



DOI: 10.3189/2308-4081/2020-10(2-3)-2

Doctor of Science in Pedagogy, Full Professor, **NATALYA BIDYUK**
Khmelnyskyi National University Address: 11 Instytutska St., Khmelnytskyi,
29016, Ukraine E-mail: biduknm@ukr.net

Doctor of Science in Pedagogy, Full Professor, **YURII KOZLOVSYI**
Lviv Polytechnic National University
Address: 12 Stepan Bandera str., 79013, Lviv, Ukraine
E-mail: yuraubs@gmail.com

Doctor of Science in Public Administration, Full Professor, **MYROSLAV KRYSHYANOVYCH**
Lviv Polytechnic National University
Address: 12 Stepan Bandera str., 79013, Lviv, Ukraine
E-mail: mf0077@ukr.net

LITERACY AND ESSENTIAL SKILLS DEVELOPMENT IN THE CONTEXT OF CANADIAN CORPORATE L&D

ABSTRACT

The research is an attempt to analyze the issues of adult literacy and essential skills (LES) development in the context of corporate education in Canada. Literature review of official documents and scientific works revealed the importance of functional literacy development which encompasses literacy in its traditional understanding and other skills essential for the sustainable development of an individual, company, nation, and mankind. The important role of the private sector in this respect is undisputable. Since Canada is one of the most developed countries in the world, its experience in the area of adult LES development is assumed to be an exemplar for other countries. Because of this, the paper outlines the state of adult LES promotion and enhancement in Canada focusing on the role of the private sector in the process. Digital literacy is regarded as one of the essential skills of the 21st century, thus the experience of Canada in technical upskilling of the working population is considered as well. The research reveals that increasing investment into employees' learning is beneficial for an individual and a company alike. Therefore, significant attention is paid to the experience of Canadian companies in this area. Cooperation of various stakeholders is crucial for addressing the issue of low levels of literacy and essential skills, thus, the paper dwells on some national programs and local initiatives facilitating cooperation between public and private sectors for advancing the literacy level of working adults in Canada. The results of the research wrap up with one of the effective approaches to developing LES training in the corporate context as recommended in the scope of Advancing Workplace Learning, a wide-scale national project dedicated to various aspects of corporate L&D in Canada.

Keywords: literacy and essential skills (LES), digital literacy, adult education, skills gap, workplace learning, learning, and development (L&D), corporate education, Canada.

АНОТАЦІЯ

Дослідження є спробою проаналізувати проблеми грамотності дорослих та розвитку основних навичок (LES) у контексті корпоративної освіти в Канаді. Огляд



літератури офіційних документів та наукових праць виявив важливість розвитку функціональної грамотності, яка охоплює грамотність у її традиційному розумінні та інші навички, необхідні для сталого розвитку особистості, компанії, нації та людства. Важлива роль приватного сектору в цьому відношенні є безперечною. Оскільки Канада є однією з найрозвиненіших країн у світі, її досвід у галузі розвитку ЛЕС для дорослих вважається прикладом для інших країн. У зв'язку з цим, у статті зазначено про стан просування та вдосконалення ЗНЗ для дорослих у Канаді у контексті ролі приватного сектору в процесі. Цифрова грамотність розглядається як одна з найважливіших навичок XXI століття, а тому також враховано досвід Канади щодо покращення технічних навичок працездатного населення. Показано, що збільшення інвестицій у навчання співробітників вигідно як для окремої людини, так і для компанії. Тому значну увагу приділено досвіду канадських компаній у цій галузі. Співпраця різних зацікавлених сторін має вирішальне значення для вирішення проблеми низького рівня грамотності та основних навичок. Таким чином, стаття висвітлює деякі національні програми та місцеві ініціативи, що сприяють співпраці державного та приватного секторів для підвищення рівня грамотності працюючих дорослих у Канаді. Результати дослідження підсумовують один із ефективних підходів до розробки тренінгів ЛЕС у корпоративному контексті, як це рекомендовано у рамках широкомасштабного національного проекту *Advancing Workplace Learning*, присвяченого різним аспектам корпоративного навчання та досліджень у Канаді.

Ключові слова: грамотність та основні навички (LES), цифрова грамотність, освіта дорослих, недостатня кваліфікація, навчання на робочому місці, навчання та розвиток (L&D), корпоративна освіта, Канада.

INTRODUCTION

In the turbulent times of constant change, the ability to develop necessary skills is of immense importance for any individual striving for a decent life. Literacy as a set of functional skills is a foundation for building up further learning in nowadays society. UNESCO World Conference of Ministers of Education on the Eradication of Illiteracy in 1965 declared that functional literacy should be a concern not only of formal educational institutions as the whole society should be involved in the issues related to enhancement and promotion of it (*World Conference, 1965*). This placed the private sector of the economy among key stakeholders in the efforts for expanding functional literacy.

Personnel learning and development is one of the key factors resulting in the success of any business and, eventually, developed state economy. Similarly, the stronger pool of skills a country has, the more advanced economy is built on it (OECD & Statistics Canada, 2005). Corporate learning and development (L&D) function should take literacy and essential skills of personnel into consideration when elaborating and implementing strategies for employees' professional development. Herein, skills gaps analysis becomes a cornerstone for any L&D function or organization as timely identification and addressing of insufficient level of literacy and essential skills (LES) result in a more productive and efficient workforce.

Canada is the state with a highly developed economy. It actively promotes and enhances LES for the welfare of its citizens as well as in the international arena. As evidenced by the Survey of Adults Skills results in the scope of the Programme for the International Assessment of Adult Competencies (PIAAC), Canada reached scores in



literacy, numeracy, and problem-solving in a technology-enriched environment higher than the OECD average. Because of this, the experience of Canada in maintaining high results in adult literacy and its immediate response to skill gaps of the workforce is worth analyzing for other countries to take up the best practices.

THE AIM OF THE STUDY

The research is an attempt to analyze the issues of adult literacy and essential skills (LES) development in the context of corporate education in Canada. The following goals derived from the aim of our study: to outline the main issues of adult LES development in the Canadian corporate context; to dwell on the role of digital literacy of the workforce; to consider the ways of addressing LES gaps in the scope of Canadian corporate education; to conclude the most effective approaches to LES development in the context of corporate L&D in the researched country.

THEORETICAL FRAMEWORK AND RESEARCH METHODS

There is a growing body of research on the issues of adult literacy and essential skills development; however, it is still insufficient enough (Beder, 1999; Krudenier, 2002). According to Comings and Soricone (2007), the following questions require more attention from LES researchers: target audiences (TA) requiring LES training, approaches that work most efficiently for various TAs, ways of learning effectiveness evaluation.

Researchers in the field mostly employ the definitions of literacy coined by international organizations. Recalling education as a fundamental human right, the above-mentioned UNESCO World Conference (1965) recognized adult literacy as an integral part of human development influencing economy and welfare not only of a state but of the whole of mankind. Ten years later the UNESCO member states returned to Iran to reaffirm the statement that literacy should be regarded as a fundamental human right in the Declaration of Persepolis (*Declaration of Persepolis*, 1975). Involvement of the private sector, especially in its cooperation with the public one, into literacy issues were highlighted in the Framework for Action to Meet Basic Learning Needs (*World Declaration*, 1990) and the Hamburg Declaration on Adult Learning (*Adult Education*, 1997). The UN Sustainable Development Goal 4 refers to the necessity of equal education for all and announces common efforts towards eradicating illiteracy among youth and adults. The Incheon Declaration proclaims a commitment to “ensuring that all youth and adults, especially girls and women, achieve relevantly and recognized functional literacy and numeracy proficiency levels...” (*Education 2030*, 2015, art. 10).

Galloway (n.d.) notes that “definitions of literacy have broadened over the past half-century” (p. 3). Now it is widely recognized that “countries with lower skill levels risk losing competitiveness as the world economy becomes more dependent on skills” (OECD, 2013, p.6). Understanding literacy has expanded beyond knowing how to read and write to learning how to acquire information needed for the prosperity of a person in society (*World Conference*, 1965). As defined by UNESCO, literacy enables people “to identify, understand, interpret, create, communicate and compute using printed and written materials” (*Aspects of Literacy Assessment*, 2005, p. 40). A functionally literate person can read, write, and calculate “for his/her own and the community’s development” (Unesco & General Conference, 1979, p. 18).

An increasing number of studies are dedicated to digital literacy which is essential for any individual living in the 21st century. Though the nature of the concept is rapidly changing, attempts to define it and elaborate its classifications were made by some scholars (Boechler, 2014; Chinien & Boutin, 2011; Stordy, 2015). Some research includes digital



literacy in the broader term of “literacy” (*Menial No More*, 2011). Digital skills for the workforce are sometimes differentiated as a separate level of the essential skills which include office application proficiency, social media, IT language understanding (*Digital Skills*, 2016). Hadziristic (2017) argues that “there is no single measure of digital literacy” (p. 12) and claims such wide-scale studies as PIAAC to be imperfect. Since technologies are constantly advancing, it is difficult to define boundaries of the term, therefore, digital literacy is widely associated with adaptability to change in a technology-enhanced environment.

A relatively many researches were dedicated to the importance of LES training at the workplace (Ananiadou, et al., 2004; Gray, 2006; Salomon, 2009); however, Benseman (2012) claims that few of them are “based on original research studies” (p. 29). The analysis presented in this paper is based on the publicly available information published by Statistics Canada, Organisation for Economic Cooperation and Development (OECD), Conference Board of Canada, Brookfield Institute for Innovation + Entrepreneurship, Frontier College.

Analytical methods of scientific research are applied in order “to obtain, decode or make explicit information which is hidden, encoded or entailed by the information in a preexisting knowledge base” (Kosterec, 2016, p. 84). Methods of systematization and generalization enabled a thorough analysis of the findings of the above-mentioned organizations. Induction and deduction led to a more prudent interpretation of specific concepts and revealing regularities as well as discrepancies among concepts and approaches. These methods allowed us to retrieve and interpret valuable information on literacy and essential skills development in the researched country.

RESULTS

Canada is a signatory nation of major international organizations proclaiming education and thus literacy as a fundamental human right. In 1976 Canada ratified the Bill of Human Rights which states that fundamental education should be “encouraged or intensified as far as possible for those persons who have not received or completed the whole period of their primary education” (*International Covenant*, 1966). It implies the importance of LES development in various contexts throughout an individual’s life, including at the workplace.

The Government of Canada’s Office of Literacy and Essential Skills (OLES) claim that LES is “needed for work, learning and life”, they are “the foundation for learning all other skills” and “help people evolve with their jobs and adapt to workplace change” (Employment and Social Development Canada, 2015a). The Office associates essential skills with literacy and enlists nine of them: reading, writing, numeracy, thinking, working with others, document use, oral communication, computer use/digital skills, and continuous learning (Employment and Social Development Canada, 2015b). Hayes (as cited in Jackson & Schaetti, 2013) stresses the importance of literacy complexity for “firm and national prosperity”, but first and foremost for an individual to be “able to participate fully as a Canadian citizen” (p. 7).

There is a direct correlation between levels of proficiency among the working population and their wealth. Generally, earnings of literate individuals on average tend to be 70% higher than those lacking essential skills (Heisz et al., 2016). Additionally, people with low literacy proficiency are likely to experience long periods of unemployment. The data from the Programme for the International Assessment of Adult Competencies (PIAAC) evidenced that Canadians show results that are above average when it comes to assessing literacy and essential skills. Nevertheless, the authorities are concerned that 17%



of the population showed the literacy proficiency level one (Heisz et al., 2016). 32% of adult Canadians demonstrated level two.

The response of Canadian authorities was instant. Currently, the Government of Canada's National Essential Skills Initiative funds the National Research Project on Literacy as a Poverty Reduction Strategy with the main purpose to provide low-skilled adults "with the knowledge, confidence, resilience, and autonomy they need to overcome the challenges they face and live productive lives" (*Literacy and Essential Skills*, 2019, p.2). The Project puts a lot of effort into collecting and analyzing data for various stakeholders, including the private sector, for them to make grounded decisions on increasing investments into LES development of adult Canadians.

Digital literacy of the workforce is an essential issue for talent development and Canadian organizations pay a lot of attention to its promotion and enhancement. The OECD's PIAAC project revealed that Canadians were above average in technology use (OECD & Statistics Canada, 2005). On the contrary, there is a lack of ICT-skilled talent to fill in all related positions (Wolfe, 2016). This shortage is addressed by attracting professionals from abroad: immigrants constitute 40 % of ICT specialists in the country (ICTC, 2016). Overall, Canada does not have any standards for digital literacy upskilling at the workplace (Hadziristic, 2017). In 2010 the Ministry of Industry Canada launched the Digital Economy Strategy Consultation intending to stir discussion for the elaboration of a national digital literacy strategy. Large companies, such as IBM and Microsoft, were regarded as important partners in this process (ICTC, 2010). A Government of Canada called for increasing of "understanding of the relationship between digital skills and relevant labor market and social outcomes" (Government of Canada, n.d.). The strategy pronounced the importance of LES development beyond basic education, in the workplace inter alia.

Training, especially on LES development, covered by an employer is beneficial for both, an employee and business. Some studies demonstrate a strong correlation between LES development of employees and enhanced performance and job retention (Gyarmati et al., 2014). Other advantages include "more customers satisfaction, productivity gains, and fewer production mistakes" (CB Insights, 2014). Because of this, the issue of investing in LES development at the workplace became a topical issue for Canadian employers. Multiple types of research of corporate L&D show the trend of increasing investment into employees' learning (ATD, 2019; Cotsman & Hall, 2018). During the last decade of the 20th century and by 2010 the average annual sum spent on training of an employee dropped by 40 %. This tendency changed later and with each year the expenditures increase. However, these indicators for Canadian companies still lag behind the US ones (Cotsman & Hall, 2018). The research has shown that undertaking corporate learning programs eventually leads to paying raise by 5–9 %. When low-skilled workers are trained, the salaries increase by 15 % (Ci et al., 2015). At the same time, companies tend to invest much more (around 70 % of their training budget) into the development of their higher-ranking managers (Ci et al., 2015). This is inconsistent with the fact that the development of a low-skilled workforce requires more training to create high value in the long term.

The CB Insights names several excuses Canadian companies use for not providing workplace LES training. The first argument against it is the perception that literacy training is the responsibility of formal primary and secondary educational institutions. While this is true and the Canadian government puts a lot of effort into the development of education, adults of working age might have lacked proper training at school in the past. Another excuse relates to the fear of losing trained employees. This is irrational since employing



unprofessional people is much more degrading for the company. Some companies are not convinced inefficiency of LES training costs, while numerous studies proved the opposite. And finally, LES training is sometimes regarded as not affordable for business. The solution to this is launching multiple initiatives to promote adults' LES development and enable it in various contexts (CB Insights, 2014). As small and medium businesses usually do not secure sufficient costs to support a well-developed L&D function, there was a suggestion to subsidize small and medium Canadian businesses to allow them to finance LES training of employees (Asliturk et al., 2016).

Since literacy proficiency is important for companies as well as for employees' prosperity, L&D organizations have to put efforts not only into ensuring learning opportunities but also in motivating and engaging the workforce into self-development. Windisch (2015) points out that, though workplace learning can help an employee develop LES, low-skilled adults are not able to find the job motivating or offering proper training in the area. Additionally, some studies of Canadian work-related training confirm that motivation from labor unions and all stakeholders at the workplace, like managers and colleagues, play an important role for low-skilled workers' desire to develop LES (Bélanger and Robitaille, 2008).

Cooperation and knowledge sharing between various stakeholders, private and public sector, is actively encouraged in Canada. One of the initiatives aimed at enhancing the LES of working adults, especially women, in the Workplace Services Training Program from the Calgary Immigrant Women's Association (CIWA). The program is dedicated to literacy upskilling of adults in communities and cooperation with employers on the development of LES curricula for workplace learning. In the scope of this cooperation, specific learning materials, for example, illustrations of objects used during work, are created to cover the identified needs (*Literacy and Essential Skills*, 2019).

Another bright example of cooperation between public and private sectors is the Advancing Workplace Learning project funded by the Government of Canada's Adult Learning, Literacy, and Essential Skills Program (ALL ESP). It is a pool of valuable resources for efficient and effective corporate training.

In the scope of the Advancing Workplace Learning project, the list of recommendations for companies on LES programs development at the workplace has been coined. The first step in approaching LES enhancement at the workplace is an analysis of available resources on LES training, especially from external providers. Very often such services or materials are offered free of charge. Then, thorough needs and goals assessment should be conducted either internally by the efforts of corporate L&D or externally by a specialized local provider. Another piece of advice is to create a team within a company dedicated to LES development of the workforce. Such a team should include representatives of various stakeholders: some employees, labor union members, managers, etc. The next stage of the process is instructional design. The most common learning formats used for literacy training at the workplace are "classes, small groups, or workshops taught by instructors from outside the company" (CB Insights, 2014). Budgeting is essential, so companies have to decide on the approaches best suited to their needs which are cost-efficient and affordable at the same time. Funding programs from the government or local specialized organizations might be considered as well. One more important aspect of LES development at the workplace is the relevant and considerate marketing campaign. Employees should see the value in undertaking such training. The last recommendation for employers is to work on creating a culture of continuous learning and integrating it into a



broader corporate culture. Putting efforts into promoting learning within an organization is the best solution for any company from a long-term perspective.

CONCLUSIONS

Our investigation has shown the importance of developing literacy and essential skills in the workplace. The experience of Canada in this respect can be an exemplar for other countries. Timely response to identified skills gaps is essential for the effectiveness of LES training. Canadian authorities encourage the research in the area and provide funding and support to cover the literacy gaps of the adult population.

Digital literacy is usually regarded as an aspect of the broader concept of literacy. Promotion and enhancement of digital literacy training are of paramount importance in the rapidly changing 21st century. The shortage of ICT professionals in Canada is partially covered with attracting foreign specialists. At the same time, there are some programs at local and national levels dedicated to the technical upskilling of adults and support of business in this respect.

Enhancement of employees' LES level has undisputable benefits for the company as it improves performance, decreases turnover, leads to more happy customers. Therefore, employers should consider increasing investments in LES learning of low-skilled workers. Canadian companies show this tendency within the last decade. At the same time, the government provides financial support for adults who need LES training for their jobs. Cooperation of various stakeholders is crucial for addressing the issue of low levels of literacy and essential skills. There are some wide-scale programs and local initiatives facilitating cooperation between public and private sectors for advancing the literacy level of working adults in Canada.

Companies should consider the following steps in approaching the development of LES training for the workforce: resources analysis, learning needs analysis, forming a dedicated team inside a company, instructional design conducted by a corporate L&D, external provider, or both, budgeting, marketing of an initiative, constant development of learning culture inside an organization.

All in all, the presented study reveals some of the Canadian best practices in the promotion and development of literacy and essential skills of adults in the corporate context. Other countries should follow the example of the Canadian public and private sectors in addressing the knowledge and skills gaps of the working population.

REFERENCES

1. *Adult Education. The Hamburg Declaration. The Agenda for the Future.* (1997). UNESCO-Institute for Education.
2. Ananiadou, K., & National Research and Development Centre for Adult Literacy and Numeracy. (2004). *Identifying effective workplace basic skills strategies for enhancing employee productivity and development* [Scoping and pilot study report]. The National Research and Development Centre for Adult Literacy and Numeracy (NRDC).
3. Asliturk, E., Cameron, A., & Faisal, S. (2016). *Skills in the Digital Economy: Where Canada Stands and the Way Forward.* Information and Communications Technology Council.
4. *Aspects of Literacy Assessment. Topics and Issues from the UNESCO Expert Meeting.* (2005). UNESCO.



5. Beder, H. (1999). *The Outcomes and Impacts of Adult Literacy Education in the United States: (371752004-001)* [Data set]. American Psychological Association. <https://doi.org/10.1037/e371752004-001>
6. Bélanger, P., & Robitaille, M. (2008). *A Portrait of Work-Related Learning in Quebec*. Centre for Interdisciplinary Research and Development and Advanced Studies on Lifelong Learning, Université du Québec à Montréal. <http://en.copian.ca/library/research/ccl/quebec/quebec.pdf>
7. Benseman, J. (2012). Literacy and Workplace Change: Evaluation Findings from 18 Workplace Literacy Programs. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 1(2), 28–43.
8. Boechler, P. M., Dragon, K., & Wasniewski, E. (2014). Digital Literacy Concepts and Definitions: Implications for Educational Assessment and Practice. *International Journal of Digital Literacy and Digital Competence (IJDLC)*, 5(4), 1–18. <https://doi.org/10.4018/ijdlc.2014100101>
9. Canada, E., and S. D. (2015a). *Skills definitions and levels of complexity* [Policies]. Aem. <https://www.canada.ca/en/employment-social-development/programs/essential-skills/definitions.html>
10. CB Insights. (2014, May 15). How essential-skills training unlocks business value. *Canadian Business*. <https://www.canadianbusiness.com/insights/literacy/>
11. Chinien, C., & Boutin, F. (2011). *Defining Essential Digital Skills in the Canadian Workplace* (p. 87) [Final Report]. Policy and Research Office of Literacy and Essential Skills, Human Resources and Skills Development Canada, Government of Canada.
12. Ci, W., Galdo, J., Voia, M., & Worswick, C. (2015). Wage returns to mid-career investments in job training through employer supported course enrollment: Evidence for Canada. *IZA Journal of Labor Policy* 4, 9. <https://doi.org/10.1186/s40173-015-0035-8>
13. Comings, J., & Soricone, L. (2007). Adult Literacy Research: Opportunities and Challenges. NCSALL Occasional Paper. *National Center for the Study of Adult Learning and Literacy (NCSALL)*.
14. Cotsman, S., & Hall, C. (2018). *Learning Cultures Lead the Way: Learning and Development Outlook—14th Edition*. The Conference Board of Canada.
15. *Declaration of Persepolis*. (1975). International Symposium for Literacy.
16. *Digital Skills for the UK Economy*. (2016). ECORYS UK. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492889/DCMSDigitalSkillsReportJan2016.pdf
17. *Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4*. (2015). UNESCO. <https://iite.unesco.org/publications/education-2030-incheon-declaration-framework-action-towards-inclusive-equitable-quality-education-lifelong-learning/>
18. Employment and Social Development Canada. (2015b). *Literacy and essential skills* [Policies]. Aem. <https://www.canada.ca/en/employment-social-development/programs/essential-skills.html>
19. Galloway, S. (n.d.). *C21 Literacy: What is it, How do we get it? A creative futures think tank*. 39.
20. Government of Canada. (n.d.). *Mid-Term Self-Assessment Report on Canada's Action Plan on Open Government 2014-16: 10. Digital Literacy*. Government of Canada. Retrieved April 10, 2020, from <https://open.canada.ca/en/commitment/mtsar/2014-2016/10-digital-literacy>



21. Gray, A. (n.d.). *Upskilling through foundation skills. A literature review* (p. 119). The Department of Labour.
22. Gyarmati, D., Leckie, N., Dowie, M., Palameta, B., Shek-wai Hui, T., Dunn, E., & Hébert, S. (2014). *UPSKILL: A credible test of workplace literacy and essential skills training* [Technical Report]. Social Research and Demonstration Corporation (SRDC). <http://www.srdc.org/media/199774/upskill-technical-report-en.pdf>
23. Hadziristic, T. (2017). *The state of digital literacy in Canada. A literature review*. Brookfield Institute for Innovation + Entrepreneurship (BII+E). <https://brookfieldinstitute.ca/the-state-of-digital-literacy-a-literature-review/>
24. Heisz, A., Notten, G., & Situ, J. (2016). *The association between skills and low income* (Insights on Canadian Society / 7). Statistics in Canada. <https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2016001/article/14322-eng.pdf?st=UvBf7fgL>
25. Ho, M., Jones, M., Robinson, S., & Moore, A. (Eds.). (2019). *2019 Global Trends in Talent Development Whitepaper*. ASTD DBA Association for Talent Development (ATD); www.td.org/Store.
26. ICTC. (2010). *Digital literacy: Canada's productivity opportunity*. https://www.ictc-ctic.ca/wp-content/uploads/2012/06/ICTC_DigitalLitWP_EN_09-10.pdf
27. ICTC. (2016). *Digital talent road to 2020 and beyond: A national strategy to develop Canada's talent in a global digital economy*. https://www.ictc-ctic.ca/wp-content/uploads/2016/03/ICTC_DigitalTalent2020_ENGLISH_FINAL_March2016.pdf
28. *International Covenant on Economic, Social, and Cultural Rights*. (1966). The United Nations.
29. Jackson, C., & Schaetti, M. (2013). *Measurement and Assessment in Adult Literacy and Essential Skills: A Critical Literature Review* (A. Gardner, Ed.). Bow Valley College.
30. Kosterec, M. (2016). Analytic Method. *Oragon F*, 23(1), 83–101.
31. Kruidenier, J. (2002). *Research-based principles for adult basic education reading instruction*. National Institute for Literacy. https://lincs.ed.gov/publications/pdf/adult_ed_02.pdf
32. *Literacy and Essential Skills as a Poverty Reduction Strategy*. (2019). [National research report]. Frontier College.
33. *Menial No More: A Discussion Paper on Advancing our Workforce through Digital Skills*. (2011). Ontario Literacy Coalition (OLC).
34. OECD. (2013). *Skilled for Life? Key Findings from the Survey of Adult Skills*. OECD. https://www.oecd.org/skills/piaac/SkillsOutlook_2013_ebook.pdf
35. OECD, & Statistics Canada. (2005). *Learning a Living: First Results of the Adult Literacy and Life Skills Survey*. OECD. <https://doi.org/10.1787/9789264010390-en>
36. Salomon, M. (2009). *Workplace literacy & essential skills: What works and why*: a literature review (The Centre for Literacy (Montréal, Québec), Ed.). The Centre for Literacy of Quebec. <https://www.deslibris.ca/ID/220889>
37. Stordy, P. (2015). Taxonomy of literacies. *Journal of Documentation*, 71(3), 456–476. <https://doi.org/10.1108/JD-10-2013-0128>
38. Unesco, & General Conference. (1979). *Records of the General Conference twentieth session, Paris, 24 October to 28 November 1978: [Resolutions, reports, and proceedings]*. Unesco.



39. Windisch, H. C. (2015). *Adults with low literacy and numeracy skills: A literature review on policy intervention* (OECD Education Working Papers No. 123; OECD Education Working Papers, Vol. 123). <https://doi.org/10.1787/5jrxnjdd3r5k-en>
40. Wolfe, D. A. (2016, December 26). *Digital transformation of the Canadian economy*. Policy Options. <https://policyoptions.irpp.org/magazines/december-2016/digital-transformation-of-the-canadian-economy/>
41. *World Conference of Ministers of Education on the Eradication of Illiteracy*. (1965). [Final Report]. UNESCO.
42. *World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs*. (1990). UNESCO.