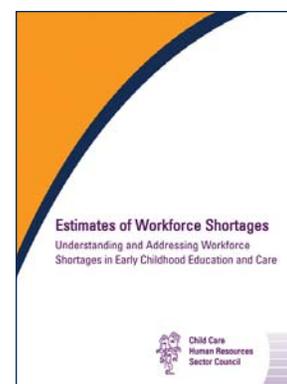


Executive Summary

Estimates of Workforce Shortages

Why do workforce shortages occur? How large are workforce shortages in the early childhood education and care (ECEC) sector? What is their impact?

The *Estimates of Workforce Shortages Report* seeks to answer each of these questions. A summary of key findings is outlined below. For more information, download the full-length *Estimates of Workforce Shortages Report* at: www.ccscc-cssge.ca.



What is a workforce shortage?

Generally, whenever the demand for workers exceeds supply there is a workforce shortage. Unless there is an economy-wide shortage, an occupation-specific shortage occurs when there are not enough potential employees with the skills required by employers to fill the available jobs. Shah and Burke (2003) outlined the differences between a skills shortage, skills gap, and recruitment difficulties, specifically:

- **Skills shortage:** occurs when demand for workers exceeds the supply of workers who are qualified, available, and willing to work in a specific occupation under existing market conditions;
- **Skills gap:** occurs when employers are hiring workers they consider under-skilled or where their existing workforce does not have the skill set desired;
- **Recruitment difficulties:** occur when employers cannot fill vacancies despite a sufficient supply of workers. Reasons for this may include: low wages, poor working conditions or image of the industry, unsatisfactory working hours, etc.

Based on interviews with key informants, the ECEC sector seems to have aspects of all these types of shortages.

How large are the workforce shortages in early childhood education and care?

Estimates of Workforce Shortages calculates significant shortages for the sector. The analysis shows that workforce shortages first started to bite in 2001, when the ECEC sector went from having a surplus of workers to a shortage. Since then, the shortages have steadily worsened. Between 2001 and 2007, there was a cumulative shortage of 24,766 ECEC workers. Across Canada, 4,802 workers were still needed to fill available ECEC positions in 2007. The shortage was highest in Quebec (over 1,400 workers needed) and Ontario (over 1,000 workers needed).

Worker Surplus (Number of Workers)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Canada	2726	1446	469	-664	-1868	-2949	-3853	-4865	-5775	-4802
Newfoundland and Labrador	98	88	46	47	28	23	-1	-23	-39	-88
PEI	35	37	38	42	41	33	28	28	17	26
Nova Scotia	166	114	79	60	32	11	-17	-39	-81	-84
New Brunswick	170	93	87	75	75	54	60	50	32	73
Quebec	599	331	72	-290	-555	-994	-1240	-1498	-2030	-1429
Ontario	1780	1160	783	346	-87	-414	-687	-1130	-1405	-1035
Manitoba	-7	-52	-104	-150	-189	-225	-274	-310	-398	-325
Saskatchewan	35	11	-6	-19	-33	-57	-70	-91	-89	-142
Alberta	80	-28	-192	-271	-338	-505	-559	-599	-728	-624
B.C.	569	350	258	111	23	-101	-248	-371	-520	-429

The shortages are significant because the data suggest they are especially acute for those who have training and qualifications to work in the sector. There is no workforce shortage for those who are paid hourly and have lower qualifications.

It is important to note that most methods of measuring occupational workforce shortages look at the unemployment rate, wage growth, and employment growth of a single occupation in comparison to all occupations. In order to determine if workforce shortages exist in the ECEC sector, the approach taken by the U.S. Bureau of Labor Statistics (BLS) and the Canadian Occupational Projection System (COPS) was used. In order to determine the size of the shortage, the unemployment-vacancy technique was used. This technique simply calculates the shortage by subtracting the number of unemployed from the number of vacancies. To do this properly it is important to have consistent definitions of unemployment and vacancy rates, as some of the unemployed may not be qualified or may not live in the areas where vacancies exist. For a detailed explanation, including background on the data sources used, see the full-length *Estimates* report.

Why are workforce shortages in the ECEC sector occurring?

The *Estimates Report* examined the reasons a shortage of skilled workers exists in the ECEC sector—these include:

Technological change: Technological change increases the demand for highly skilled work. In Canada the demand for highly skilled workers is rising faster than the demand for low-skilled workers. Since many ECEC workers have post-secondary education, the number of alternative employment options for these workers is growing, contributing to significant turnover and recruitment issues.

Globalization: In a high wage country like Canada, businesses must compete by having a more productive workforce. One way to improve the productivity of the workforce is through higher education. As with technological change, an implication of globalization is that the demand for workers with higher levels of formal education are higher than for workers with lower levels of formal education. Because the ECEC sector has a workforce with above average education, demand for this type of worker will continue to rise at an above average rate. This means that turnover will continue to be a drain on the ECEC sector as the most educated workers are lured to higher paying jobs outside the sector.

Demographic changes: An aging workforce and declining population of working age exist throughout Canada. This means that the ECEC sector will experience a rising tide of retirements and increasing replacement demand in the years ahead. Furthermore, departures to other occupations will occur as other sectors partly seek to replace workers by “raiding” lower-paid occupations that have high levels of education.

Demand: Demand for workers in the sector is consistently high. However, the type of demand varies by level of education. For example, between 2000 and 2007, the demand for qualified early childhood educators vastly exceeded the demand for less qualified employees. More specifically, demand for qualified ECEs increased by 40% in that period, compared to 15% for all other professions. However, since 2005, rising demand for ECEC services has meant that there are not enough qualified ECEs to fill available jobs. As a result, child care centres are increasingly hiring people with lower qualifications and receiving government exemptions¹ to do so.

Wages: Wages have remained below the level needed to meet demand. At the wage employers are willing or able to pay, few trained ECEs are interested in filling the vacancies. Shortages will be reported by these employers who may instead hire those with lower qualifications, contributing to a skills shortage.

It is important to note that slow adjustments in the labour market may cause shortages. It takes time for employers to recognize labour shortages and react to them, for example, by offering higher wages. It also takes time for workers to recognize better opportunities elsewhere and react to them. As well, employers may be reluctant to raise wages or be tied to collective agreements or inflexible remuneration structures.

¹ Exemptions are usually given on the condition that a training plan is put in place and followed within a specific timeframe.

What is the impact of workforce shortages in Canada's ECEC Sector?

The research shows that the benefits of ECEC to children come mainly from increased future earnings due to the greater likelihood of attaining higher education. For mothers, the benefits come in the form of higher current and future earnings due to increased labour force activity. Access to ECEC allows mothers to increase their labour force activity. This translates into more working hours, which increase mothers' present earnings. The additional experience gained from these extra hours also increases mothers' future wage earnings. Lower smoking rates, and lower special education and grade failure rates are also some of the benefits that accrue to children.

Using 2007 as an example, the shortage of 4,800 workers represents 33,636 child care spaces and 3,700 mothers who could not look for full-time work. (In the short-term stimulus exercise, it was assumed that half of the child care spaces were full-time—as was the average for child care centres in Canada during 2007—and that 0.22 women worked full-time per full-time child care space.)² Furthermore, from 2001, when ECEC workforce shortages first appeared, to 2007, there was a cumulative shortage of 24,776 ECEC workers. This shortage represents 19,100 lost full-time work years for mothers.

In economic terms, the *Literature of Socioeconomic Effects* estimates that the hourly cost of ECEC in 2005 was \$2.77, with a corresponding benefit of \$7.04. Subtracting hourly ECEC costs from hourly ECEC benefits gives a net 2005 ECEC benefit per hour of \$4.27. Thus the net hourly benefit for children and mothers is \$4.27.

Conclusion

The cumulative net economic costs of the ECEC workforce shortages between 2001 and 2008 are estimated to be at least \$141 million.³

Based on our calculation of the short-term impacts of ECEC workforce shortages as described in the *Literature Review of Socioeconomic Effects*, it can be estimated that the lack of ECEC workers in 2007 caused a loss of 6,724 jobs through indirect, induced and mothers' workforce participation, or an additional 1.4 jobs lost for every job in the ECEC sector that was not filled. This means that since 2001, the lack of ECEC workers caused an estimated loss of 34,686 person-years of employment in other sectors.

These estimates illustrate that ECEC workers not only provide benefits to society via early childhood development and long-term benefits to the economy, but that the sector also provides significant short-term economic stimulus and removes a potential roadblock for parents in general, and mothers in particular, to participate in the workforce and add to Canada's economic potential.

For more information or to order print versions of this document, contact the Child Care Human Resources Sector Council (CCHRSC):

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² 33,636 lost child care spaces * 0.5 (full-time spaces) * 0.22 (number of mothers working full-time) is 3,700.

³ We estimated the national and provincial yearly economic costs of workforce shortages by applying the hourly net benefits of ECEC from our report, *Literature Review of Socioeconomic Effects and Net Benefits*, to the shortfall in hours.