



Higher Education
Quality Council
of Ontario

An agency of the Government of Ontario

Making the Grade? Troubling Trends in Postsecondary Student Literacy

@ Issue Paper No. 16
October 31, 2013

Nicholas Dion and Vicky Maldonado
Higher Education Quality Council of Ontario



Published by

The Higher Education Quality Council of Ontario

1 Yonge Street, Suite 2402
Toronto, ON Canada, M5E 1E5

Phone: (416) 212-3893
Fax: (416) 212-3899
Web: www.heqco.ca
E-mail: info@heqco.ca

Cite this publication in the following format:

Dion, N., & Maldonado, V. (2013). *Making the Grade? Troubling Trends in Postsecondary Student Literacy*. Toronto: Higher Education Quality Council of Ontario.



Executive Summary

While the benefits of strong literacy skills are well established, there is growing concern that Canadians' literacy skills, including those of students attending postsecondary institutions in Ontario, are not meeting expectations. The timing is especially problematic given that strong literacy skills are critical to students as they graduate into a highly competitive and increasingly globalized labour market.

A review of literacy data from Statistics Canada and the Organisation for Economic Co-operation and Development (OECD), including results from the International Adult Literacy Survey (IALS), the Adult Literacy and Life Skills Survey (ALL) and the Programme for the International Assessment of Adult Competencies (PIAAC), point to some troubling trends in literacy achievement and a lack of consistency in expectations for high school students who go on to postsecondary education.

According to IALS, not even a quarter of respondents aged 18 to 65 scored above level 3 – the minimum level of proficiency. The results from ALL, which was carried out several years later to follow up on IALS findings, found no substantial improvement in Canadians' literacy skills in this same age group. The most recent literacy results from PIAAC also registered no improvement but rather a slight deterioration in Canadians' scores at both ends of the literacy spectrum, with a greater number of Canadians scoring at level 1 and below and fewer Canadians scoring at levels 4 and 5.

The pressing question for Ontario is whether students entering postsecondary education have the literacy skills required to succeed. Data from the Programme for International Student Assessment (PISA), which tests students' abilities in reading, science and math, suggest that while students who score highest on the reading assessment at age 15 are more likely to attend university, a considerable percentage of students scoring below level 3 will also attend. Results also underscore that colleges are attracting individuals with a much wider range of language abilities, with fewer students from the upper end of the proficiency scale and more students from the lower-mid range.

Research also reveals the existence of several conflicting literacy standards for students entering postsecondary education. On the one hand, the OECD establishes level 3 as the minimum proficiency level for high school graduation. Yet Ontario's high schools operate with yet another standard, and the expectations of faculty members for high school graduates set yet another standard. This lack of clarity in expectations is problematic both for students and for institutions.

The report closes with two recommendations to address the literacy skills of students both entering and leaving Ontario's postsecondary institutions:

- Postsecondary institutions need to define the literacy standard they expect of students upon admission and/or at graduation.
- An appropriate level of literacy is such a fundamental outcome expected of a postsecondary education that postsecondary institutions should be assessing entering and exiting literacy skills in all of their students as part of a comprehensive assessment of the achievement of desired learning outcomes.

Table of Contents

Executive Summary	1
Table of Contents	2
Introduction.....	4
Literacy and the Labour Market	5
Measuring Literacy Skills in Canada and Abroad	6
International Adult Literacy Survey (IALS).....	7
Adult Literacy and Life Skills Survey (ALL)/International Adult Literacy and Skills Survey (IALSS)	7
Programme for the International Assessment of Adult Competencies (PIAAC).....	9
Literacy in the School System.....	10
Family Literacy.....	10
Literacy and High School Completion.....	11
High School Data and the OSSLT	12
Literacy and PSE Attendance	14
Are High School Graduates Prepared for PSE?	16
Literacy in Ontario’s Colleges	17
Avenues of Future Research	19
Literacy in Ontario’s Universities	20
Assessments and Responses	22
The University of Waterloo’s English Language Proficiency Exam (ELPE)	22
Nipissing University’s English Writing Competency Test (WCT).....	22
Huron University College’s Writing Proficiency Assessment (WPA)	23
The University of Toronto’s Writing Initiatives	24
Conclusions and Recommendations	24
References.....	26

List of Tables

Table 1: Descriptions of International Literacy Levels	6
Table 2: Population (Ages 16-65) by Prose Literacy Score, IALS	7
Table 3: Population (Ages 16-65) by Prose Literacy Level, Ontario and Canada, IALSS 2003.....	8
Table 4: PISA Reading Proficiency Levels By Score.....	8
Table 5: PISA Combined Reading Scores of Canadian 15-year-old Students, Ontario and Canada	9
Table 6: Population (Ages 16-65) by Prose Literacy Level, Ontario and Canada, PIAAC	10
Table 7: Ontario High School Curriculum, Reading and Writing Expectations.....	13
Table 8: English Proficiency Levels at a Large Ontario College, 2002-2012	18

List of Figures

Figure 1: High School Completion Rates by Literacy Level.....	12
Figure 2: OSSLT Success Rate of First-Time-Eligible Students, Ontario	13
Figure 3: Postsecondary Pathway by OSSLT Completion Rate.....	14
Figure 4: PSE Participation by Age 19 by Reading Proficiency Level.....	15
Figure 5: Postsecondary Pathway by Reading Proficiency Level, Ontario.....	15
Figure 6: Postsecondary Pathway by Reading Score, Ontario and Canada	16

Introduction¹

In November 2010, shortly after releasing its annual university rankings, *Maclean's* published an article on its website entitled “Students can’t write.” The piece repeats a number of perennial complaints about undergraduate student writing. “The grammar sucks and the writing is awful,” explains one professor as he blames high school teachers for failing their students. “[University] teachers are afraid to teach grammar,” opines another instructor. “They know the rules instinctively, but they can’t teach them.”

The *Maclean's* piece is only one in a long line that calls for action against a perceived literacy² crisis in Canadian society in general and in postsecondary education in particular. The Canadian Council on Learning (2007), for example, expands on what it calls this country’s “learning paradox”: while Canada has one of the most highly educated populations in the world, 42% of the adult population still lacks the literacy skills required to thrive in the global economy. In an American study, Levin and Calcagno (2008) conclude that large numbers of students entering American colleges and universities are not prepared for this course of study, and that deficiencies are most striking in foundational skills such as reading and writing. Nor is there necessarily anything new to this situation. As early as 1998, Thomas J. Collins, an administrator and English professor with 20 years of experience at Western University, notes that incoming university students at his institution lack basic reading and writing skills to such an extent that he “cannot assume even a moderate degree of literacy from those who *elect* to study first-year English” (p. 2).

The benefits of strong literacy skills have also been well established. Essential Skills Ontario (2012a) reports that those with low literacy skills are twice as likely to be unemployed for six months or longer than those with more developed abilities, and that a 1% increase in national adult literacy levels could result in a permanent 1.5% increase in Canadian per capita GDP (Coulombe, Tremblay & Marchand, 2004). High literacy levels have also been correlated with better health and increased civic engagement, while lower literacy levels have been linked to poverty, with 65% of social assistance recipients scoring poorly on literacy tests, and increased criminality, with 82% of offenders housed in correctional institutions scoring at literacy levels below those expected of a Grade 10 student (Essential Skills Ontario, 2012a).

Voices from a number of different sectors seem to be in agreement that Canadians’ literacy skills, including those of students attending Ontario’s postsecondary institutions, are not meeting expectations. The evidence supporting this “crisis of literacy,” however, all too often remains restricted to anecdotes. As part of HEQCO’s effort to examine learning outcomes in Ontario’s postsecondary sector, and the teaching and learning that takes place within our colleges and universities, this paper examines literacy rates in the province’s population. It reviews relevant data, especially as they relate to students entering tertiary education, to identify both the scope of the problem and the responses that colleges and universities might adopt to address it.

¹ The authors would like to thank Richard Wiggers and Robert Brown for conceiving of this topic and for the extensive preliminary research they did on it. The authors would also like to thank the many readers who provided feedback on drafts of this report.

² Unless otherwise indicated, this paper uses the broad term “literacy” to refer to English language reading and writing abilities. This focus excludes numeracy, which some international measures include under the banner of literacy. Furthermore, while the French language context is also important both nationally and in Ontario, it deserves a more focused treatment than can be offered in this report.

Literacy and the Labour Market

The 2005 Rae report predicted that up to 70% of future jobs created in Canada will require some postsecondary education, an estimate in line with similar projections for the U.S. economy (Rae, 2005; Martin Prosperity Institute, 2009). Other numbers from the federal government suggest that Canada has already reached this 70% mark and that postsecondary education (PSE) is more crucial than ever both for positive labour market outcomes and for the prosperity of the Canadian economy (Government of Canada, 2008). In this light, strong literacy skills take on great importance.

Strong literacy skills are highly coveted on the labour market, placing those graduates who possess them in an advantageous position when searching for employment (CCL, 2007). Yet university and college faculty are not the only ones sounding the alarm concerning literacy. As students graduate into a highly competitive and increasingly globalized labour market, employers are also voicing their displeasure with the skills that recent graduates possess. 41% of employers surveyed in one American study were dissatisfied with recent high school graduates' ability to understand complicated materials, a measure of reading and critical thinking skills, while 34% found their oral communication skills to be lacking (Achieve Inc., 2005). A similar survey of over 500 U.S. employers concluded that high school graduates were lacking in the ten skills that employers rated as being "very important" to success in the work force (Stewart, 2009). Graduates from American colleges fared little better and were also ranked as deficient by employers, especially in English writing and leadership skills.

In 2007, the Association of American Colleges and Universities commissioned a study to investigate employer satisfaction with recent American college graduates (Peter D. Hart Research Associates, Inc., 2008). The results once again point to dissatisfaction with writing skills. Of the 301 employers surveyed, most were satisfied that graduates left college with a wide range of skills that sufficiently prepared them for entry-level positions, but were unsure that these new hires possessed the skills to progress through the ranks of their companies. When asked to rate American college graduates' writing skills in a scale of 1 to 10, 37% of employers ranked them in the range of 1 to 5, with only 26% ranking them between 8 and 10. The average ranking across all employers was 6.1, pointing to mid-range writing abilities at best.

Lest we believe that this dissatisfaction is limited to the American context, studies from other anglophone countries confirm similar results. 71% of employers in the United Kingdom, for example, list strong writing skills as important for new recruits (Archer & Davidson, 2008). They rank it eighth on their list of most important skills, but twenty-third on the list of skills with which they are most satisfied, yielding the fourth largest importance-satisfaction gap in a 2008 survey. A HEQCO-funded survey of Ontario employers participating in work-integrated learning (WIL) partnerships yields similar results: among WIL employers hiring Ontario college students, 32% list a lack of soft skills, including literacy, as a challenge, while 15% list it as their top challenge. Results were only marginally better for employers hiring university students, where 29% listed lack of soft skills as a challenge and 10% listed it as their top challenge (Sattler & Peters, 2012).

These data all bring us to the same conclusion: while employers deem strong reading and writing abilities to be important for new hires, they are largely dissatisfied with the writing skills that new graduates bring to the table. Literacy skills are likely to become even more important in the future as labour markets continue to globalize (CCL, 2007). If Canadian graduates do not leave their postsecondary institutions with strong writing skills, they may soon find themselves losing employment opportunities to strong writers from other countries.

Measuring Literacy Skills in Canada and Abroad

The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines literacy as the ability to identify, understand, interpret, create, communicate, compute and use printed and written materials associated with varying contexts. According to UNESCO, literacy enables an individual to achieve his or her goals, to develop his or her knowledge and potential, and to participate more fully in the wider society. While literacy can include a wide range of skills, including numeracy, this paper restricts its focus on reading and writing, with the understanding that further research into numeracy should be performed and framed in its particular context.

Picking up on the increased importance of strong literacy skills, a number of agencies, such as Statistics Canada and the Organisation for Economic Co-operation and Development (OECD), have instituted surveys to track the evolution of reading and writing skills in the general population. The question of literacy in Canada goes well beyond sorting individuals into categories of literate and illiterate. Only a very small portion of the Canadian population can truly be called illiterate by international standards. Instead, the OECD sorts respondents' results into five categories, which it uses for all of its literacy-related surveys (Table 1). It is especially important to note that the OECD identifies level 3 as the minimum proficiency level needed to complete secondary school and cope with the demands of daily life.³

Level 1	Read relatively short text, locate, and enter a piece of information into that text, and complete simple, one-step tasks such as counting, sorting dates, or performing simple arithmetic.
Level 2	The ability to sort through “distracters” (plausible, but incorrect pieces of information), to integrate two or more pieces of information, to compare and contrast information and to interpret simple graphs.
Level 3	Demonstrate the ability to integrate information from dense or lengthy text, to integrate multiple pieces of information and to demonstrate an understanding of mathematical information in a range of different forms. Level 3 tasks typically involve a number of steps or processes in order to solve problems.
Level 4	Tasks involve multiple steps to find solutions to abstract problems. Tasks require the ability to integrate and synthesize multiple pieces of information from lengthy or complex passages, and to make inferences from the information.
Level 5	Requires the ability to search for information in dense text that has a number of distracters, to make high-level inferences or use specialized background knowledge and to understand complex representations of abstract formal and informal mathematical ideas.

Source: Essential Skills Ontario, 2012a; Canadian Council on Learning, 2008

³ Though we might reasonably expect a higher skill level from PSE graduates, as we argue below.

International Adult Literacy Survey (IALS)

The IALS collected literacy test results from a representative sample of Canadian adults aged 16 to 65 in three cohorts between 1994 and 1998 (OECD & Statistics Canada, 2000). It defined literacy according to three specific domains:

- Prose literacy, the ability to understand and use information gathered from texts;
- Document literacy, the ability to locate and use information contained in various formats, such as forms, schedules, tables, maps and graphs;
- Quantitative literacy, the ability to apply arithmetic operations to numbers embedded in printed materials, such as balancing a cheque book or figuring out a tip.

The IALS found a high correlation between literacy skills and level of education. The most important predictor of literacy proficiency was educational attainment, with participants scoring about ten points higher for each additional year they attended school. In all countries surveyed, adults aged 20 to 25 who had completed high school scored higher than those who had not, while those who had completed tertiary education scored higher still. Globally, the greatest number of participants scoring on the higher end of the literacy proficiency scale (levels 4 or 5) held high-skilled white-collar jobs, while the second highest number identified as students.

Further analysis of IALS data by the Conference Board of Canada (2006) presents some alarming statistics about the literacy levels of Canadians in general. 42% of Canadians, for example, score at levels 1 or 2 of the IALS prose literacy measure, failing to meet the minimum functioning standard of level 3. 35% score at level 3 and only 23% of Canadians score above it.

Level 1	16.6%
Level 2	25.6%
Level 3	35.1%
Level 4/5	22.7%

Source: Conference Board of Canada, 2006

Unsurprisingly, these scores were also highly correlated with educational attainment, with those who had not completed high school scoring considerably lower than those who had completed high school or who had also completed PSE. 42% of those who had not completed high school scored below the middle of the level 3 range, and only 10% of them scored above level 3. Of the 23% of Canadians who scored above level 3, over half had completed a university or college program.

Adult Literacy and Life Skills Survey (ALL)/International Adult Literacy and Skills Survey (IALSS)

The ALL/IALSS, which ran from 2002 to 2008, was designed to follow up on some of the data collected in the IALS. ALL results are most remarkable in their consistency. Despite the time elapsed since the end of the IALS, ALL results registered generally weak if not altogether nonexistent improvement of literacy skills (OECD & Statistics Canada, 2011). 58% of the Canadian population scored at level 3 or above on the ALL prose

measure, with only 20% of them scoring at levels 4 or 5. Numbers were similar on the document measure, with 57% scoring at level 3 or above and 21% scoring at levels 4 or 5.

Analysts had expected the percentage of the working age population that reached literacy level 3 to rise in the ALL, as older and generally less literate workers retired and were replaced with younger employees more likely to have completed PSE. They did not find this to be the case, however, as roughly 42% of the working age population of Canada failed to reach level 3 in both 1994 and 2003 (OECD & Statistics Canada, 2011).

Human Resources and Skills Development Canada (HRSDC) analyses of the 2003 IALSS results examined the scores and their correlation with education levels (HRSDC & Statistics Canada, 2005). While 52% of those who had completed high school scored 3 or above, this number rose to 65% for those who had completed a non-university form of PSE and 78% for those who had completed university. Increased education was again seen to promote better literacy skills. The youngest age groups scored best on the survey, with 62% of those 16 to 25 and 66% of those 26 to 35 scoring 3 or above. Overall, the literacy skills of Ontario's general population closely parallel those in the rest of Canada (Table 3).

	Canada	Ontario
Level 1	14.6%	16.2%
Level 2	27.3%	26.0%
Level 3	38.6%	38.3%
Level 4/5	19.5%	19.5%

Source: Statistics Canada, 2005, p. 118 (Table 1.7)

PISA is an international OECD study instituted in 2000 and undertaken every three years to measure 15-year-old students' abilities in reading, math and science. In Canada, the 2000 cycle of PISA was administered by Statistics Canada and paired with the Youth in Transition Survey (YITS), which tracked students longitudinally. PISA is scored on a scale to 700, using the OECD's same five-level measure (Figure 1).

Below level 1	Below 335
Level 1	335-407
Level 2	408-480
Level 3	481-552
Level 4	553-625
Level 5	626+

Source: Organisation for Economic Co-operation and Development

Canadian students have performed well on the PISA reading assessment. In 2009, Canada registered a mean combined reading score of 524, well above the OECD average of 496. Only four jurisdictions – Shanghai-China, Korea, Finland and Hong Kong-China – scored higher (Knighton et al., 2010). These numbers were in line with the scores of Canadian participants in previous PISA cycles. Students scored 534 on the combined reading scale in 2000, 528 in 2003 and 527 in 2006. In each case, roughly 70% of Canadian 15-year-olds scored in or above the level 3 range of the international reading scale.

	Canada	Ontario
2000	533	534
2003	530	528
2006	534	527
2009	531	524

Source: Knighton et al., 2010

In both the 2000 and 2003 PISA reading assessments, students from Ontario, Alberta and British Columbia scored highest (SPR Associates Inc., 2008). Alberta and Ontario were also the only two provinces to score above the Canadian average in the 2009 combined reading measures, with Ontario being the only province to score above the Canadian average on each individual reading measure (Knighton et al., 2010).

Programme for the International Assessment of Adult Competencies (PIAAC)

PIAAC, which was administered from November 2011 to June 2012, provides the most up-to-date international data on the literacy skills of Canadian adults aged 16 to 65. Contrary to previous assessments, however, PIAAC used a broader construct of literacy that emphasized the ability to work with digital texts and platforms. While this and other changes⁴ mean that PIAAC data cannot be compared directly to those gathered by earlier literacy assessments, the usefulness of the results is enhanced by the large sample size (n=27,285) and the wealth of sociodemographic information gathered on PIAAC respondents (Statistics Canada, 2013).

Canada scored at the OECD average on the PIAAC literacy measure, with two provinces – Ontario and Alberta – scoring above this average (Statistics Canada, 2013). Data for Ontario and Canada as a whole compare very closely, with slightly fewer Ontarians scoring at the lower literacy levels and slightly more Ontarians scoring at level 4/5.

⁴ Statistics Canada (2013) lists three major changes that should urge caution when comparing PIAAC data to earlier literacy assessments such as IALS or ALL: 1) PIAAC's use of digital texts and its emphasis on online platforms; 2) the elimination of the dual prose literacy and document literacy domains used in previous assessments and their replacement with a single literacy measure that collapses both of the above; and 3) the use of adaptive and computer-based testing with PIAAC, which can lead to more refined measurements,

	Canada	Ontario
Level 1 or below	17.0%	15.0%
Level 2	32.0%	32.0%
Level 3	38.0%	38.0%
Level 4/5	14.0%	15.0%

Source: Statistics Canada, 2013, p. 17

PIAAC results are perhaps most interesting given the sociodemographic information gathered from participants, which makes it possible to break down results by age, gender, educational attainment⁵ and labour market participation. The youngest age groups scored highest on the PIAAC literacy measure, with respondents aged 25 to 34 performing best and those aged 16 to 24 close behind (Statistics Canada, 2013). Those in the oldest age group (55 to 65) scored lowest.

Educational attainment was also closely correlated with higher literacy scores. Respondents who possessed a bachelor’s degree or higher performed best on the PIAAC literacy measure, with those who had completed a postsecondary credential “below” a bachelor’s degree scoring better than those who possessed a high school diploma or less (Statistics Canada, 2013). This finding was also consistent within each of the age groups.

Despite urging caution, Statistics Canada’s (2013) report of PIAAC findings does provide some comparisons between these newest results and those from the ALL/IALSS in 2003. It suggests that results are most remarkable in their consistency, with Canadians’ literacy skills registering no real improvement in the last decade. If anything, results have deteriorated at both extremes of the literacy scale, with more Canadians scoring at level 1 or below in 2013 than in 2003, and fewer Canadians scoring at levels 4/5 in 2013 than in 2003. Nevertheless, the “value added” to literacy skills of a postsecondary credential is clear, with those Canadians who have completed a postsecondary credential scoring higher than those who have not, and with Canadians of a younger age (16 to 34) scoring higher than their older counterparts.

At the very least, we can conclude that Canadians’ literacy scores have not been improving, neither in Ontario nor at the national level. This remains true despite the clear link between literacy scores and education level. The following section will investigate this link further and consider in greater detail how education and literacy are related.

Literacy in the School System

Family Literacy

The development of literacy skills begins at home, well before a child enters the school system, where a number of socioeconomic factors come into play. Family literacy is defined as the “development and use of literacy skills in a family’s daily life, including how families: use literacy in their everyday tasks; help their children develop literacy skills; get involved in their children’s education; and use literacy to maintain relationships with each other and with their communities” (Essential Skills Ontario, 2012b). This perspective acknowledges the connection between early literacy and adult literacy skills. Programs aimed at family

⁵ Highest level of education completed.

literacy generally seek to encourage children and their families to become familiar and more comfortable with initiating and participating in literacy enhancing activities in their daily life (Essential Skills Ontario, 2012b).

From this perspective, time away from school can prove detrimental to a child's literacy skills in certain home environments. Research in Ontario, for example, investigates the "summer setback" in literacy that many children experience (Davies & Aurini, 2010). The study, funded by the Ministry of Education's Literacy and Numeracy Secretariat, focuses on students from low-income families, who tend to read about five months behind their more affluent classmates. The researchers are interested in the widening gap in literacy skills that occurs over the summer months, when school attendance cannot level the playing field. From June to September, higher-income students with highly educated parents saw their literacy skills increase by two months over the summer break, while lower-income students saw their scores drop by a month. This increasing gap points to the important role that home environment can play in strengthening literacy skills outside of the formal school setting and the detriment resulting from the absence of such an environment. As a remedy, the research piloted 60 summer literacy camps across 30 school boards in Ontario from 2010 to 2012. The findings were promising: students who participated in the program saw their reading skills improve by about 1.5 months compared to students who did not participate, making up much of the two-month gain in skills typical of higher-income students.

Literacy and High School Completion

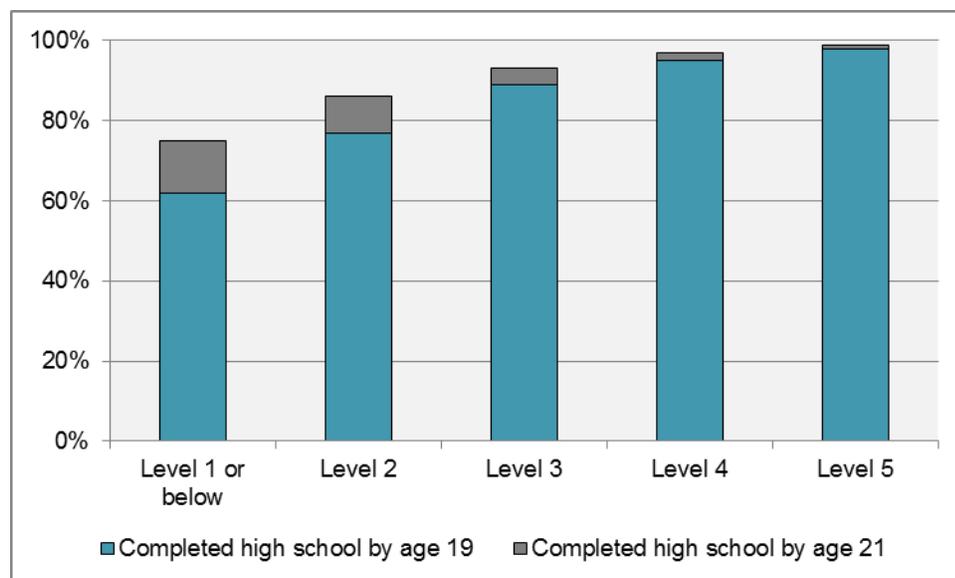
Literacy skills have been closely correlated with both high school attrition rates and a student's choice of postsecondary education options. Students with weak reading and writing skills are less likely to complete high school, while those with strong skills are more likely to go on to college or university after graduation. If the province wants more students to attend tertiary education and the choice to attend is linked to strong reading and writing skills, then the need to produce highly literate students becomes an economic imperative as well as a social one.

Students with poor scores on the PISA reading assessment are less likely to complete high school. In their analysis of PISA/YITS data from 2000 and 2002, Bushnik et al. (2004) conclude that, while the average composite reading score for all students was 535, which is the level 3 range, those students who eventually left high school before graduating typically scored at level 2, a full proficiency level below the average. While the decision to leave cannot necessarily be attributed solely to poor reading ability, we can conclude that students who continue in and finish high school are better readers and writers generally speaking than those who leave.

Knighton et al. (2006) similarly trace students' high school completion rates by age 19 to their PISA reading scores at age 15 to reach the same conclusions as above. Students who went on to complete high school scored 100 points higher on the PISA reading assessment four years earlier than did students who left high school without completing (547 vs. 457). Again, this represents a difference of more than one full proficiency level. While 87% of all PISA participants had completed high school by the age of 19, proportions were lower for those with level 1 (62%) and level 2 (77%) reading scores. Almost all youth who scored at proficiency levels 4 and 5 had completed high school by the age of 19. Reading proficiency continued to have an effect on high school graduation rates even after controlling for other variables such as gender, mother tongue, parental education, family income, location of residence, and academic and social engagement.

Bussière et al. (2009), who examined high school completion rates by age 21, confirm many of Knighton et al.'s (2006) findings. Students with poorer reading skills had lower high school completion rates by age 21 and took longer to complete than those with stronger literacy skills (Figure 2). While 62% of students who scored at reading proficiency level 1 completed high school by age 19, as would be expected in most cases, 13% of participants who scored at reading proficiency level 1 only completed high school between the ages of 19 and 21. This was true of only 1% of those who scored at level 5. 25% of students with level 1 literacy skills still had not completed high school by age 21, compared to only 1% for students with level 5 skills.

Figure 1: High School Completion Rates by Literacy Level



Source: Bussière et al., 2009

High School Data and the OSSLT

We may also approach the issue of literacy and postsecondary pathways using data from Ontario high schools. As early as grade 9, students must begin considering whether they wish to attend college or university and are expected to choose courses that will help them reach their preferred destination. Generally speaking, “academic” (U) classes prepare students to meet university admission requirements, while “applied” (C) classes meet college entrance requirements. In both cases, four English courses are required to complete the Ontario Secondary School Diploma (OSSD). English language learner (ELL) students also require four English classes, three of which can be chosen from English as a Second Language (ESL) options and the last of which must come from the “academic” or “applied” lists (King et al., 2009).

One analysis that looked at the transcripts of students who were in grade 9 in Ontario during the 2002-2003 school year concluded that 75% of students who followed the university preparation stream attended a university within five years of completing grade 9, and that 90% of these students attended some form of postsecondary education (King et al., 2009). An examination of the grade 12 transcripts of that 10% of students who followed the university preparation stream but did not attend PSE revealed that about 50% of these students had low marks either in general or in English or math in particular. An examination of “college destination” students who graduated with an OSSD in the college preparation stream pointed to a similar trend of academic difficulties in English and math. The same was true of students who did not complete high school within five years of being in grade 9. The three threads of this study point to a common conclusion: students who have difficulties in English or math are less likely to complete high school and to reach the PSE option for which they have been prepared, be it college or university.

In addition to meeting all course-based academic requirements, Ontario high school students must pass the Ontario Secondary School Literacy Test (OSSLT) or its equivalent to qualify for their OSSD. The OSSLT assesses both reading and writing skills and is designed to evaluate whether students have met the literacy expectations outlined in the Ontario high school curriculum (Education Quality and Accountability Office, 2011b) (Table 5).

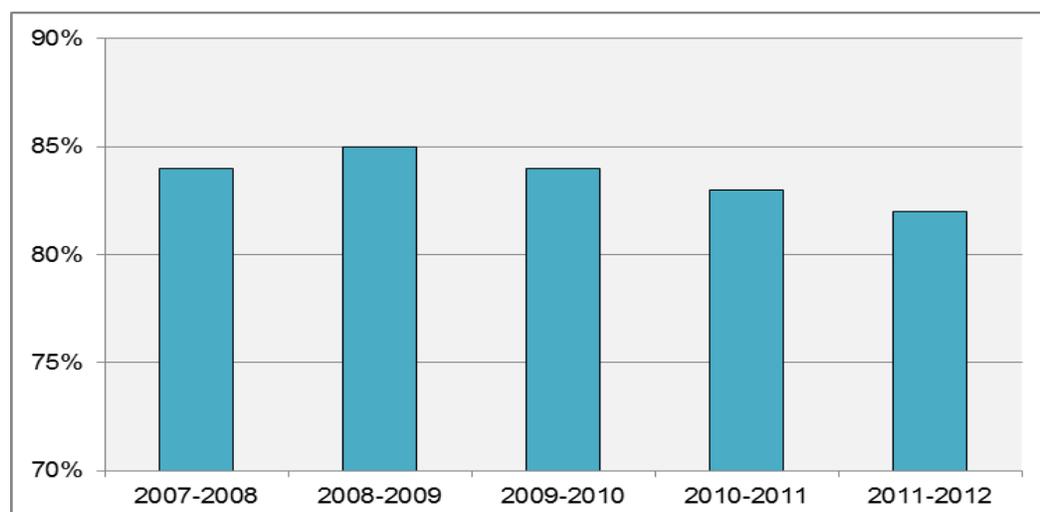
Table 7: Ontario High School Curriculum, Reading and Writing Expectations	
Reading 1	Understanding explicitly stated information and ideas
Reading 2	Understanding implicitly stated information and ideas (i.e., making inferences)
Reading 3	Making connections between information and ideas in a reading selection and personal knowledge and experience (i.e., interpreting reading selections by integrating the information and ideas in a reading selection with personal knowledge and experience)
Writing 1	Developing a main idea with sufficient supporting details
Writing 2	Organizing information and ideas in a coherent manner
Writing 3	Using conventions (i.e., spelling, grammar, punctuation) in a manner that does not distract from clear communication

Source: Education Quality and Accountability Office, 2011b

Most students first write the OSSLT in grade 10. The success rate of students on their first attempt has been consistently high – around 83% – since 2007 (Figure 3). Those students who do not pass or who do not write the exam during their first year of eligibility, either because they defer the exam or because they are absent, must either pass the exam in a subsequent year or complete the Ontario Literacy Course in grade 12, which is designed to test the same general skills as the OSSLT. As with the PISA/YITS, several studies performed using OSSLT data allow us to track students longitudinally and measure the impact of literacy skills on educational attainment.

A recent study of students who either did not write or did not pass the OSSLT during their first year of eligibility in 2006 demonstrates that almost half (47%) of them still needed to complete the requirement two years later, when they would normally be finishing grade 12 (Hinton et al., 2010). Some of these students had left school entirely, while the study may have lost track of others. Of those who did not pass in 2006 and could still be identified as registered students in 2007 or 2008, however, 21% still needed to pass the OSSLT. This suggests that many students who either miss or fail the OSSLT during their first year of eligibility continue to struggle with the exam in subsequent years, which can become a serious obstacle to high school graduation.

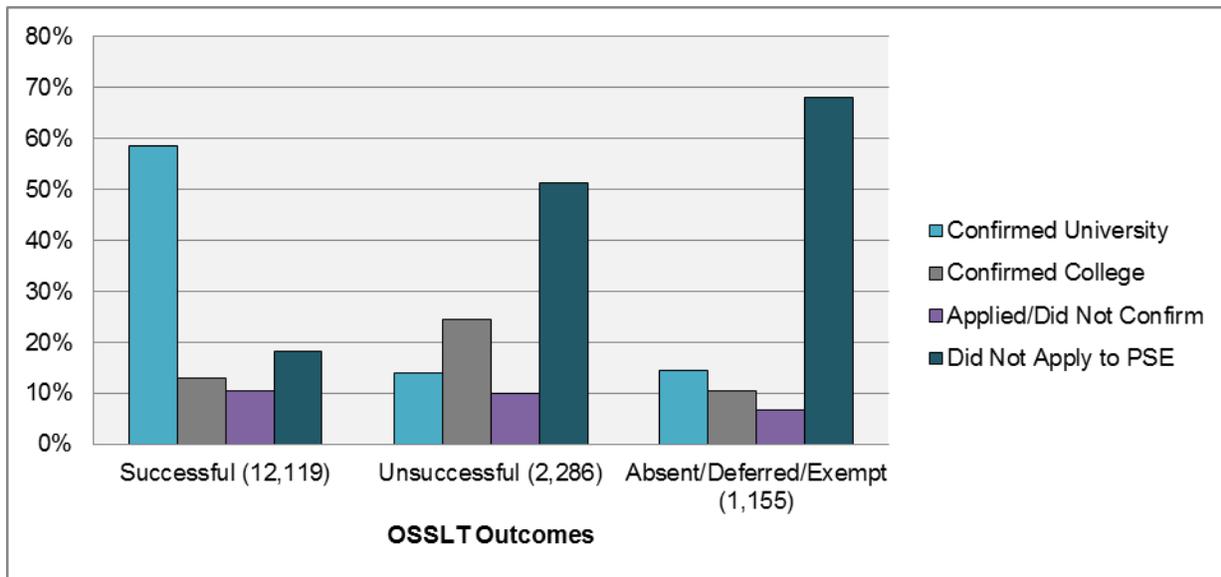
Figure 2: OSSLT Success Rate of First-Time-Eligible Students, Ontario



Source: Toronto District School Board, 2012

Further analysis from the Toronto District School Board suggests that most of its students who passed the OSSLT in 2007 applied successfully to university in 2009 or 2010 (Figure 5). This further supports the strong correlation between high literacy skills and university attendance. Students who did not pass the OSSLT in 2007 were more likely to apply to college or to forgo PSE altogether, while those who did not write the exam usually did not apply to PSE either. Students who were absent, exempt, or who deferred the exam were also most likely not to apply to PSE.

Figure 3: Postsecondary Pathway by OSSLT Completion Rate



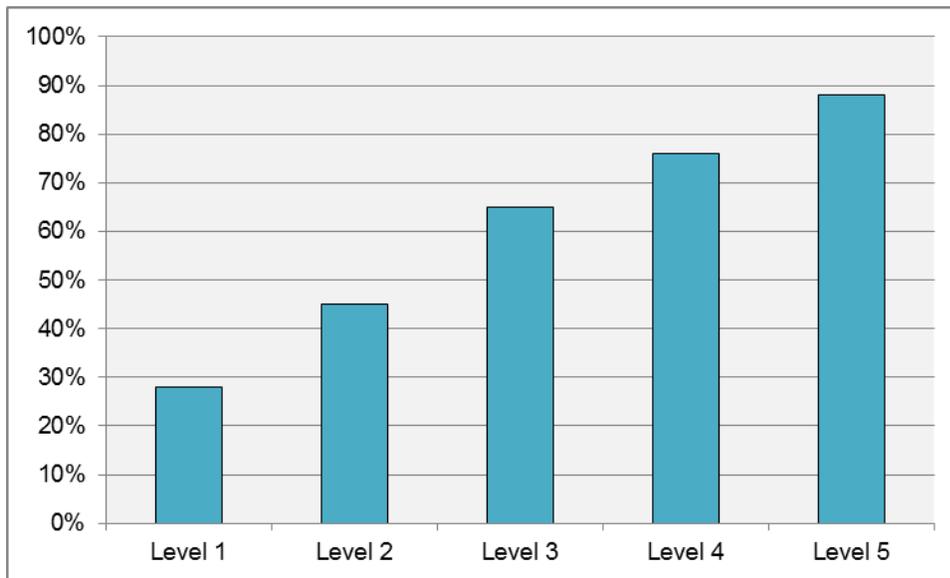
Source: Brown, Maldonado & Wiggers, 2012

Literacy and PSE Attendance

Willms' (2004) analysis of national PISA reading data from 2000 suggests that students with the best literacy scores – levels 4 and 5 on the OECD's scale – are more likely to attend PSE in the six years following graduation from high school. These links were very strong. Fifteen-year-olds who scored at levels 4 or 5 on the prose literacy component were ten times more likely to attend PSE than students who scored at level 2 or lower. Similarly, students who scored at level 3 were about half as likely to attend PSE as those who scored in the top two levels. These data demonstrate an important shift in standards: while the OECD identifies level 3 as the minimum level required for life in modern society, it is clear that level 3 is not necessarily the standard expected to predict participation in PSE. Instead, the likelihood of attending postsecondary education increases as PISA reading scores increase.

Knighton et al.'s (2006) examination of PISA data further correlates reading proficiency at age 15 with participation in postsecondary education by age 19. 65% of students who wrote the PISA reading assessment in 2000 and who were not still in high school at age 19 had enrolled in some form of PSE by then. Those who had PSE had an average combined reading score of 566 (level 4), compared to 492 for those who had not. Only 28% of students who scored at level 1 had participated in some form of PSE by age 19. This number rose to 45% for level 2, 65% for level 3, 76% for those at level 4 and 88% for those at level 5 (Figure 5).

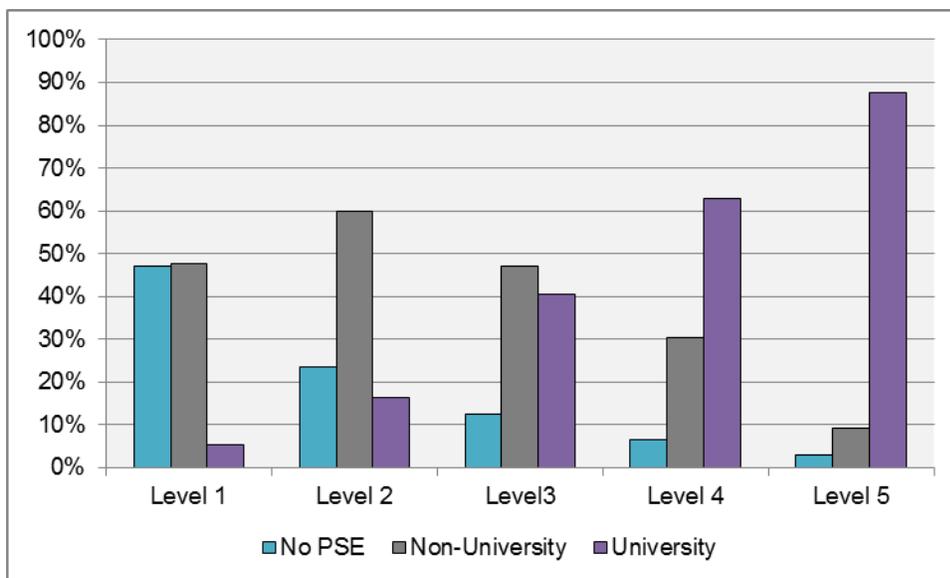
Figure 4: PSE Participation by Age 19 by Reading Proficiency Level



Source: Knighton et al., 2006

Further analysis by Lennon et al. (2011) suggests that Ontario students who score higher on the PISA literacy measure are more likely to attend university than college (Figure 6). The proportion of students who attended university was highest for students who scored at level 5 and lowest for students at level 1. At the same time, the proportion of students who attempted non-university PSE was highest for students who scored at level 2 and decreased as reading proficiency rose. Only 9% of students who scored at level 5 attended non-university PSE. Students at the lowest reading level were also more likely not to have pursued PSE at all.

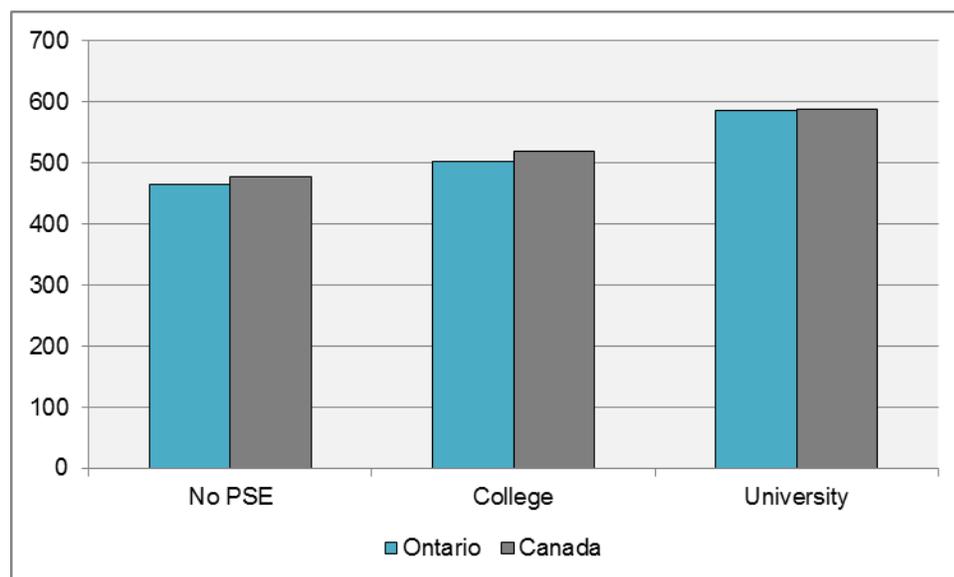
Figure 5: Postsecondary Pathway by Reading Proficiency Level, Ontario



Source: Lennon et al., 2011

By age 21, almost 75% of 2000 PISA participants had attempted some form of PSE (Bussière et al., 2009). Reading proficiency again proved to be highly correlated with this decision (Figure 7). University students had the highest combined reading scores, while those who did not attend PSE scored well below those who attended college.

Figure 6: Postsecondary Pathway by Reading Score, Ontario and Canada



Source: Bussière et al., 2009

The vast majority of participants who scored at level 4 or 5 at age 15 had enrolled in some form of PSE by age 21. 63% of these students had opted to attend university, while 26% had enrolled in college. Among those who scored at reading proficiency level 3, 33% had attended university and 40% had attended college. Of those who scored below level 3, 13% had attended university and 38% had attended college. Overall, participants with higher reading ability at age 15 were more likely to have attended PSE by age 21. As reading scores rose, students also became more likely to attend university over college. Reading proficiency at age 15 had the most significant effect on a student’s choice of postsecondary pathway, even after controlling for other variables such as gender, mother tongue, place of residence, parental education and family income (Bussière et al., 2009).

Are High School Graduates Prepared for PSE?

The literature abounds with examples of college and university faculty bemoaning the perceived underpreparation of their first-year students. Many of these instructors are quick to blame high schools. Levin and Calcagno (2008, p. 201), for example, call for “vast improvements in elementary and secondary education,” while another study reports that “large majorities of instructors are dissatisfied with the job public schools are doing in preparing students for college” (Achieve Inc., 2005, p. 8). In one survey of professors at Western University, 91% agreed that high schools do not sufficiently prepare students to write essays at a university level (Collins, 1998).

The problem, according to one American study, is not that students cannot write, but rather that they cannot write well (National Commission on Writing, 2003). Students have mastered the basics and can write to be understood but often seem unable to move beyond this functional level. Prose remains inelegant and unsophisticated, document structure is rudimentary and is often limited to the “five-paragraph essay” taught in

Ontario's high schools, and critical thought often seems to be nonexistent. Written assignments are all too often viewed as documents to be avoided, copied or purchased online rather than carefully and skillfully crafted.

One American study found that an important proportion of students entering PSE acknowledge the existence of a significant gap between their high school preparation and college expectations. 41% of students attending two-year American colleges and 37% of those attending four-year colleges admitted to having gaps in their preparation (Achieve Inc., 2005). When asked specifically about writing ability, 35% of students acknowledged a gap in their high school preparation, while 9% qualified it as a large gap. Students who described having faced high academic expectations in high school were more likely to feel well prepared for PSE (80%) and were nearly twice as likely to be receiving A's in college than students who described their high school expectations as low. Similar results emerge from a HEQCO-funded study in the Ontario context. When a focus group of students at an Ontario university was asked how prepared they felt for university upon entry, most students stated that they were not at all prepared (Dunn & Carfagnini, 2010). Most comments were academic rather than social in nature and included difficulties with note taking and writing.

Are Ontario high school graduates prepared for the rigors of higher education, either at colleges or universities, especially when it comes to literacy and reading/writing skills? As mentioned earlier, PISA data tell us that those students who score highest on the reading assessment at 15 years of age are more likely to attend university, though a considerable percentage of students scoring at level 3 will attend as well. Results also reveal that colleges are attracting individuals with a much wider range of language abilities, with fewer students from the upper end of the proficiency scale and more students from the lower-mid range. But it is unclear how the literacy expectations of the average university or college professor would rate on the OECD's reading proficiency scale. Is level 3 sufficient or would such skills appear lacking to faculty? What benchmarks would accurately reflect the proficiency levels expected of incoming students?

Given the abundance of anecdotal critiques from faculty,⁶ the lack of preparation to which some students admit and the increased number of students that tertiary education attracts, especially with the move towards mass higher education, postsecondary institutions should consider carefully the readiness of students' reading and writing abilities upon entry and take corrective measures to strengthen these abilities where necessary. Institutions of higher education do not exist simply to teach applied career skills or discipline-specific knowledge. They should also exist to strengthen basic skills, including reading and writing. Nor can institutions of higher education assume that these skills are sufficiently developed simply because students arrive with high school diplomas in hand. Ontario's universities and colleges have both dealt with this challenge in different ways.

Literacy in Ontario's Colleges

The *Ontario Colleges of Applied Arts and Technology Act, 2002* (sect. 2.2) gives the colleges a fixed and clear mandate "to offer a comprehensive program of career-oriented, post-secondary education and training to assist individuals in finding and keeping employment, to meet the needs of employers and the changing work environment and to support the economic and social development of their local and diverse communities." This mandate instructs colleges to work closely with employers to train students who will meet the needs of the labour market. The Ontario Ministry of Training, Colleges and Universities' (MTCU) list of essential employability skills focuses on communication as one of those abilities that college graduates should possess to be competitive. All graduates holding Ontario college certificates, diplomas or advanced diplomas are expected to be able "to *communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience*" (MTCU, 2009).

⁶ Further research should also be undertaken here to determine how widespread these perceptions truly are as well as to identify how faculty opinions might differ between disciplines and between institutions.

While the learning outcomes may be clear, the government does not mandate how these ends should be achieved.⁷ One study notes varying interpretations of these minimum requirements, both between institutions and between programs within colleges (Fisher & Hoth, 2010). Ontario’s colleges also have to deal with a wider range of writing abilities among incoming students. According to a study by Colleges Ontario (2009), English was the first language of only 79% of college students, with French accounting for another 5%. As a result, mandatory post-admission assessment is more prevalent in the college sector than in the university sector, and so too are course-based communications requirements. A recent HEQCO-funded project at George Brown College recognizes outright that the “Ontario Secondary School Diploma or equivalent does not guarantee that all students are prepared for the rigors of postsecondary academic work” (George Brown College & Academic Group Inc., 2011, p. 4) and that many entering students require developmental English instruction.

The data also point to the fact that many students entering Ontario’s colleges are not prepared to write and communicate at the required level. One study found that 41% of incoming students at one Ontario college scored below the suggested skill level for postsecondary communication and required some form of developmental education (Payne, 1999, cited in Fisher & Hoth, 2010). Further evidence is provided by another study, which suggests that 42.4% of incoming students at a large Ontario college test below the prescribed level of college English, a proportion that has risen steadily since 2005 (Schmitz & Kanurkas, 2013).

Further data from an internal study at another large Ontario college present similar numbers. Between 2006 and 2010, almost 60% of incoming students who wrote a mandatory post-admission English proficiency assessment scored below the required level for college English (Table 6). Although some of these students had not completed high school in Ontario, the overwhelming majority were direct-entry students who were indeed coming to college with an Ontario high school education.

Table 8: English Proficiency Levels at a Large Ontario College, 2002-2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	%										
Below College English	49.7	47.8	51.2	48.5	58.8	59.3	59.8	59.3	55.0	49.0	47.6
College English	48.4	49.9	45.8	48.5	39.4	38.4	38.2	36.5	41.0	45.9	46.4
Exempt	1.3	1.7	2.6	2.3	1.6	2.0	1.7	2.3	1.6	2.5	2.0
Total Responses (Count)	5,746	5,967	6,126	6,184	6,150	6,429	6,380	6,834	7,179	6,525	6,920

Source: Data provided by institution.

Note: “Exempt” includes students who test out of having to complete College English. Some columns may not add up to 100%, as a small number of students may be tested but not placed in an English level. Represents students from fall intake only.

Many colleges have created courses to suit a range of English proficiency, so that students might have every chance of being successful in their studies. A HEQCO-funded survey of language assessment practices in Ontario’s college sector (Fisher & Hoth, 2010) emphasizes the variety of practices that institutions have adopted. 63% of colleges reported using some kind of informal post-admission assessment of student writing, often based on student writing samples collected during introductory English classes. These assessments would then allow instructors to identify students having difficulty and refer them for further assistance. These

⁷ The MTCU has delegated this authority to the colleges through the Minister’s Binding Policy Directive, *Framework for Programs of Instruction*. See <http://www.accc.ca/ftp/es-ce/MTCUCollegeFramework.pdf> for more.

informal practices were not institutionally mandated, occurring instead at the discretion of individual instructors.

Formal writing assessments were also common, with 62% of colleges administering them annually to incoming students for placement purposes. They often took the form of writing samples, computer-based tests, or a combination of the above. These formal assessments were not necessarily used by all programs within an institution. 8% of colleges estimated using formal language proficiency assessments in “some” programs, 33% in “most” programs and 21% in “all” programs. The large colleges tended to have the most consistent and most robust proficiency requirements.

As a result of the mandated employability skills, colleges require English or communication courses in many of their programs. All colleges reported requiring at least one English or communication course in most (46%) or all (54%) of their diploma programs. “Level 2” or advanced communication and English classes were also common, with 21% of colleges requiring them in “some” of their diploma programs, 63% in “most” and 16% in “all” (Fisher & Hoth, 2010).

The Ontario colleges frequently use mandatory post-admission writing assessments to identify those students who are not prepared to write at the college level and sort them into developmental English classes. Developmental English education can occur in a variety of ways, including through student services such as writing centres, credit and non-credit courses in developmental English, and through the modification of regular introductory English courses to provide added support to those who need it. Combinations of the above strategies are also common. In cases where developmental English courses are offered as non-credit options, students often end up paying for extra courses in an attempt to meet their program’s communication requirements. It is also important to note that colleges are not currently funded to offer these non-credit language options and must instead find room to support them within their existing budgets.

With this emphasis on skills assessment and development, Fisher and Hoth (2010) also note that exit testing is more common in the college sector than it was with the universities, though it is still relatively uncommon. Defining “exit testing” as “a measure or indicator of language proficiency following some form of language training” (p. 30) – either in a course or a program of study – results show that such assessments take place in 57% of large colleges, 13% of medium-sized colleges and 11% of small colleges.

Fisher and Hoth (2010) conclude their report by emphasizing that “the formal assessment of language proficiency was neither a universal priority nor a consistent practice either across the Ontario college system or across all college programs” (p. 42). While a number of practices exist, their variety and divergence points to the lack of a consistent provincial policy or strategy in this matter. The challenge, of course, is to reconcile the competing goals of government direction, institutional autonomy and funding implications.

Avenues of Future Research

Fisher and Hoth’s (2010) project has laid the groundwork for a number of subsequent investigations that are currently underway dealing with English assessment and instruction in the college sector. The results that these studies produce will be relevant to those carrying this discussion about college literacy forward in the future.

For example, an intercollegiate team of investigators, headed by Gary Jennings at Mohawk College and the Ontario College Language and Communications Council, is currently assessing the efficacy of developmental English classes in five colleges. Incoming students selected to participate in the project are identified as having developmental English needs by their individual college’s evaluation process and are placed into their institution’s developmental English class. By administering a standardized language proficiency assessment both before and after participants have completed the developmental class, researchers hope to confirm that this prescribed course of study does indeed help students improve their language skills. By linking students’

college data with their high school grades and course choices, the team also hopes to draw correlations between specific academic pathways and success in collegiate study.

The College Student Achievement Project (CSAP), run out of Seneca College, is the follow-up to the College Math Project and intends to analyze students' performance in language classes during their first year of study, with the ultimate end of developing ways to improve student achievement and retention. The research team is gathering data from all 24 Ontario colleges concerning students' programs, language course selection, language course grades and high school grades. Researchers intend to link college performance and high schools grades to identify, as with the Mohawk study, those high school pathways most closely correlated with college success. The CSAP is expected to begin reporting at the end of 2013.

Literacy in Ontario's Universities

The discussion of students' reading and writing skills in the university context is heavily influenced by the lack of relevant data. While many colleges assess a large portion if not all of their incoming students' language abilities post-admission, this practice has all but disappeared within Ontario's universities. One environmental scan of writing assessments completed in 1995 demonstrates that even then only six universities in the province required mandatory post-admission assessment, three required non-binding post-admission assessment, and twelve had little or no post-admission literacy assessment at all (Brown et al., 2012). Only two universities at the time gave all first-year students a writing course (Procter, 1995), and the practice has diminished even further since then despite growing concerns.

A number of reasons are cited to explain the progressive elimination of this form of assessment, including cost, the alternate provision of optional writing instruction and the resentment that these sorts of tests engender among high school teachers and administrators (although some high school teachers admit that they would welcome a clearer definition of university-level writing expectations) (Procter, 1995; Collins, 1998). Further challenges relate to student motivation – while an assessment can identify students with sub-par skills, it cannot motivate them to seek help. Importantly, the same report (now quite dated) also emphasizes the relationship between assessment and the university curriculum: if an institution tells incoming students that they lack a skill essential to success in their program, the institution should in turn assume the responsibility of improving said skill (Procter, 1995). The elimination of assessment, one could argue, casts doubt upon this responsibility.

All of Ontario's universities have English proficiency requirements for incoming students. Those entering from Ontario high schools with university preparation stream courses and those coming from other high schools or universities where the language of instruction is English are usually exempt from demonstrating any further proof of proficiency. Students coming from francophone universities in Ontario are also usually exempt. International students coming from institutions where the language of instruction is not English are required to demonstrate proof of English proficiency through alternate methods, usually an internationally recognized standardized test such as the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Acceptable cut-off marks differ between universities and often between programs within universities as well.

A number of factors exist in the current university environment that make both assessing incoming students' language abilities and improving these skills a challenge. The inflation of grades at the high school level can make it difficult for admissions officers to properly assess incoming students' abilities. One study of incoming students at a large Ontario university documented the grade drop of 10,961 students entering from 368 different schools. While students entered with a mean average of 79.5% in their final year of high school, their mean grade at the end of their first year at the university was 65.3%, a drop of 14.2% (Collins, 1998). We might be tempted to attribute this decrease to the unreasonable demands of university instructors, but it at least suggests that the expectations of universities and high schools are out of sync.

The increasing size of many first-year university classes also makes it difficult for instructors to focus on writing. By virtue of their size, these classes often rely on transmissive pedagogical approaches such as the “traditional lecture” to present material (Kerr, 2011), a format that does not lend itself well to more student-centred tasks such as individual or small-group writing instruction. While many of these classes will attempt to compensate for their size by requiring conference or tutorial sessions, where students meet on a weekly basis in smaller groups with a teaching assistant, writing is not always a priority there either, nor are teaching assistants necessarily trained to act as de facto writing instructors. Class size also tends to dictate assessment methods. A recent HEQCO-funded project that examined teaching practices in large classes (Kerr, 2011) suggests that instructors teaching large classes are more likely to resort to multiple choice assessments. Most instructors surveyed admitted to using multiple choice assessments as a means of reducing the marking load on their teaching team. In these cases, writing-intensive assignments like essays, which would at least allow students to practice their writing skills, are often impractical and time-consuming to grade.

One recent study which analyzed course syllabi from a small liberal arts college affiliated with a large Ontario university concluded that the amount of writing required of undergraduate students differed substantially depending on the program of study (Graves, Hyland & Samuels, 2010). The research team considered 179 syllabi from courses taught in one academic year, across program areas and academic levels. On average, 2.5 writing assignments were assigned per course, with almost half of all assignment being four pages in length or less. Courses in mathematics and economics required no writing of students while others, in French for example, required at least four assignments per course. Writing assignments tended to be short and low-risk, worth 10% or less of the final grade. The average number of pages required per assignment in the humanities (4.30) was double that in the social sciences (2.04). While humanities writing assignments spanned the range from short to long, social sciences assignments were much more likely to be short – one page or less. It becomes clear from these results that a student’s exposure to writing requirements can differ considerably based on program, raising questions for the authors about some students’ preparation to work in their field after graduation (p. 309-310).

Finally, while the increasing internationalization of education provides many opportunities, it also brings with it some challenges in terms of language ability. Many of those Ontarians who score at the lowest levels of literacy on international assessments are new Canadians, both long-term and recently arrived (Essential Skills Ontario, 2012). In 2006, almost two-thirds of new Canadians scored in the lowest levels of literacy, including 35% of those with university degrees scoring below level 3 (CCL, 2009). While universities may expect that standardized tests such as TOEFL or IELTS will guarantee English fluency, the increasing use of these exams has also given rise to methods for circumventing them, including the existence of English proficiency “cram schools” that prepare students to score well on exams without necessarily strengthening overall fluency.

Given this challenging context and the general lack of data concerning students’ proficiency upon entering university, also noteworthy is a lack of data assessing students’ reading and writing skills upon completion of their education. In short, it is difficult to demonstrate that undergraduates’ reading and writing skills actually improve during their course of study. According to the Canadian Council on Learning (2009), 20% of university graduates in Canada fell below level 3 on the PISA prose literacy scale in 2006. This proportion was expected to rise to 24% by 2031. While this increase might seem relatively small, we must keep in mind that a decrease was instead expected as a younger, more educated demographic supposedly populated the sample and as older graduates, who are more likely to have seen their literacy skills decline with age, leave it. Numbers were even higher for students who had completed non-university PSE, with 38% of graduates falling below level 3 in 2006 and a projected 45% for 2031.

Assessments and Responses

Universities have sought to address the challenge that incoming students' English literacy levels raise in a number of ways. This section is meant to provide a partial view on these responses and is not meant to be comprehensive.

The University of Waterloo's English Language Proficiency Exam (ELPE)

The University of Waterloo's 2012 undergraduate calendar recognizes that students "must have a basic competency in written English in order to prosper in their university studies." Accordingly, the university is the only remaining one in Ontario to require a post-admission English proficiency exam for all entering undergraduates. The test was instituted because of a concern that high school grades did not always reflect a student's reading and writing skills (Tamburri, 2005). While each department sets the passing grade for its students, all undergraduates must pass the exam to their department's standard before they are allowed to graduate. All full-time students must write the exam by the end of the second semester in their first year (the 1B term) and pass the exam by the end of their 2B term, though there is some room for departmental flexibility with this latter date. Students who do not pass the exam by this deadline may be asked to leave the university or may be refused graduation.

The ELPE is offered a number of times each year and gives students one hour to draft a four to five paragraph response to one of two topics proposed in the exam. Topics are broad and do not presuppose any prior knowledge. Grading criteria are clear and transparent; the University of Waterloo Writing Centre's web page includes study and exam tips for the ELPE, descriptions of the schedule for testing day to allay student anxiety and sample essays for each exam scoring level drawn from a variety of academic disciplines. Considerations when marking include the student's ability to develop a focused argument, to write a coherent paragraph, to compose clear and logical sentences, and to employ proper writing mechanics, including grammar, spelling and punctuation.

According to Ann Barrett, the director of the University of Waterloo's Writing Centre, roughly 30% of entering students do not pass the ELPE on their first attempt, an increase of 5% over previous years. This proportion includes a number of "elite" students who applied to the university with strong high school grades (Canadian Press, 2010; Côté & Allahar, 2007). Students who do not pass are presented with a number of options (University of Waterloo, 2012). They can meet with writing centre staff and review their exam, providing an opportunity for them to learn from their mistakes and identify areas for improvement. This puts students in a good position to write the exam again. They may also participate in small-group tutorial sessions led by the writing centre and designed to improve writing skills. Finally, students may petition their faculty to complete the ELPE requirement by achieving a satisfactory grade in one of several English instruction classes, including some for non-native speakers.

The ELPE is a long-standing requirement at the University of Waterloo that has continued to find administrative support through changes in the educational environment. According to Dr. Barrett, the exam has remained very relevant in the current climate given the high number of ELL students who are attracted to the university. Furthermore, the ELPE is seen as strengthening the institution's many co-op work-integrated learning opportunities. In a labour market where strong literacy skills are in high demand and are often found to be lacking, the ELPE requirement certifies that University of Waterloo co-op students and graduates meet a certain standard of literacy.

Nipissing University's English Writing Competency Test (WCT)

Unlike the ELPE, Nipissing University's WCT is a non-binding exam. Students are not required to pass the exam to graduate. Rather, the WCT's purpose is purely diagnostic, identifying students with writing problems and helping those students better understand where their English skills are deficient. The WCT is mandatory,

with all undergraduates admitted to the Faculty of Arts and Sciences and to the Faculty of Applied and Professional Studies required to write it.

The English Language Competency Test asks students to write a 500-word essay on one of three topics within a two-hour time frame. Students are provided online with tips, guidelines and a grading scheme for the exam. To receive top marks, an essay must be well organized, with a developed thesis statement, properly constructed paragraphs, and correct spelling and grammar.

The exam is graded on a scale of one to three. A score of one signifies an exam that demonstrates a level of English proficiency that is appropriate for university study, while a score of two or three signals some writing difficulty. Prior to 1993, a score of one was required to graduate (Procter, 1995). Now, students who achieve a score of two on the exam are required to complete and pass a three-credit developmental writing course at some point during their course of study. ELL students may be asked to complete a second such course as well. Students achieving a grade of three on the WCT are also required to complete a developmental writing course and are strongly encouraged to follow a special non-credit writing skills course as well. Students scoring a two or a three may be exempt from these requirements by rewriting the WCT and scoring a one.

Huron University College's Writing Proficiency Assessment (WPA)

Huron University College is a small liberal arts college affiliated with Western University. It has roughly 1,100 students, the great majority of whom study the arts and sciences (Hyland et al., 2010). The WPA was instituted in 1998, resulting from the realization that increasing university enrolment also brought with it a wider range of student abilities upon admission. All undergraduates are required to write the WPA, usually at some point in their first year of study. The WPA is non-binding and primarily diagnostic in purpose. Students are provided with extensive written feedback on their exam, allowing them to identify their personal areas of strength and weakness. While they are not required to follow up with writing centre staff regarding this feedback, the WPA still serves to impress upon students the importance of strong literacy skills for success in university.

The WPA asks students to read an article and complete two separate written tasks, the first a summary of the article and the second an essay responding to its main themes. Both parts are now written online, and students are provided with two hours from the time that they first log in to complete the exam. Exams are scored on a scale of one to six, with grades of four and above representative of "good" writing for the university level. According to the director of the program, 80% of students in their first year score at level 3 or below, indicating that they have serious problems in one or more areas of academic writing skills.

Upon its institution, the WPA was also used to measure the added value of a university education to writing skills. Undergraduates wrote the exam twice, upon entry and upon graduation, and the scores were compared. The WPA is no longer required upon graduation, though students can choose to write it again if they so desire to earn a certificate of writing proficiency from the college. While a HEQCO-funded study that examined the difference between exam scores upon entry and upon graduation (Hyland et al., 2010) yielded only a very small sample (n=21) that was not representative of the student population, those students interviewed described the change in their self-assessment as writers that came as they began writing at the university level. One student described a drop of 15% in his or her marks in university, while another spoke about increased expectations in writing at the university level: *"Well, it became very clear that you do have to, you have to have a thesis. You can't just describe things like you can get away with [in] a high school paper.... I find it challenging, working with ten high quality sources as opposed to maybe a reflection piece of just, you know, the practising thing we were doing in high school"* (Hyland et al., 2010).

The University of Toronto's Writing Initiatives

The University of Toronto eliminated its mandatory proficiency exam for Arts and Sciences students in 1986 and instead devoted resources towards providing different forms of optional aid for those students who require it (Procter, 1995). Each of the university's colleges operates a writing centre, where students can receive help with written work. In addition, the Office of English Language and Writing Support (ELWS) opened in 2000 and provides writing support for graduate students, offering academic writing courses for both native and non-native English speakers, including courses on grant writing and scientific writing. Moving well beyond basic literacy skills, ELWS introduces graduate students to those new genres in academic writing that are fundamental to advanced university study.

The University of Toronto's Faculty of Arts and Sciences also launched its Writing Instruction for Teaching Assistants (WIT) program, which provides added support for instructors and TAs to focus on student writing (Rolheiser et al., 2013). While WIT began as a pilot project in the departments of geography and Near and Middle Eastern civilizations, it has since grown to approximately 20 units and 70 courses across Arts and Sciences. Instructors participating in WIT receive assistance with designing and structuring assignments that will be most beneficial for student writing, and receive tips on introducing "low stakes" writing assignments into class on a regular basis. Units also receive funding for a senior PhD student to become a lead writing TA, who receives intensive training and mentoring in aspects of writing instruction, peer-based training and workshop design (Rolheiser et al., 2013). WIT resources can be deployed to encourage and promote the writing goals most appropriate to each participating unit. "This approach allows for writing instruction to vary across disciplinary contexts while promoting and instilling core pedagogical skills in TAs and meeting broader faculty-wide curricular goals" (Rolheiser et al., 2013). Classes of different sizes currently participate in WIT. In large classes, WIT often provides the support necessary for instructors to continue providing writing assignments despite high enrolment.

Conclusions and Recommendations

As colleges and universities face pressure to educate a larger percentage of an increasingly diverse population, students admitted to PSE bring with them a wider range of language abilities. This effect can be perceived using international literacy survey data. While students scoring at levels 4 and 5 of the OECD's proficiency scale are likely to attend PSE, they are by no means the only students being admitted. Level 3 students also attend university in substantial numbers, as do some who score below this level. The colleges attract students with a wider range of language abilities, including a greater proportion that scores at level 3 and below.

The gap in expectations between high school graduation and postsecondary admission needs to be reconciled. By several measures, students who meet college English requirements should be able to write an error-free, five-paragraph argumentative essay. This standard closely mirrors those outlined in the Ministry of Education's high school curriculum. The ability to read texts critically, to integrate quotations, to summarize or paraphrase a text, to use referencing systems confidently and to conduct basic research are PSE-level skills. First-year students, in many cases, will not be comfortable carrying out these tasks. The admissions expectations are thus very low by many standards, certainly lower than those of many university professors. At the same time, as previously cited statistics demonstrate, students are failing in large numbers to meet even this level of competence.

This project also raises the broader issue of learning outcomes. Higher education in Canada generally enjoys a reputation for quality (CCL, 2009). Without sufficient measures in place, however, it is difficult to gauge how well-founded this reputation is. If employers find PSE graduates' skills to be lacking, we might ask whether college and university training are improving students' literacy skills. There is some evidence from PISA data to suggest that they might not. Arum and Roksa's study (2011), which used the controversial Collegiate Learning Assessment to measure undergraduate learning, concludes pessimistically that about 45% of

students showed no improvement in written communication skills during the first two years of their degree. The lack of exit testing data, however, makes it difficult to pursue this avenue much further. The Ontario Qualifications Framework outlines clear degree expectations for undergraduate bachelor's and honours bachelor's degrees (2007). In both sets, communication outcomes figure prominently. Without further information, though, it is difficult to know whether these expectations are being met (Clark et al., 2011; CCL, 2009). Clark et al. (2011) refer to the Ontario government's "don't ask, don't tell" approach to higher education quality. Governments expected institutions to provide quality training for students but rarely held them to account. This strategy, which maximizes institutional autonomy, works well as long as expectations are being met. The data regarding literacy reviewed in this paper suggest that it may be time to revisit this philosophy.

Finally, the information presented in this report also highlights some areas for future research. First, the expected arrival of new PISA data in December 2013 will allow subsequent studies to carry our lines of inquiry further and identify any improvements in skills. Another study might consider the ways in which both literacy skills and expectations are evolving in light of technology, as both learning in particular but also reading and writing in general increasingly move into digital environments. Perhaps most importantly, the gap in expectations between high school graduation and PSE admission deserves further consideration. On the one hand, Ontario's students fare well on international literacy assessments, and evidence shows that the students with the strongest language skills are attending PSE, especially university. On the other hand, the data from the colleges in particular suggests that students are failing to meet basic admission standards for literacy. Are expectations unrealistically high? Are the tests being used to assess these standards poorly designed or otherwise inaccurate? The reason for this disjunction is unclear and needs further investigation.

The proverbial "elephant in the room" throughout this report has been the question of numeracy, another topic worthy of future study. The OECD's definition of literacy includes a measure of numeracy, another key skill for navigating today's complex world. An investigation similar to this one should be carried out with a focus on the numeracy skills of students entering postsecondary education in Ontario. This is especially important given the current focus on increasing the numbers of students in STEM disciplines, where numeracy skills are key to success. While this paper has focused intentionally on the reading and writing dimensions of literacy, numeracy remains an avenue for future research.

This report closes by making the following recommendations that serve to address the literacy skills of students both entering and leaving Ontario's postsecondary institutions:

- 1) **The appropriate writing standard for students entering postsecondary education needs to be determined.** This report has revealed that different assessments have set different standards to identify acceptable literacy skills for students entering postsecondary education. On the one hand, the OECD's international assessments identify level 3 as a minimum functioning level of literacy. On the other, the OSSLT sets a different standard, and the expectations of postsecondary instructors are at yet another level. These various levels of expectation need to be reconciled into a common standard that can be assessed upon entry.
- 2) An appropriate level of literacy is such a fundamental outcome expected of a postsecondary education that **postsecondary institutions should be assessing entering and exiting literacy skills in all of their students as part of a comprehensive assessment of the achievement of desired learning outcomes.**

References

- Achieve Inc. (2005). *Rising to the Challenge: Are High School Graduates Prepared for College and Work? A Study of Recent High School Graduates, College Instructors, and Employers*. Washington, DC: Achieve Inc.
- Alexander, C. (2010). *Literacy matters: A call for action*. TD Bank Financial Group. Retrieved from <http://www.td.com/document/PDF/economics/special/td-economics-special-literacy0907.pdf>
- Archer, W., & Davison, J. (2008). *Graduate employability: What do employers think and want?* London: Council for Industry and Higher Education.
- Arum, R., & Roksa, J. (2011). *Academically Adrift: Limited learning of college campuses*. Chicago, IL: University of Chicago Press.
- Brown, R., Maldonado, V., & Wiggers, R. (2012). *The Impact of High School Literacy on Postsecondary Pathways*. Paper presented at the Ontario Education Research Symposium.
- Bushnik, T., Barr-Telford, L., & Bussière, P. (2004). *In and out of high school: First results from the second cycle of the Youth in Transition Survey*. Ottawa: Statistics Canada. Catalogue no. 81-595-MIE2004014.
- Bussière, P., Hébert, R., & Knighton, T. (2009). *Educational outcomes at age 21 associated with reading ability at age 15*. Ottawa: Statistics Canada. Retrieved from <http://www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm>
- Canadian Council on Learning. (2007). *The state of learning in Canada: No time for complacency*. Ottawa: CCL. Retrieved from <http://www.ccl-cca.ca/CCL/Reports/StateofLearning/StateofLearning2007.htm>
- Canadian Council on Learning. (2008). *Reading the Future: Planning to Meet Canada's Future Literacy Needs*. Ottawa: CCL. Retrieved from <http://www.ccl-cca.ca/pdfs/ReadingFuture/LiteracyReadingFutureReportE.pdf>
- Canadian Council on Learning. (2009). *Post-secondary Education in Canada: Meeting our needs?* Ottawa: CCL. Retrieved from http://www.ccl-cca.ca/pdfs/PSE/2009/PSE2008_English.pdf
- Canadian Press. (2010, January 31). Students Failing English because of Twitter, Facebook. Retrieved from <http://www.ctvnews.ca/students-failing-english-because-of-twitter-facebook-1.479463>
- Clark, I. D., Trick, D., & Van Loon, R. (2011). *Academic Reform: Policy Options for Improving the Quality and Cost-Effectiveness of Undergraduate Education in Ontario*. Montreal: McGill-Queen's University Press.
- Colleges Ontario. (2009). *Environmental Scan 2009*. Toronto: Colleges Ontario.
- Collins, T. J. (1998). *The High School/Post-Secondary Transition*. Toronto: CMEC. Retrieved from <http://publications.cmec.ca/postsec/transitions/en/431.collins.pdf>
- Conference Board of Canada. (2006). *Literacy, Life and Employment: An Analysis of Canadian IALS Microdata*. Ottawa: Conference Board of Canada.
- Côté, J. A., & Allahar, A. L. (2007). *Ivory Tower Blues: A University System in Crisis*. Toronto: University of Toronto Press.

- Coulombe, Serge, Tremblay, Jean-François, & Marchand, Sylvie. (2004). *Literacy Scores, Human Capital and Growth Across 14 OECD Countries*. Ottawa: Statistics Canada. Catalogue no. 89-552-MIE.
- Davies, S., & Aurini, J. (2010). *The Ontario Summer Literacy Learning Project*. Toronto: Ministry of Education, Literacy and Numeracy Secretariat.
- Dunn, R., & Carfagnini, A. (2010). *First Year Transitions: An Evaluation of Nipissing University's UNIV 1011*. Toronto: Higher Education Quality Council of Ontario.
- Education Quality and Accountability Office. Government of Ontario. (2011b). *Information Bulletin: OSSLT 2010-2011*. Toronto: Queen's Printer.
- Essential Skills Ontario. (2012a). *Literacy and Essential Skills in Ontario*. Toronto: Essential Skills Ontario.
- Essential Skills Ontario. (2012b). *Stronger Communities*. Toronto: Essential Skills Ontario.
- Fisher, R., & Hoth, W. (2010). *College-Level Literacy: An Inventory of Current Practices at Ontario's Colleges*. Toronto: Higher Education Quality Council of Ontario.
- George Brown College & Academica Group Inc. (2011). *The Communications Adjunct Model: An Innovative Approach to Language and Literacy Remediation for Adult Learners*. Toronto: Higher Education Quality Council of Ontario.
- Gilmour, M. (2010, November). Students can't write. *Maclean's*. Retrieved from <http://oncampus.macleans.ca/education/2010/11/19/students-cant-write/>
- Graves, R., Hyland, T., & Samuels, B. M. (2010). Syllabi analysis: Undergraduate writing assignments at one Canadian university. *Written Communication*, 27(3), 293-317.
- Green, D. A., & Riddell, W. C. (2012). *Ageing and Literacy Skills: Evidence from Canada, Norway and the United States*. Bonn, Germany: Institute for the Study of Labor. Discussion paper no. 6424. Retrieved from <http://ftp.iza.org/dp6424.pdf>
- Hinton, A., Rogers, W. T., & Kozlow, M. (2010). *Keeping an Eye on Literacy: Tracking the Progress of Students Who Were Unsuccessful on or Did Not Participate in the 2006 Ontario Secondary School Literacy Test*. Toronto: EQAO.
- Human Resources and Skills Development Canada. (2012). *Literacy and Essential Skills definitions*. Retrieved from <http://www.hrsdc.gc.ca/eng/workplaceskills/LES/definitions/definitions.shtml>
- Human Resources and Skills Development Canada & Statistics Canada. (2005). *Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey 2003*. Ottawa: Statistics Canada. Catalogue no. 89-617-XIE.
- Hyland, T. A., Howell, G., & Zhang, Z. (2010). *The Effectiveness of the Writing Proficiency Assessment (WPA) in Improving Student Writing Skills at Huron University College*. Toronto: Higher Education Quality Council of Ontario.
- Kerr, A. (2011). *Teaching and Learning in Large Classes at Ontario Universities: An Exploratory Study*. Toronto: Higher Education Quality Council of Ontario.

- King, A. J. C., Warren, W. K., King, M. A., et al. (2009). *Who Doesn't Go To Post-Secondary Education?* Toronto: Colleges Ontario.
- Knighton, T., Brochu, P., & Gluszynski, T. (2010). *Measuring Up: Canadian Results of the OECD PISA Study, The Performance of Canada's Youth in Reading, Mathematics and Science 2009 First Results for Canadians Aged 15*. Ottawa: Statistics Canada. Catalogue no. 81-590-XIE.
- Knighton, T., & Bussière, P. (2006). *Educational Outcomes at Age 19 Associated with Reading Ability at Age 15*. Ottawa: Statistics Canada. Catalogue no. 81-595-MIE2006043.
- Lennon, M. C., Zhao, H., Wang, S., & Gluszynski, T. (2011). *Educational Pathways of Youth in Ontario: Factors Impacting Educational Pathways*. Toronto: Higher Education Quality Council of Ontario.
- Levin, H. M., & Calcagno, J. C. (2008). Remediation in the Community College: An Evaluator's Perspective. *Community College Review*, 35 (3), pp. 181-207.
- Martin Prosperity Institute. (2009). *Ontario in the Creative Age*. Toronto: Martin Prosperity Institute.
- Ministry of Training, Colleges and Universities. Government of Ontario. (n.d.). *Essential Employability Skills*. Retrieved from <http://www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/essential.html>
- Ministry of Training, Colleges and Universities. Government of Ontario. (2009). *Ontario Qualifications Framework*. Retrieved from <http://www.tcu.gov.on.ca/pepg/programs/oqf/>
- National Commission on Writing in America's Schools and Colleges. (2003). *The Neglected 'R': The Need for a Writing Revolution*. Retrieved from <http://www.nwp.org/cs/public/print/resource/2523>
- Ontario Council of Academic Vice-Presidents. (2007). *Guidelines for University Undergraduate Degree Level Expectations*. Toronto: COU. Retrieved from <http://www.cou.on.ca/publications/reports/pdfs/university-undergraduate-degree-level-expectations>
- Organisation for Economic Co-operation and Development & Statistics Canada. (2000). *Literacy in the Information Age: Final Report of the International Adult Literacy Survey*. Paris: OECD.
- Organisation for Economic Co-operation and Development & Statistics Canada. (2011). *Learning for Life: Further Results from the Adult Literacy and Life Skills Survey*. Ottawa: Statistics Canada. Catalogue no. 89-604-X.
- Peter D. Hart Research Associates, Inc. (2008). *How should colleges assess and improve student learning? Employers' views on the accountability challenge*. Washington, DC: Peter D. Hart Research Associates.
- Procter, M. (1995). *Post-Admission Assessment of Writing: Issues and Information*. Internal report submitted to the University of Toronto. Retrieved from <http://www.utoronto.ca/writing/reportw.html#200>
- Rae, Rob. (2005). *Ontario: A Leader in Learning*. Toronto: Queen's Printer.
- Rolheiser, C., Seifert, T., McCloy, C., Gravestock, P., Stewart, G., Greenleaf, E., Burnett, M., Carpenter, S., Pottruff, B., & McKean, S. (2013). *Developing Teaching Assistants as Members of the Teaching Team*. Toronto: Higher Education Quality Council of Ontario.
- Samuels, B., McDonald, K., & Misser, E. (2013). *Writing Instruction Using an Online Assignment Planner*. Toronto: Higher Education Quality Council of Ontario.

- Sattler, P., & Peters, J. (2012). *Work-Integrated Learning and Postsecondary Graduates: The Perspective of Ontario Employers*. Toronto: Higher Education Quality Council of Ontario.
- Schmitz, A. (2013). *The Impact on Writing Skills of Tablets in College Developmental English Classes*. Toronto: Higher Education Quality Council of Ontario.
- SPR Associates Inc. (2008). *Acquiring Literacy Skills: A Comparison of Provincial and International Results from PISA and IALSS*. Toronto: Council of Ministers of Education, Canada.
- Standing Committee on Human Resources, Social Development and the Status of Persons with Disabilities. Government of Canada. (2008). *Employability in Canada: Preparing for the future*. Ottawa: House of Commons.
- Statistics Canada. (2005). *Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey*. Ottawa: Statistics Canada. Catalogue no 89-617-XIE.
- Statistics Canada. (2013). *Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies*. Ottawa: Statistics Canada. Catalogue no. 89-555-X.
- Stewart, S. (2009). *Will You Want to Hire Your Kids? Will Anybody Else?* Ottawa: Conference Board of Canada.
- Tamburri, R. (2007, November). Some universities tighten admission standards. *University Affairs*. Retrieved from <http://www.universityaffairs.ca/some-universities-tighten-admission-standards.aspx>
- Toronto District School Board. (2012). *EQAO Grade 10 Literacy Results 2011-2012*. Retrieved from http://www.tdsb.on.ca/_site/ViewIItem.asp?siteid=9976andmenuid=5813andpageid=5060
- University of Waterloo. (2012). *University of Waterloo 2012-2013 Undergraduate Calendar*. Retrieved from <http://ugradcalendar.uwaterloo.ca>
- Willms, D. J. (2004). *Variation in Literacy Skills among Canadian Provinces: Findings from the OECD PISA*. Ottawa: Statistics Canada. Catalogue no. 81-595-MIE2004012.



Higher Education
Quality Council
of Ontario

An agency of the Government of Ontario