workers as possible into the knowledge-based economy in a meaningful way. The linkage between literacy and economic growth must be acted upon by governments to increase economic growth, community and national stability and wellness and to stem the tide of Canada’s increasing labour market inequity and polarization.

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NOTES

1. Interview with Jennine Agnew-Kata, Executive Director of the Literacy Network of Durham Region (LiNDR) February 13, 2012 in Oshawa, ON.
2. We are aware of the wide range of critiques regarding the various literacy surveys (see Hamilton & Barton 2000; Gomez 2000; Bernardo 2000).
3. The bill received Royal Assent on June 29, 2012. The legislative summary is available at: <http://www.parl.gc.ca/LegisInfo/BillDetails.aspx?Language=E&Mode=1&Bill=C38&Parl=41&Ses=1&View=8>
4. Literacy Council of Durham website accessed Oct 10, 2012. http://www.literacydurham.ca/index.php?option=com_content&view=article&id=49&Itemid=55

RÉSUMÉS

Les changements économiques à l'échelle mondiale ont transformé la nature de la compétitivité économique et placé l'apprentissage des matières de base comme conditions au succès économique des travailleurs. En Ontario, l'augmentation des emplois et la prospérité économique ont été liées à l'économie du savoir, qui est maintenant considérée comme la panacée qui favorise l'ensemble de la population. Nous démontrons, au contraire, qu'il n'existe qu'un petit nombre de gagnants qui bénéficient de cette économie du savoir contre un grand nombre de perdants. L'alphabétisation (ou multi-alphabétisation), que l'on peut définir comme comprenant l'alphabétisation à l'égard de l'imprimé, du numérique et du visuel ainsi que la numératie, est un facteur essentiel pour que les individus puissent avoir véritablement accès au monde du travail et à l'économie du savoir. Le besoin de développer des politiques d'alphabétisation dans le monde du travail et le lien historique entre alphabétisation et privilèges systémiques ont été mis en évidence par la recherche scientifique, mais n'ont pas été pris en compte dans les pratiques politiques. Nous nous intéressons donc d'une part aux travaux scientifiques réalisés sur l'alphabétisation, et d'autre part, à l'absence de politiques d'alphabétisation dans le monde du travail. Nous fondons notre analyse sur le contexte historique de l'éducation, de l'emploi et de la formation en alphabétisation au Canada, tout en nous penchant plus particulièrement sur la situation en Ontario anglophone, et en examinant les liens entre ces facteurs et les problèmes systémiques d'accès au marché du travail. Cela nous permet de recommander un modèle politique permettant un meilleur accès au monde du travail fondé sur les résultats scientifiques sur les questions de développement et d'investissement. La possibilité d'obtenir des formations pour développer les capacités humaines au maximum et ainsi permettre aux travailleurs d'obtenir un travail satisfaisant fait de l'alphabétisation un problème de droit et d'équité, tout autant qu'un problème de croissance économique.

Changes in the global economy have transformed the nature of competitiveness and heightened the importance of basic skills for the economic success of those in the labour market. In Ontario, job growth and economic prosperity have been linked to the knowledge-based economy (KBE), which is looked to as a panacea that will ultimately benefit the majority of the population. We argue, however, that there are a select few who are KBE "winners" and far more KBE "losers." Literacy (or multiliteracies), defined broadly to include print, digital and visual literacies, and numeracy, is a major factor in the ability of individuals to access the labour market and the KBE in a truly meaningful way. The need for labour market relevant literacy training policies, and the connection of literacy to the history of systemic privilege, power and labour market accessibility has been well identified by research but are not part of accepted policy practice. This research, along with the policy disconnect, are the focus of this paper. We will ground our discussion by putting it in the context of the history of education, labour and literacy training in Canada, with an emphasis on English-speaking Ontario, and then connect this to the current systemic problems of labour market accessibility. This allows us to advocate for a policy model allowing for greater accessibility to labour markets that is founded upon a research-based development and investment model. The ability to have training that will maximize one's potential and allow one to have the basic dignity of meaningful work makes literacy an equity issue as well as one of economic growth.

INDEX

Mots-clés : alphabétisation, apprentissage, économie du savoir, monde du travail

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