

Ontario Adult Literacy Curriculum Framework

Foundations of Assessment

Ontario Ministry of Training, Colleges and Universities

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What is this document about?

Foundations of Assessment provides background information about assessment practices, tools, and principles. This background information and the considerations arising from it are guiding the activities of the developers of the Ontario Adult Literacy Curriculum Framework (OALCF). Another purpose of the document is to begin to establish a common language to facilitate meaningful discussion about assessment practices in Ontario.

This document

- defines assessment
- discusses what the reasons for assessing literacy are and who uses assessment results
- describes how assessment is categorized
- details the two new OALCF assessment strategies: goal completion and learner gains
- talks about different kinds of assessment tools
- describes current OALCF research activities in assessment

What is assessment?

Assessment in adult literacy contexts is any process or procedure that gathers information for making decisions about a learner’s knowledge, skills, and behaviours. It forms a critical part of everyday activities in literacy programs, as decisions are made throughout the learning process to determine how best to meet learners’ needs.

Assessment is carried on at different times throughout the instructional process. However, regardless of when assessment occurs, its primary purpose is to give learners, practitioners, and other stakeholders an opportunity to critically appraise a learner’s past and present as specific and realistic goals are set. Furthermore, assessment can provide an opportunity for determining whether or not a literacy program is providing quality service.

Assessment includes a large range of approaches from informal procedures, such as intake interviews to collect information about a learner’s current literacy practices, to formal standardized assessments, or tests, to measure precisely how much a learner has progressed along an established scale.

Assessment for accountability

Assessment is an aspect of a broad range of accountability activities that can judge program effectiveness and inform stakeholders about program improvement. However, as Merrifield (1998) has identified, what is counted too often ends up becoming what counts in program practice and decision making—highlighting the need to carefully examine the ways in which assessment is intended to inform decisions about program improvement.

In the last decade, Ontario’s Literacy and Basic Skills (LBS) Program has moved towards more detailed accountability systems to measure and assess the outcomes of adult literacy programming (Grieve, 2007). LBS-funded agencies have moved away from only counting how many learners attend a literacy program for what length of time to detailing the outcomes of learner participation, such as how many learners have met their independence, employment, or educational goals when exiting the LBS program. This practice has embedded accountability into the day-to-day instructional work of adult literacy practitioners.

Why do we assess literacy?

Literacy practitioners conduct assessments for a variety of purposes. When a learner has reached a certain point in a program, assessment can often provide meaningful information about his or her needs or progress.

Assessment may also be conducted to provide program administrators with information about how their materials and instructional approaches are serving learners and other stakeholders.

Assessment results can have significant impacts not just on learners' progress, but on their lives and livelihoods as well. Assessment can determine what content to address in a learning situation, or when a learner should move from one level to another within a literacy program. More importantly, assessment results may determine a learner's eligibility for postsecondary programs, employment, or income-support benefits. Assessment is therefore a critical component of literacy training, contributing in a variety of ways to a learner's success both during and after her or his participation in an LBS program.

Fair assessment principles

Assessments are used primarily to inform decisions, and every decision has consequences. To ensure a fair and equitable assessment of all learners for OALCF purposes, LBS-funded agencies need to apply fair assessment principles that take into account the

- nature of the decisions to be made
- individuals and organizations these decisions will directly or indirectly affect
- procedures for gathering information

The following principles of fair assessment practices have been summarized from the work of the Joint Advisory Committee (1993) and the Joint Committee on Testing Practices (2004):

- An assessment is a procedure, not a document.
- Consequences associated with decisions based on assessment should be the driving force in selecting appropriate assessment tools and procedures.
- Assessments should be suitable for the backgrounds and needs of learners and should be related to their instructional goals.
- Assessments should be free of bias, including cultural bias, gender bias and linguistic bias.
- Basing a judgment or decision about a learner on a single measure is never advisable; therefore, outcomes should be based on multiple assessment methods.
- Instructions to learners should be clear, and examples should be provided.
- Scoring procedures, rating scales and checklists should be clear and consistent.
- Assessment instruments, procedures, and the interpretation of results should be transparent.
- Assessments should be continually evaluated for their appropriateness.
- Individuals or organizations that apply assessment results have the ultimate responsibility for making decisions and defending their integrity.
- Assessments should be chosen based on purpose and construct, validity for the intended purpose, and reliability.

- Assessment methods should reflect teaching objectives and approaches.
- Written policies should be established to guide all assessment decisions.

Who uses assessment results?

The Literacy and Basic Skills (LBS) Program has the following four primary audiences, or end users, of assessment results:

1. learners
2. practitioners
3. other educational institutions, training providers and employers
4. LBS Program funder

Each of these four groups has a slightly different interest in LBS assessment, and each group values assessment in different ways and for different purposes.

1. **Learners** want to know how they are progressing and whether or not they will be able to develop the literacy needed to support their goals.
2. **Practitioners** want to inform learners of their progress and want to use assessment results to help with program planning and program improvement.
3. **Other educational institutions, training providers, and employers** may want to determine whether or not a potential participant will be able to manage program or job requirements.
4. **The LBS Program funder** is concerned about accountability and may need to determine whether or not programs are providing an expected level of service and to assure others, such as other Ministry staff and the public, that LBS programs are providing quality service facilitating positive learner outcomes.

How do we categorize assessment?

We use the following broad categories to group assessment:

- **Intake Assessment:** An intake assessment is administered either before or at the point when a learner begins her or his literacy program. Intake assessments typically obtain information to help program staff decide about programming levels and content. In LBS programs, learner information and other tracking data are collected and reported at the intake stage.
- **Ongoing Assessment:** An ongoing assessment is administered while a learner is attending programming. Ongoing assessments, or formative assessments, are used to
 - monitor learner progress
 - identify ways to help learners develop the abilities to achieve their goals
 - identify any barriers to achieving their goals

- **Exit Assessment:** An exit assessment is administered at the end of a program. Exit assessments, or summative assessments, are used to
 - determine the skills, knowledge, and behaviours learners have gained during their programming
 - identify whether learners have met their learning goal

In many cases, exit assessments can confirm promotion readiness when learners are ready to transition out of their current program and into further education and training programs, the workplace, or elsewhere.

- **Gains Assessment:** A gains assessment is administered at any point when information is required to make comparisons about the progress of learners as a group within or across programs.

Intake, ongoing, and exit assessments are familiar to LBS service providers that currently report learners' LBS levels at entry and exit. However, the OALCF will now support the reporting of a learner's progress toward goal completion. Furthermore, learner gains assessment, whose primary purpose is to furnish data for program accountability, will, in time, be introduced to Ontario's LBS Program.

What are the two new OALCF assessment strategies?

The OALCF will develop the following two new assessment strategies for LBS programs:

1. goal completion
2. learner gains

These two assessment strategies will enable the Ministry, practitioners, and learners to know whether or not

- learners have increased their identified skills, knowledge, and behaviours while in the LBS program
- learners have made progress towards their learning goals or have successfully achieved them
- The LBS Program has helped Ontario learners make gains in achieving targeted skills

Goal completion as an assessment strategy

Goal completion means that learners have achieved everything that they have identified on their LBS learner plans. These plans reflect what is relevant both to the individual needs of each learner and to the goal requirements for employment, further education and training, or independence.

Goal completion as an assessment strategy is being developed through OALCF. Although LBS-funded agencies currently use goal completion as one of their assessment-related indicators along with LBS levels and outcomes, they have not had the tools to consistently measure goal completion.

Linking goal completion to skills development, task performance, social practice, and change

To consider the program elements that contribute to goal completion, we need to look at literacy learning in general, and the different ways to discuss and organize it. To guide this general discussion, we will use the terms

skills development, task performance, social practice, and change. Goal completion connects to these four terms that are involved in everyday literacy work. In addition, the terms are extremely useful in any discussion of adult literacy assessment, as they help to highlight important debates, tensions, and perspectives among literacy service providers.

Literacy as skills development

Literacy skills can be thought of as the individual threads in the woven fabric that makes up literacy (Belfiore, Defoe, Folinsbee, Hunter & Jackson, 2004). While the threads, or skills, are an integral element of literacy learning, they lose their meaning when pulled apart and looked at in a discrete and decontextualized manner. Yet, emphasizing the development of literacy skills can be very appealing, as skills are easier to describe, test, and use for reporting purposes. In addition, many assume that literacy skills are stable and readily transferrable to a variety of contexts. However, research reveals that only the most basic component skills—reading left to right, grammar, and decoding—are readily transferable (Mikulecky, Albers & Peers, 1994).

Literacy as task performance

If skills are the individual threads in a literacy fabric, then tasks are its patterns. Ideally, the patterns should reflect the way literacy is used in day-to-day life, not only the way skill threads can be woven together. The OALCF uses a task-based approach to reflect the way learners use literacy in everyday life, whereas the current LBS system uses tasks or demonstrations to show skill mastery.

For example, a learner’s task may be to write an email. In the current LBS approach to developing tasks for demonstration purposes, the email task might be judged successful when the learner uses complete sentences, proper formatting, and consistent verb tenses.

In comparison, the OALCF’s task-based approach connects the way learners use literacy for different purposes, in different contexts, and within different cultural and linguistic groups. Instead of simply writing the email, an OALCF task would include a description of the email’s purpose, audience, and settings.

Literacy as a social practice

Seeing literacy as a social practice is seeing literacy in its entirety—the threads, patterns, and fabric that lend themselves to many literacy uses in the home, at work, in the community, or in learning settings. The list below highlights some important shifts that have occurred in our understandings of literacy. While the list draws from more studies than those cited, the cited authors provide compelling and accessible examples (Barton & Hamilton, 1998; Belfiore, et. al., 2004; Brandt, 2001; Darville, 2001; Heath, 1983; Reder & Davila, 2005).

- The way we use and value literacy changes over time.
 - For example, compare what people needed to know about literacy a century ago to what they need to know now.
- Technology and different tools change literacy.
 - For example, compare how writing and thinking changes when using a pencil, typing on a keyboard, or texting on a cell phone.
- People’s past experiences and current circumstances shape their feelings about literacy and its perceived role in their lives; future uses for literacy and reasons for attending a literacy program will also affect literacy learning and learning in general.
 - For example, consider how people’s experiences with learning to read and write in elementary

school might affect their participation in their current adult literacy program.

- Literacy and other forms of communication shape our ways of knowing and being in the world.
 - For example, consider how American Sign Language (ASL) shapes communication, interaction, and understanding differently than print.
- Some literacies are more dominant than others, marginalizing certain groups who are not a part of a dominant literacy culture. In addition, literacy can be regulated and produced in ways that unintentionally and intentionally exclude others.
 - For example, consider how the term "standard English" is used to suggest there is a single correct way of writing that disregards the role of dialects and technology.
- The purposes for literacy and settings in which it is used shape literacy.
 - For example, compare the difference between writing an email to keep in touch with a friend and writing an email to a supervisor to request a leave during a busy period at work.

Literacy programs address these complexities when they look at text beyond the page and incorporate a variety of different activities and approaches into their day-to-day work, such as discussions, role-plays, project-based learning, arts-based activities, the use of social media, hands-on and experiential activities, and partnerships with employers and community organizations. The OALCF's task-based approach has opened the door to fully explore the potential of incorporating an understanding of literacy as a social practice.

Literacy as an agent of change

Understanding literacy as an agent of change acknowledges that entering a program and developing new uses for literacy are about change. People change as they learn new literacy practices, and people often enter literacy programs to make changes in their lives. These changes could relate to a learner's educational attainment, employment objectives, or independence goals. Change may occur individually, within families, and in communities. Literacy learning and program participation can support learners in making and navigating through these changes.

We have incorporated this broad discussion of literacy into the goal completion assessment strategy for the following two reasons:

- It ensures that literacy assessment in the OALCF is viewed and understood in the most comprehensive way possible.
- It acknowledges the importance of a variety of approaches to assessment.

Too often, skills alone become the focus of literacy assessments, whether the assessments are standardized or non-standardized. Readily available, skills-based assessments can provide a straightforward indicator of literacy progress since the criteria are deemed to be simply a presence or absence of a particular skill. However, skills-based assessments reveal only a glimpse of the whole picture that is literacy learning. A comprehensive and learner-centred approach to assessment includes tools and processes that also look at task performance, social practices, and changes in learners' lives.

Tools to assess goal completion

LBS service providers currently use a variety of assessment tools. These tools are organized by the

- range of formality, from informal to formal, including tools that fall somewhere in between
- aspect of literacy they are measuring, for example, skills, task performance, social practice, or change

Using informal or formal tools for assessment

When making decisions about learners and programs based on assessments, considering the formality of the tool is essential. Lower-stakes decisions determining, for example, when a learner should move to the next level in a literacy program, are usually better informed by informal assessment tools. Informal assessment tools are those that a practitioner or individual program develops.

Higher-stakes decisions affecting the lives of learners outside the program are usually better informed by more formal and standardized tools. Formal tools are tools usually developed by those with assessment expertise. These formal tools have gone through a transparent and rigorous process to determine their *validity*, ensuring that they measure what they say they will measure, and to determine their *reliability*, ensuring that they measure the same way under the same conditions with the same sorts of test takers.

Categorizing tools according to the particular aspect of literacy they measure

In addition to categorizing tools along the informal to formal range, it is important to recognize the particular aspect of literacy they are measuring—skills development, task performance, social practice, or change. All four aspects are an integral part of learning.

Too often, though, assessments focus primarily on skills-based learning. Even when task-based assessments are used, they are primarily concerned with skill development than with the actual use of literacy practices and the related changes in learners' lives. Explicitly describing skills development, task performance, social practice, and change in an assessment strategy acknowledges the importance of different and distinct types of assessments in a comprehensive assessment strategy. It also confirms that literacy learning progress needs to be judged on more than skills development.

Learner gains as an assessment strategy

Learner gains assessment, used primarily for accountability purposes, collects and uses numerical data about the progress of groups of learners—information that can be compared across programs. Although individual learners are assessed, aggregate scores are of particular interest to funders and other key stakeholders. These scores are often used to identify trends and to inform decisions. Given the need for comparing results, large-scale, standardized tools are the typical choice for measuring learner gains.

As in many jurisdictions, Ontario has identified the need to measure learner gains in adult education programming for the purpose of province-wide reporting. MTCU is currently reviewing this approach and potential tools for measuring learner gains. Key to choosing an appropriate assessment tool is ensuring that it can ultimately meet the needs of both MTCU and literacy learners who are working towards goals related to employment, further education and training, and greater independence.

MTCU is interested in using the 500-point International Adult Literacy Survey (IALS) scale to report learner gains.

Some background information on IALS

IALS was designed as a method to understand the literacy levels of populations as a whole. The impetus for this

large-scale undertaking came from the belief that literacy levels contribute to a nation's competitiveness. By understanding literacy levels, countries were expected to be better prepared to ensure their populations could compete in the knowledge economy.

IALS does not define literacy as a single skill, nor does it make a distinction between those who are literate and those who are not. Instead, IALS measures a population's skills on a 500-point scale in three skill domains:

1. prose literacy
2. document literacy
3. quantitative literacy

In 1994, IALS was administered to representative samples of populations in eight countries, with respondents ranging from 16 to 64 years of age. Through their analysis of the results, Murray, Kirsch and Jenkins (1998) found that the 500-point scale breaks out into five levels of proficiency.

Some background information on the ALL Survey

Between 2003 and 2005, the Adult Literacy and Life Skills (ALL) Survey continued the work begun under IALS. In addition to collecting data on the distribution of adults' prose and document literacy, ALL aimed to examine five additional domains:

1. numeracy
2. problem solving
3. practical cognition
4. teamwork
5. information and communication technology

Researchers in different countries determined that only the following four domains met established criteria and would be assessed in ALL:

1. prose literacy
2. document literacy
3. numeracy
4. problem solving

ALL used the same approach as IALS to measure skill proficiency along a 500-point continuum, with each score denoting a point at which a person had an 80 percent chance of successfully completing tasks associated with a similar level of difficulty (Statistics Canada & Organisation for Economic Co-operation and Development, 2005). This 500-point scoring system is currently being used in the development of commercially available assessment tools, specifically Bow Valley College's TOWES (Test of Workplace Essential Skills) and the Educational Testing Service's PDQ (Prose, Document Use, and Quantitative).

In describing the technical features of this 500-point system, Teresa Kline (2009) points out that individuals' scores along the scale can be compared both within each skill domain and across all skill domains.

Some background information on PIAAC

The next IALS-type assessment, scheduled for 2011, is the Programme for the International Assessment of Adult

Competencies (PIAAC). According to the Organisation for Economic Co-operation and Development (2008), the goals of PIAAC are to

- further expand the range of skills being measured
- include a self-report measure of workplace skills
- use computers to administer the assessment

Group (2009) anticipates that the scores on the PIAAC literacy assessment will be determined as they were for IALS and ALL and that the PIAAC scores will use a 0-500 point scale.

Large-scale surveys, such as IALS, ALL, and PIAAC indicate that literacy skills are related to key educational, health, social and economic outcomes (Murray, Clermont & Binkley, 2005).

Tools to assess learner gains

Given the requirement to compare assessment results across programs and the potentially high stakes associated with learner gains assessment, it is likely that only formal assessments will qualify, as these types of assessments tend to have high degrees of reliability and rigorously standardized procedures—essential features that ensure a sufficient degree of validity.

MTCU is considering adopting a standardized tool to gather information about learner gains for comparison purposes.

Assessment research and related products

Researchers for MTCU are currently carrying out a variety of research activities related to goal completion assessment and learner gains assessment.

Research on goal completion assessment

A team of Ontario researchers is exploring how assessment can be used to indicate goal completion in the OALCF. MTCU expects that by focusing on goal completion, the literacy field will be able to measure progress that looks at more than skills acquisition. OALCF plans to use goal completion indicators, or milestones, to collect information about a learner's progress toward meeting her or his individual needs and the goal requirements for employment, further education and training or independence.

The researchers are also considering how the OALCF will affect the current LBS service providers' use of

- learner plans
- the documentation of progress using demonstrations of a learner's achievements
- the use of various assessment tools at intake, throughout the program, and at exit

They will also identify the supports and training required by practitioners.

To carry out their work, the goal completion researchers are engaged in four key activities:

1. describing progress indicators within a learner's goal path
2. describing progress indicators of goal completion

3. compiling and describing relevant assessment tools
4. developing supports for practitioners

Describing transitions in a learner's goal path

Researchers will investigate how to use goal paths to support learning and how to identify requirements that enable learners to transition to employment, further education and training, or independence. To do this, researchers will explore what a learner may encounter in the next steps of her or his goal path. The information will be useful not only to describe entry and admission requirements for the goal paths of apprenticeship, secondary school credit, and postsecondary, but also to describe common entry processes and expectations for employment. Then, researchers will identify key transition activities for each of these paths.

The unique independence goal path is being looked at differently.

Developing progress indicators for goal completion

OALCF researchers will describe progress indicators, or *milestone tasks*, for goal completion. These tasks provide concrete information about learner progress toward identified goals. Milestone tasks relate to the learner's goal, the requirements of goal transition, and the OALCF competencies.

Compiling and describing relevant assessment tools

Researchers for the goal completion project will collect and present examples of existing non-standardized tools that support a goal completion assessment strategy. The resulting practitioner document will indicate what aspect of literacy the tools are assessing—skills development, task performance, social practice, or changes in learner's lives—and guide practitioners as they choose tools to incorporate into their current intake, ongoing, and exit assessment practices. This research may also identify a possible need to develop different kinds of tools to support goal completion assessment.

Developing supports for practitioners

OALCF researchers are examining ways to support practitioners as they integrate a goal completion assessment strategy into their current assessment and reporting practices. Two key areas of focus are

1. how a goal completion approach may affect learner plan development and the documentation of learner progress for both program planning and reporting
2. what kind of training will practitioners need, and what other considerations are important

Research on learner gains assessment

Ontario is not alone in its interest in learner gains assessment. To learn more about collecting and using numerical data about the progress of groups of learners for comparisons across programs, OALCF researchers are investigating the use of learner gains assessment strategies outside Ontario. This research will provide a foundation for identifying potential challenges that MTCU might encounter when implementing learner gains assessment for the LBS Program and for suggesting approaches to avoid potential pitfalls.

For example, research has revealed the pitfalls of learner gains testing when it results in narrowing the scope of literacy programming. In England, where the *Skills for Life* framework tests reading and numeracy, controversy exists among literacy providers who are concerned that programming has concentrated too heavily and narrowly on the skills tested.

In the United States, literacy instruction has tended to closely mirror test content and test approaches, resulting in much of adult basic education instruction relying on commercially produced texts that explicitly focus on skills development for specific tests, such as TABE and CASAS. This kind of situation can be mitigated if learner gains assessment is seen as only one measure, and other indicators of success, such as goal completion, are clearly articulated.

Measuring learner gains within the OALCF is expected to begin once

- a tool has been identified
- testing conditions have been determined
- appropriate training is available

Reviewing possible assessment tools

A key activity of the learner gains researchers is reviewing examples of possible tools to learn about their features, purpose, format, and target population. In particular, researchers are exploring the extent to which various available assessment tools are compatible with the needs of diverse learners from different linguistic and cultural backgrounds. To enhance the validity of assessment results, the OALCF must ensure that all assessment instruments and procedures are fair to each learner in all LBS delivery streams (culture and language) and goal paths (employment, education, training or independence).

Developing strategies to gather and use test data

Testing situations make many literacy learners feel some degree of discomfort. Unfamiliar testing situations with tests that may include inappropriate content can create even more anxiety. Developing strategies for gathering test data that consider learner needs will enable MTCU to mitigate this situation.

Furthermore, researchers will work with OALCF to explore the degree to which standardized test results can and should be used to make judgments and decisions, and the degree to which these decisions can be considered valid and meaningful. The Ministry will then be in a better position to articulate how it wants test data to affect change and influence programming.

The results of the research on learner gains assessment will be available in a series of MTCU reports.

References

- Barton, D. & Hamilton, M. (1998). *Local literacies: Reading and writing in one community*. London, England: Routledge.
- Belfiore, M.E., Defoe, T., Folinsbee, S., Hunter, J., & Jackson, N. (2004). *Reading work: Literacies in the new workplace*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Brandt, D. (2001). *Literacy in American lives*. Cambridge, England: Cambridge University Press.
- Darville, R. (2001). Adult literacy as social relations: A democratic theorizing. *20th Anniversary Proceedings of the Conference of Canadian Association for Studies in Adult Education (CASAE)* (pp. 61-66). Retrieved from CASAE website <http://www.oise.utoronto.ca/CASAE/cnf2001/darville.pdf>
- Grieve, K. (2007). Assessment for whom and for what? Stepping back to ask important questions about assessment. In P. Campbell (Ed.) *Measures of success: Assessment and accountability in Adult Basic Education* (pp. 123-158). Edmonton, AB: Grass Roots Press.
- Group, P. E. (2009). PIAAC Literacy: A Conceptual Framework. *OECD Education Working Papers*, No. 34. Paris, France: OECD Publications.
- Heath, S.B. (1983). *Ways with words: Language, life and work in communities and classrooms*. Cambridge, England: Cambridge University Press.
- Joint Advisory Committee. (1993). *Principles for fair student assessment practices for education in Canada*. Edmonton, AB: Centre for Research in Applied Measurement and Evaluation.
- Joint Committee on Testing Practices. (2004). *Code of fair testing practices in education*. Washington, DC: American Psychological Association.
- Kline, T. (2009). *Brief introduction to the use of the 500-point scoring system*. Sudbury, ON: College Sector Committee.
- Lytle, S., & Wolfe, M. (1989). *Adult literacy education: Program evaluation and learner assessment*. Retrieved from ERIC database. (ED315665)
- Merrifield, J. (1998). *Contested ground: Performance accountability in adult basic education*. (NCSALL Report No. 1). Retrieved from NCSALL website www.ncsall.net/fileadmin/resources/research/report1.pdf
- Mikulecky, L., Albers, P., & Peers, M. (1994). *Literacy transfer: A review of the literature*. National Center for Adult Literacy (Report TR94-05). Retrieved from ERIC database <http://www.eric.ed.gov/PDFS/ED374340.pdf>
- Ministry of Education and Training. (1998). *Working with learning outcomes: Validation draft*. Toronto, ON: Queen's Printer for Ontario.
- Murray, T.S., Clermont, Y., & Binkley, M. (2005). *Measuring adult literacy and life skills: New frameworks for assessment*. Ottawa, ON: Minister of Industry, Statistics Canada.
- Murray, T.S., Kirsch, I.S., & Jenkins, L.B. (1998). *Adult literacy in OECD countries: Technical report on the first international adult literacy survey*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Center For Education Statistics.
- Ontario Literacy Coalition. (2000). *The level descriptions manual*. Retrieved from the National Adult Literacy Database www.nald.ca/fulltext/levels/levels.pdf
- Organisation for Economic Co-operation and Development. (2008). *The OECD Programme for the International*

Assessment of Adult Competencies (PIAAC). Paris, France: OECD Publications.

Reder, S., & Davila, E. (2005). Context and literacy practices. *Annual Review of Applied Linguistics*, 25, 170-187.

Statistics Canada & Organisation for Economic Co-operation and Development. (2005). *Learning a living: First results of the Adult Literacy and Life Skills Survey*. Ottawa, ON and Paris, France: Ministry of Industry, Statistics Canada, and Organisation for Economic Co-operation and Development.