

A woman in a blue uniform is mopping a long, dimly lit hallway with a tiled floor. The hallway has several doorways and is illuminated by warm, low-key lighting. The woman is positioned in the middle ground, facing right, and is using a long-handled mop. The floor is made of large, square tiles. The walls are light-colored, and there are dark wood accents around the doorways. The overall atmosphere is quiet and focused.

MENIAL NO MORE

A Discussion Paper on Advancing our
Workforce through Digital Skills



“From the mine workers in Northern Ontario, to the food processing plants in Malton, and the room attendants in Toronto’s downtown hotels, **the jobs that for generations were described as menial are menial no more.**”

It seemed like an easy assignment

for an experienced adult literacy instructor. Patti had been assigned to teach writing and language skills to a group of kitchen staff as part of a workplace training program. Patti assumed that it would be pretty much like any of her other assignments—the only difference being that the teaching was occurring in a workplace, not a classroom. However, Patti's first day on site was an eye opener. *"The basic skills required were not so easy to figure out, the workers were using all sorts of digital equipment, thinking skills and scientific devices. The reading and writing was both basic and incredibly complex at the same time."* Patti realized that *"these are no longer low-skilled jobs at all."*

Over the past two years, Ontario Literacy Coalition (OLC), along with a variety of community partners, implemented 15 workplace literacy and essential skills demonstration projects across the province of Ontario funded by the Ministry of Training, Colleges and Universities (MTCU). The project focused on providing basic skills to workers in entry-level positions within various industries. While early results related to the evaluation of program effectiveness are promising, one particular finding already stands out. Patti's reaction to what was occurring in the workplace was common across all of the demonstration sites—the jobs that had been assumed as entry-level or low-skilled were now anything but. Jobs perceived as low-skilled are undergoing massive changes driven by emerging technology, the pressures of productivity, and legislative changes to health and safety standards.

**These are no longer
low skilled jobs at all.**



In this labour market, the kinds of jobs labeled as ‘entry-level’ not only persist, they continue to grow. Yet these jobs do not look like they used to. Certainly, the required competency of a cafeteria worker is not one that very many people describe as a ‘skilled trade’. It is among a range of jobs that have been traditionally staffed by non-high school graduates and recent immigrants. Except, when we move beyond the preconceptions and analyze the working skills required, we encounter a changing story about a wide range of job categories and what we have come to know as ‘low-skilled’ workers. Indeed, these are the people who help us buy retail goods, solve frontline healthcare problems, and build Ontario infrastructure; they are at the heart of our primary industries. From the mine workers in Northern Ontario, to the food processing plants in Malton and the room attendants in Toronto’s downtown hotels, *the jobs that for generations were described as menial, are menial no more.*

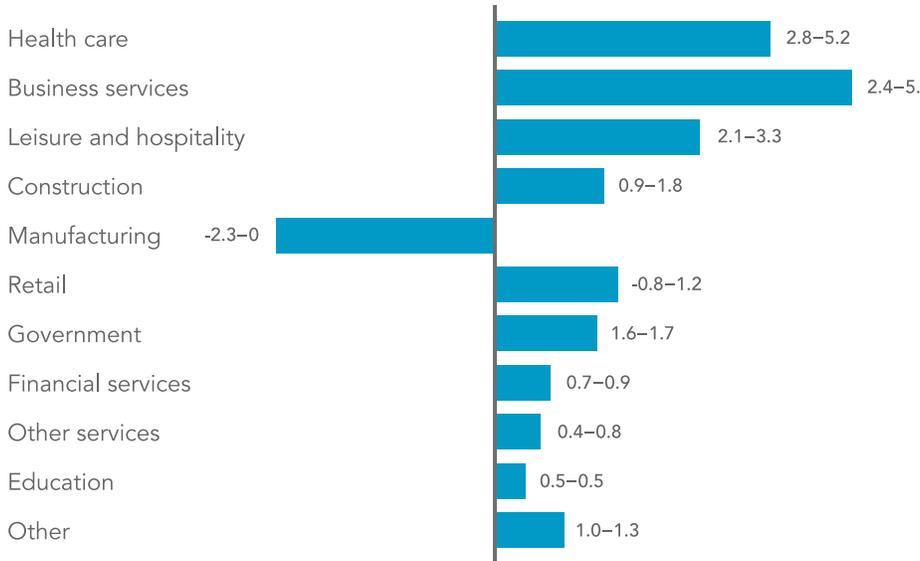
The direct result of companies keeping pace with technological advancements has meant that positions previously requiring low skills now demand solid digital skills: the ability to access, use, and interpret digital information in the workplace.

There has been a general assumption among some analysts that Ontario’s labour market is taking the shape of an hourglass. The view is that high-skilled, knowledge-based jobs requiring a university or college degree are increasing. Jobs at the other end of the spectrum that require few skills and that are ‘dead-end’ in nature are also increasing. In turn, middle-skilled jobs are being transformed into entry-level or dead-end jobs.¹ From the perspective of wage earnings, this analysis is indeed correct; however, if we look beyond current wage earnings in those types of job classifications and examine the actual skill levels required for these positions, the picture takes on a different hue. As we take into account the ever-changing nature of entry-level work and the required competencies to perform in these types of employment, it may well be that the jobs in the middle are not in fact disappearing, but rather that jobs previously considered low-skilled are becoming middle-skilled positions.

The fundamental shift in our labour market has created two challenges regarding job skills demand and job skills supply. Skills-biased technological change has fundamentally altered our labour market to favour skilled workers over those who are perceived as unskilled. Coupled with the ever-increasing demand for productivity growth, we will require responsive and flexible skill-building initiatives to keep pace with the changing needs of the economy. Quite simply, we require higher digital and technical skills for almost every job. The direct result of companies keeping pace with technological advancements has meant that positions previously requiring low skills now demand solid digital skills: the ability to access, use, and interpret digital information in the workplace.

Job growth potential varies by sector

Jobs created by 2020 (million)



This is augmented by the fact that we are on the brink of a massive skills shortage. The skills shortage is two-fold. There are those workers currently in entry-level positions who need to up-skill and train, just to ensure that they maintain their jobs and keep up with the changes occurring in their industries. The shortage is then compounded when we look to the future for the next generation of workers in primary industry, retail, front-line healthcare, and hospitality services. They will not have received the training or acquired the essential skills now necessary to do these jobs adequately, if at all. In the report, *People without Jobs, Jobs without People*, Dr. Rick Miner demonstrates the need for higher skilled individuals.³ The report estimates that by 2031, 77% of jobs will need some form of post-secondary education or training.

While Miner’s report projects low-skilled jobs as shrinking and assumes that they remain unchanged in nature, what may actually be occurring is that low-skilled jobs are in fact no longer low-skilled. Growth is occurring in these positions; the only difference is that the character of the jobs has changed dramatically. If we take the time to look at the concrete tasks of these ‘menial positions’, we begin to see a definitive pattern: Change is occurring everywhere and the way services and goods are being delivered to customers has been transformed.

Miner’s report may actually be underestimating the gravity of the situation and the need for skills upgrading. Furthermore, many of these jobs are described as low-skilled only because of the lack of certification as well as their associated wages. With recognition that these types of positions require some form of certified skills training, we should expect that the combination of labour market demographics and associated certification should push wages for these positions significantly higher.

We have come to expect more from our businesses without noticing the ramifications it

Figure 1 | The Labour Market Projections made in the recently released McKinsey Global Institute for the United States, are likely accurate, as well for Ontario and Canada.²

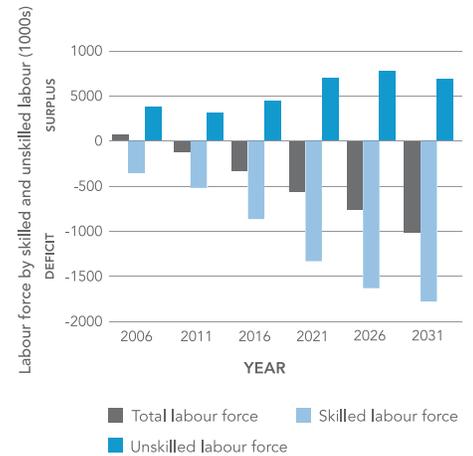


Figure 2 | Ontario’s Labour Force Balance: Medium Population Growth Projection⁴



It is time to think differently about those who need skills training, what jobs require training and how we can design an education and training system that meets these needs.

has on the skill sets needed to perform these jobs. We want goods and services faster, at cost-effective prices, and with improved customer service. Today's delivery person confirms orders and shipments of goods using a tablet; the shelf stocker no longer places stickers on products, but rather uses a complex personal digital assistant (PDA) device to control stock supplies; and your local coffee shop barista not only serves your coffee, but is also expected to troubleshoot the Wi-Fi. These new responsibilities are no longer the exceptions, but rather the rules.

So far, from moving to an hourglass made up primarily of very skilled and unskilled labour, we are instead quickly moving to a more uniform labour market that requires essential literacy and digital skills for all Ontarians participating in the workforce. We need to acknowledge and address this challenge, or face a dire problem of skills demand with an absence of labour supply. Many of the jobs that we have previously described as menial are in the fastest growing employment sectors in the province. Instead of assuming that this growth is a negative, we should view this as a chance to work with industry, labour, and the training community to create a pipeline to the underutilized segments of Ontario's labour pool.

In his book *Winning the Global Talent Showdown*, Edward E. Gordon reminds us that innovation and productivity are only as good as the population that makes use of them. The emerging digital economy "[...] will give the well-educated person the power to innovate products and services by using very advanced technologies to precisely locate and combine data, rather than drowning in a rising sea of random or ill-organized raw information. This assumes that people have the knowledge and preparation to use such technologies."⁵ To remain competitive at home and abroad, Ontario's enterprises need to make efficient use of the latest technologies and management systems. As we do this, as our production processes become more efficient, and as we digitize our information, all of our efforts must be simultaneously and equally matched with an increase in our workforce skills.

It is time to think differently about those who need skills training, what jobs require training, and how we can design an education and training system that meets these needs.

Same Positions, Different Skills

At Bridgepoint Health in Toronto, the job of the hospital orderly has changed dramatically and their work expectations continue to grow. Orderlies are part of a complex system that is not only managed digitally, but has expectations that all staff must be able to function with computers and hand-held devices. This is technology's inherent duplicity coming into sharp relief—as it makes our home and work lives easier, it simultaneously asks us to know more and do more. This is not only applicable to the healthcare field; the technological shift is visible across all sectors. We are seeing major changes in lower-level jobs in the service sectors including retail, hospitality, and tourism—and these changes are expected to continue into the foreseeable future.⁶

Nurse Aides and Orderlies	LEVEL	SHARE
Projected New Demand	65,682	48%
Retirement Replacement	60,985	44%
Other Replacement Demand	7,222	5%
Emigration	4,180	3%
Projected Job Openings	138,069	100%

Figure 3 | Growth in Nurse Aides, Orderlies and Patient Service Associates Projection for the Period of 2009-2018 across Canada.⁷

Daniel Marcoux is a plant manager with Lassonde Beverages which develops, produces, and markets an array of fruit and vegetable juices and drinks including OASIS Juice, Allens, Fairlee, and Old South. Known as a Canadian leader in the food production industry, Lassonde underwent major changes to its production facility, including substantial investments in new technology and equipment that has gone from 'hammer and wrench' technology to a production process that is calibrated to a hair's width. Marcoux notes that he has a workforce that encompasses 32 different nationalities where, as recent immigrants, many of the employees' literacy and essential skills levels in English are low. Marcoux says that while the core function of mechanics and maintenance workers has remained the same over the years, the skills they need to get the same job done have dramatically increased. "They need to understand bar graphs and charts, where before there was no issue with this," explains Marcoux, "employees now have to record data with various codes on digital devices."⁸

The question we now face is what form should this training and learning take? Government, businesses, and literacy practitioners are of two minds. On the one hand, there are those that advocate for completely retraining workers by, for example, taking unemployed factory workers and putting them in the technology field. But recent studies have shown that this type of specific retraining is not only ineffective, but they cost all parties time and money that is in short supply.⁹ Morley Gunderson, a professor at the Centre for Industrial Relations and Human Resources at the University of Toronto, states in no uncertain terms, "Basic education and skill development does turn out to

be successful [...] it's important to get those skills early in people, to curb dropping-out and to have people get the basic literacy and numeracy skills that are necessary for life-long learning."¹⁰

The alternative then is to get the unemployed and other low-skilled workers the kind of essential literacy and digital skills required to be engaged in continuous learning so they can adapt to changing technology in the workplace. Indeed, there is compelling evidence that low-skilled work has been more affected by technological change than high-skilled work. Moreover, workers who have limited skills may be more vulnerable for skill obsolescence as digital skills become commonplace in all aspects of the workplace. Krahn & Lowe analyzed the atrophy of the skills of employed persons who used limited reading, writing and computer skills on the job.¹¹ The results of their study support the idea that working in an environment with limited complexity leads to skill loss through atrophy. Low-skilled workers who suffer from literacy loss due to the limited literacy requirements in their jobs or who have been out of the workplace for an extended period of time now face the substantial challenge of having to learn both literacy and digital skills simultaneously in order keep up with the changes in the skills demanded in their jobs or profession.

Five years ago, Randy Josephs, vice-president of operations with Kisko, recognized that he needed to update his production lines to remain competitive. But it wasn't until three years later that Josephs was able to fulfill this need. When asked why, he says it was because his workers were not technology literate; they needed to be trained first. "Everything has changed dramatically in the last five to ten years, where you could have people that couldn't really read or write do certain functions, everybody has to be literate now." Through a process of internal and external teaching, Kisko now has a staff equipped with the basics, from computer use to presentation and people skills.¹²

Unfortunately, the Kisko story is not a common one. It is rare that companies take it upon themselves to up-skill their low-skill workers. A damaging stereotype surrounds low-skill work: we equate low-skill work with low wages, and low wages as a signifier that the worker is replaceable and therefore not worthy of investment.¹³ When there is no investment, workers remain at a low-skill level thus perpetuating the cycle and obviating any responsibility. This bias is pervasive, and so often we are not even aware of it—not only is it antiquated, it is also defeating.

Figure 4 | *Unemployment Rates in Ontario based on Educational Attainment 2009.*¹⁴

EDUCATIONAL ATTAINMENT	UNEMPLOYMENT PERCENTAGE
No high school certification	15.7%
High school graduates	10.6%
Average Ontario population	9.0%

A recent paper released by the Martin Prosperity Institute, noted that low-wage service workers make up 40.4% of Ontario's workforce—over 2.5 million people.¹⁵

When put this way, it is a simple, logical matter: the largest portion of our workforce is experiencing profound changes in their jobs due to our advancing technology and information-intense economy. Our companies, our organizations and our overall economy depend on the skills and efficiency of these workers. This challenge is further augmented by training institutions that are often antithetical towards training individuals for what are perceived as menial jobs. Entry-level work now demands essential literacy and digital skills. Menial work simply no longer exists.

Menial work simply no longer exists.

New Technology, New Economy, New Skills

The changes to the skills within job requirements can be seen within the entry levels of within the hospitality and tourism sector. In the past, such workers only needed to show up at a hotel seeking work, and as long as they were responsible and reliable, they were fit for the job. Not necessarily an ideal arrangement, but one that nonetheless allowed for employment opportunities for those with limited skills or lack of Canadian experience. Today, the means to employment for the exact same position are governed by a different set of rules, creating a series of previously unnecessary hurdles and obstacles. All workers must now independently complete an online application process before they are even considered for an interview.¹⁶ At one hotel chain all staff must pass an online customer service course, while another chain requires all cleaning staff to operate a PDA. These seemingly innocuous steps demand more than basic literacy; they demand nuanced essential and digital skills—skills that such positions previously did not require. Indeed, more and more hotels are requiring that these positions must be able to utilize customer service driven software.

	2010	2020
Ontario	15,128	47,230

Figure 5 | Potential labour shortage projections for Ontario in the Tourism Sector.¹⁷

Current labour projections for 2018 and beyond show that anywhere from 63% to 75% of jobs will require post-secondary education.¹⁸ Guestroom attendants do not fall into this percentage, nor are we likely to see Community Colleges providing this as a course offering in the near future. They are however, part of the population that will be required to fill the remaining 25-37% of jobs. These positions and people do not normally require a traditional post-secondary education, but they do require specific skill sets that go beyond basic knowledge, and in some cases beyond a high school diploma. A two-year college degree is too much and possibly not financially or academically accessible for many of these workers; conversely, a high school diploma is not enough.

This situation illuminates a fundamental challenge. Now that we require increased skill levels for 'entry-level' positions we must ask ourselves, where will the next generation

of ‘formerly low-skilled’ workers come from? There is a pattern of having university graduates taking on seemingly low-skilled and dead-end jobs. The question is not necessarily why university graduates take on these jobs, but why are employers choosing them over the previous pools of labour that used to fill these positions? The reality is that employers now need adaptable computer skills and technical savvy to fulfill such types of jobs where, previously, they did not.

In their book, *The New Division of Labor: How Computers Are Creating the Next Job Market*, authors Frank Levy and Richard J. Murnane debunk the common perception that computers eliminate jobs. The truth, they say, is that “computers are Janus-faced, helping to create jobs even as they destroy jobs [...] and shift work away from routine tasks and towards tasks requiring expert thinking and complex communication.”¹⁹ Levy argues that while the job market is radically changing along with the job competencies required, our workforce training systems are based on previous understanding of jobs, and the entry-points for careers.

There are two possible solutions to this. The first response is to focus on post-secondary education. The appeal of such an answer is easy to understand and to a certain degree helps to alleviate some of the pressure.²¹ Regrettably, ours is a world where this is not feasible for everyone. In an ideal world post-secondary education is free, accessible, and the simple answer to our complex labour market problems. Unfortunately, college and university degrees are not the answer for everyone. A range of jobs continues to grow for which employers do not need, nor are they demanding, degrees; however, they are expecting increased customer service, thinking, and digital skills for such types of positions.

Our second option is to tackle the problem with a more practical, albeit less headline-grabbing, solution. It answers employer demand and reaches the portion of the population that will not go on to get a post-secondary education. Data from the Adult Literacy and Life Skills Survey and the International Survey of Reading Skills (ISRS) reveals that 48% of the adult population in Canada—between ages 16-65—does not possess level 3 literacy.²²

The solution to this shortfall is to work with this portion of the population and raise them up to an IALS level 3, the basic level that is required for participation in the knowledge economy. That is a potential target group of 992,000 working age Ontarians who do not have OSSD or GED equivalency, as well as the 2,042,000 working age Ontarians who only have high school equivalency.²³ Working at this level, the formerly low-skilled group will be able to complete online applications, they will be able to manage data systems, and they will be able to get ‘entry-level’ jobs. This is the next generation of ‘low-skilled’ workers and it is not about graduating college or university with honours. It is about providing them with a combination of digital skills and the training in key disciplines related to the digital economy such as science, technology, engineering, and mathematics (STEM). Indeed, we may need to expand our vision of what constitutes literacy and essential skills. This definition will now need to incorporate digital skills and have a greater focus on building competencies in STEM disciplines.

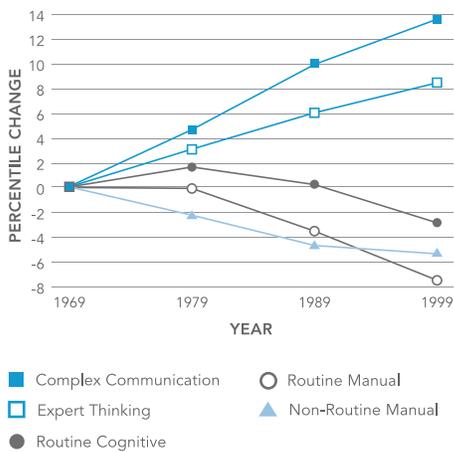


Figure 6 | Frank Levy illustrated how job tasks have evolved in the United States since 1969. Levy’s theoretical framework has been incorporated into the Programme for the International Assessment of Adult Competencies (PIAAC).²⁰



In an effort to bridge the divide between our education system and the 21st Century digital economy, major training initiatives in STEM are being adopted in the UK, US, and Australia. The STEM movement is often thought of as the domain of very high-skilled employees (IALS Level 4 and 5) that is above the template of the nine HRSDC Literacy and Essential Skills. However, the recent strategic skills audit in the UK²⁴ notes that these elements are critical pieces in propelling the workers from IALS levels in the 200 range into the 300 range, if they are to remain competitive as a nation in the competition for labour. The technical aspects of jobs are incorporated with literacy and language skills, enable individuals to work more effectively with their colleagues, and problem solve within a technologically-enriched environment. These skill sets are now required at all levels of employment. These requirements are as equally acute in entry-level jobs as they are in middle-skilled jobs.

Yet, how does this critical and emerging labour market analysis relate to literacy and essential skills (LES) in Ontario? The challenge is not just about supplying a greater number of quality professionals and technicians to high-end sectors and occupations. Rather, it is a pervasive transformation that is emerging throughout all industries and occupations, including those traditionally thought of as 'low-skilled'. The value of a blended STEM vocational approach with more generic literacy and essential skills could have the real and substantial dividend of creating a labour market pipeline between the supply and demand sides of the impending labour market shortage. Furthermore, one of the underlying principles of STEM vocational basic skills is the direct involvement of industry, business and labour in the design and delivery of the training.²⁵

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▶ Responding to the Challenge

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The I-BEST Program in Washington is showing results and is in the process of being replicated across nine different states. The I-BEST program was designed to meet the changing needs of state industry and adults with a high school diploma or less who did not have the resources, grades, or time to access College (I-BEST programs are six to eight months in duration). The only criteria for accessing an I-BEST program are that the learner must read and write *below* a grade 9 level. The state requires that I-BEST courses have both a literacy instructor and an industry lead technical instructor. Furthermore, at least 50% of the curriculum must be STEM vocational related. Independent evaluation of the I-BEST program is showing promising results in helping individuals who have had poor experiences or long absences from previous education endeavors. The I-BEST program offers certificates in healthcare, manufacturing, repairs and maintenance, transportation, as well as a general STEM diploma.

The Wisconsin Regional Training Partnership (WRTP) is an association of employers and Unions that seek to retain and attract jobs in Milwaukee and create career opportunities for low-income and unemployed community residents. WRTP develops training programs that are created in response to specific employers' requests or to clearly identified labour market needs. Its short-term pre-employment training programs are clustered towards entry-level positions in construction, manufacturing, retail, and healthcare sectors. Targeted populations are welfare recipients and recent immigrants who had no higher certification than a GED. A recent independent study of the program provided compelling evidence that the non-profit and employer/labour-led initiatives provided disadvantaged people with access to industry relevant skills and steady employment. In turn, local industries coming out of the economic downturn have access to individuals with basic skills combined with specific technical skills.²⁶

The certification of learning in relation to these forms of training is an important part of the equation in both the UK and the US. The certification not only validates the value

of the training to the learner and employer—it has the auxiliary benefit of increasing wages by creating supply and demand elements while reducing employers' in-house orientation and training.

Many US States as well as the United Kingdom are moving to address the impending labour shortages by creating a pipeline from underutilized labour pools towards the changing nature of entry-level jobs – but Ontario is not yet there. "Employment development work in Ontario continues to be focused on the supply side, with a relatively low level of employer involvement in the total process [...] Ontario's workforce development programs are essentially an extension of public welfare and social services systems [...] engagement with employers is uneven at best and could be characterized as a work in progress."²⁷

A perfect example of where literacy and essential STEM skills training could provide dividends for Ontario is in the mining sector where many jobs do not require a high school diploma. "There is a shortage of 90,000 mining-related employees right now, with many in Ontario [...] We talk about the Ring of Fire, but we need them now too. When people graduate from the Common Core mining course they're getting jobs right away." (Michael Gravelle, MPP Minister of Northern Development and Mines).²⁸ The Common Core Mining course offered online or by individual mining companies is not particularly accessible to individuals with poor literacy or technical skills. Integrating this course with essential STEM skills is just one example where we could provide a significant opportunity for industry and under-represented members of Ontario's labour pool.

It is apparent that the technological and labour market shifts are perhaps no more radical or profound than with low-skill jobs and workers. It is time we recognize what a crucial moment this is. Attracting investment to literacy and essential skills training goes beyond the thin veil of a moral imperative—it is economically vital. It has been proven that literacy directly relates to Gross Domestic Product (GDP) per capita and labour productivity in OECD economies.²⁹ Labour market integration and skills acquisition are no longer an option for the low-skilled population—they are imperative to our ability to successfully meet the demands of our new economy, and it is a responsibility we all share. In order to help Ontario's growing industries while improving employment prospects for the unemployed and low-skilled workers, the employment and training community will need to embrace innovative solutions.

Attracting investment to literacy and essential skills training goes beyond the thin veil of a moral imperative—it is economically vital.

Steps Towards Solutions: An Ontario Response

Conclusion—Some Suggested Strategies

For decades, low-income individuals have experienced difficulty earning enough to support themselves and their families. A consensus among policymakers and economists about the importance of literacy and essential skills for workforce advancement has developed. As of yet, a similar consensus on how to best deliver these skills has not entirely emerged, nor have we levered the full potential of LES, digital skills, and STEM vocational skills that are emerging in other developed nations.

Furthermore, we will need to augment our vision of the labour market so that it meets the growing labour market needs of certain sectors. There are a number of steps that can be taken to move forward.

Ontario has recently launched a new Ontario Adult Literacy Curriculum Framework (OALCF), which provides literacy and basic skills practitioners with a far clearer picture of how to provide transition-oriented programming. It is a good start. However, as we move into the post-implementation of the OALCF, we will all need to examine larger issues of program and system design. As labour market shortages begin to materialize over the coming years, we will need to find ways of fully integrating literacy and STEM essential skills with a vocational trade. A further lesson learned from other jurisdictions is that employers and labour groups must be actively involved in all aspects of local programming.

The Federal Government can continue to play a strong leadership role in modernizing literacy education for adults. The Literacy and Essential Skills framework was integral in the development of a more uniform and effective approach to adult education across the country. The OLC believes an enhanced version of the Essential Skills Framework needs to incorporate industry related digital skills in order to align the needs of business, labour, and adult learners in an articulated fashion. This will provide meaningful opportunities across industry sectors with projected labour shortages in jobs traditionally viewed as low-skilled—jobs that are now moving towards the middle. Given the importance of the changes to these types of employment, there is merit in forming a national task force in partnership with business and labour, which addresses the demand for digital and STEM related skills in a range of professions previously staffed by low to semi-skilled workers.

As Ontario moves towards strengthening the linkages between workforce training and employer demand, we need to move beyond a traditional vision of what we train for and how we train. We need to capitalize on the millions of potential workers in Ontario and across Canada who may not be looking towards traditional post-secondary routes. Over the next few years, we have a chance to demarcate new roadmaps to success.

The combination of STEM, essential skills, and vocational training provides a critical route to support the growth of our workers and key industry sectors. We need to develop new consortia to define industry skills approaches that will allow workers to demonstrate their skills, whether educationally attained or added on the job. The food processor, the orderly, the room attendant, and the miner know that their jobs are not menial and require unique sets of skills. It is now up to employer groups, government, and our training community to align our work with theirs.

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