

# **Beyond Disruption: A Case for Integrated Studies**

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## **Introduction**

In the 17 months<sup>1</sup> since this paper was presented at the 2019 Liberal Education Conference, the COVID-19 pandemic has turned the world upside down, killed over 1,000,000 people globally, triggered a world-wide recession resulting in massive unemployment that could eclipse the Great Depression, set back women’s advances in the workplace at least two generations, and upended the delivery of educational programs at every level in every country. Although some economies have gradually reopened (China, Germany, Canada), resurgence of the virus in these countries has put the brakes on a quick recovery; in large portions of the U.S. the virus remains out of control, hampering a return to “normal” and placing them well behind other advanced economies in navigating the pandemic. Fears of a Second Wave as schools move into a new normal, parents return to work, and the colder weather of winter approaches only add to the uncertainty surrounding this continuing global health and financial crisis.

While automation of some segments of the world economy has slowed as a result of the pandemic/recession, in others—such as the retooling of factories and workplaces, and remote delivery of courses and meetings (including political conventions)—it has speeded up. Plans for the recovery are moving forward now and to what extent they will embrace social change, particularly in light of the Black Lives Matter movement, remains to be seen. There are in any event two issues pertinent to the underlying thesis and case study presented in this paper that need to be flagged at the outset:

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<sup>1</sup> It is October 2020 at this writing.

1) As cash-strapped state and provincial governments consider cutting funding to post-secondary schools while looking for ways to balance their budgets, they need to understand that liberal arts and humanities courses are the key to developing the soft / human / employability skills that every report on the future of work underscores as essential. This is the time for academic and industry leaders to speak out to government—and parents and students—and make the connection crystal clear.

2) Re-skilling and up-skilling programs like the Integrated Studies Programs showcased in this paper are more important than ever, given the current numbers of laid off workers on top of the projected massive disruption to jobs precipitated by automation over the coming five to ten years. In light of the great sums of money paid out already to the unemployed and employers, as well as pumped into the global financial system during the pandemic, it would be foolish not to invest in the upskilling of the workforce to fuel the engine of economic recovery and growth as quickly as possible. These upskilling programs, just as all postsecondary programs in every field, need to include a liberal education core.

### **Automation and Human Skills**

In the spring of 2018, just prior to releasing its report on the future of jobs entitled *Humans Wanted*,<sup>2</sup> the Royal Bank of Canada launched a 30-second television spot<sup>3</sup> featuring a diverse group of students, each on a different college or university campus. The narrator begins: “We need Canada’s youth to succeed.” She cites a series of major issues awaiting a new generation of problem solvers, from the growing presence of artificial intelligence to rampaging

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<sup>2</sup> <https://www.rbc.com/dms/enterprise/futurelaunch/assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf>

<sup>3</sup> Royal Bank of Canada, “Future Launch,” accessed September 2019, <https://twitter.com/rbc/status/969240944913547264?lang=en>. The original TV spot aired in February and March of 2018 was replaced by a 15-second Twitter spot.

forest fires and the frightening spectre of as yet unknown diseases. Then each student weighs in: “We need new skills ... for a completely new job force ... but we’re not prepared.”

The disheartening implication is that colleges and universities are not preparing students for the world of the near future. *Humans Wanted*, one of a number of reports on the future of jobs released in the past three to four years by economic think tanks globally,<sup>4</sup> calls for more work-integrated learning (internships and co-op placements) for *all* postsecondary students, and also for a national review of all postsecondary programs to determine whether they are providing graduates with the skills required in the new economy. While the intent and public stance of a major industry player is both compelling and welcome, there are a couple of sticking points: there is no national office responsible for higher education in Canada that could conduct such a review; and there are approximately 700,000 postsecondary students, at least 20-30% of whom would require an industry placement in any given year, which is a gargantuan task, albeit not impossible with adequate planning, higher ed/industry cooperation, and, of course, funding.

Of the five reports on the future of work noted in the chart on the next page (Fig. X.1), two are global in perspective including the U.S. (WEF and McKinsey Global), one is strictly focussed on the U.S. (BHEF), and two are Canada-centric (RBC and Deloitte). Differing in details and approach, there are nevertheless two things all these reports agree on:

1) between now and 2030, we will experience a massive disruption of the workforce due to automation such that fully half will require new skills including some degree of interfacing

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<sup>4</sup> The Royal Bank of Canada (RBC), World Economic Forum (WEF), McKinsey Global Institute, The Business-Higher Education Forum (BHEF), Deloitte, among others (cf. Fig.X.1). In May 2020, the Brookfield Institute, an independent think tank based at Ryerson University, released *Ahead by a Decade: Employment in 2030*, which identifies five foundational traits (Fluency of ideas, Memorization, Instructing, Persuasion, Service orientation) and other high-impact skills that correlate with the findings of these other reports.

**Figure X.1. Liberal Education Outcomes & Top 10 Skills Cited in Five Reports on the Future of Work**

<b>Essential Learning Outcomes of a Liberal Education<sup>5</sup></b>	<b>WEF, Future of Jobs 2018<sup>6</sup></b>	<b>McKinsey, Skill Shift 2018<sup>7</sup></b>	<b>BHEF, Foundational Skills of the Digital Economy, 2017<sup>8</sup></b>	<b>RBC, Humans Wanted 2018<sup>9</sup></b>	<b>Deloitte, The Intelligence Revolution 2017<sup>10</sup></b>
Inquiry + analysis	Analytical thinking + innovation	Advanced IT skills + programming	Communication	Active listening + learning	Information seeking
Critical + creative thinking	Active learning + learning strategies	Advanced data analysis + mathematical skills	Analytical skills and critical thinking	Speaking	Adaptability
Written + oral communication	Creativity, originality + initiative	Creativity	Collaboration	Critical thinking	Conceptual thinking
Quantitative literacy	Technology design + programming	Teaching + training others	Creativity	Reading comprehension	Collaboration
Information literacy	Critical thinking + analysis	Critical thinking + decision making	Data management + analysis	Monitoring	Social awareness
Teamwork + problem-solving	Complex problem-solving	Project Management	Software development	Social perceptiveness	Creativity + creative thinking
Civic knowledge + engagement	Leadership + social influence	Leadership + managing others	Computer programming + digital security	Coordination	Judgment
Intercultural knowledge + competence	Emotional intelligence	Tech design, engineering, + maintenance	Understanding business processes	Time management	Critical + analytical thinking
Ethical reasoning + action	Reasoning, problem-solving + ideation	Adv. literacy + writing; complex information processing/interpretation	Project management	Judgement + decision-making	Inspirational + courageous leadership
Foundation/skills for lifelong learning	Systems analysis + evaluation	Adaptability + continuous learning	Digital design + data communication	Service orientation + 15 more	Complex problem solving

<sup>5</sup> "LEAP Essential Learning Outcomes," Association of American Colleges + Universities.

<sup>6</sup> World Economic Forum, *The Future of Jobs Report 2018*, 12.

<sup>7</sup> Jacques Bughin et al, *Skill Shift* (McKinsey Global Institute: May 23, 2018) 22.

<sup>8</sup> Markow and Hughes with Bundy, *The New Foundational Skills of the Digital Economy* (Burning Glass/BHEF), 10.

<sup>9</sup> RBC, *Humans Wanted*, 12.

<sup>10</sup> Deloitte, *The Intelligence Revolution*, 27-37.

with artificial intelligence, and in Canada as much as 25% of jobs will be heavily disrupted by technology; and

2) because we don't know exactly what specific technical skills will be required for these new jobs, the best skills to cultivate now are what are termed "human skills," that is skills that cannot easily be replicated by computers: critical and creative thinking, social perceptiveness, active listening, emotional intelligence, and complex problem-solving, to name a few.

Practitioners of liberal arts disciplines will recognize these skills—or what may better be described as "capacities"—as identical to the goals of a liberal education. But much more needs to be done to demonstrate the link between these human skills and liberal arts programs, for it is not well understood by most employers or even by most graduates of these programs.

A generation ago, a liberal arts education was still widely held to be a valuable preparation for most careers. But by some point in the 1990s, all that began to change and going to college or university for a job superseded going for an education. Now we find ourselves in an era of contradictions, for the great influencers of society—political leaders, media pundits, self-proclaimed experts on social media and in the blogosphere—have somehow succeeded in convincing parents and students that a degree in the liberal arts has limited value and relevance, claiming that English and philosophy grads end up working as baristas or taxi drivers,<sup>11</sup> just when industry think tanks are calling for more "soft skills" or "human skills." A Strada/Gallup survey of college/university graduates on program relevance as recently as spring 2018 placed

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<sup>11</sup> Ralph Klein, former Premier of Alberta, and Mike Harris, former Premier of Ontario, are famous for their disparaging comments about liberal arts disciplines (cf. John Ibbitson, *Globe and Mail*, February 28, 2000 as cited in Kim Fedderson, "The Common Sense Assault on a Liberal Education."). More recently Barack Obama commented on art history vs. manufacturing jobs, joining the ranks of Republican politicians such as Mitt Romney, Rick Scott, and Patrick McCrory. Cf. Scott Jaschik, "Obama vs. Art History." *Inside Higher Ed*, January 31, 2014.

liberal studies programs among the least relevant (and hence least valuable) to work life.<sup>12</sup>

What's missing? How can we help students, parents, and politicians connect the dots? Here's a hint: there is an additional fundamental goal of a traditional liberal education that does not find its way into these "human skills"—in part because isolated historical facts on demand through Google and Wikipedia have supplanted the need for it in many people's minds. I'm talking about history or more specifically an understanding of historical development and context. Without veering into a tangent on truth and distortion in the historical record, let me say simply that if we feel blind-sided by the massive impact of artificial intelligence on the labour market, it is because we have not paid attention to warnings and predictions of the writers and thinkers of the past 50 to 60 years (not to mention Sci-Fi writers and film makers over the past century or more). Most school curricula have quietly dropped them from sight and mind. Before proceeding to my case study of SFU's Integrated Studies Programs that were designed specifically to upskill mid-career adults by integrating liberal studies with a field of practice, I'd like to spend a little time highlighting a few of these early warnings that speak to our current situation.

### **History and Forgetfulness**

The linguistic and conceptual barriers between the study of the liberal arts—particularly the humanities—and industry's desired "soft skills" are reminiscent of C. P. Snow's 1959 Rede Lecture at Cambridge University on "The Two Cultures and the Scientific Revolution," which characterized the gulf between literature and science. Snow believed "the intellectual life of the whole of western society [was] increasingly being split into two polar groups"<sup>13</sup>—to their

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<sup>12</sup> Strada/Gallup, *From College to Life*, especially page 16..

<sup>13</sup> Snow, The Rede Lecture, 1959, doc. 15.

detriment. Despite his ungenerous description of literary colleagues, to whom he attributed a self-centred arrogance devoid of any interest in their fellow human beings, and his more benign description of narrowly focused physicists working on breakthrough discoveries for the common good, his lecture delivered an urgent message. If the strained communication between the two cultures could not be reconciled, then they must at the very least reach a mutual understanding *for the sake of surviving the impending upheaval* caused by “the application of *real science* to industry.” The resulting “industrial society of electronics, atomic energy, [and] automation,” according to Snow, would be “in cardinal respects different in kind from any that has gone before, and will change the world much more.”<sup>14</sup>

That was 1959 and the advances in technology were not even close to where they are today, but the language of Snow’s warning bears remarkable resemblance to what Klaus Schwab, Founder and Executive Chairman of the World Economic Forum (WEF), says about what he has recently dubbed the Fourth Industrial Revolution: “We stand on the brink of a technological revolution,” he writes, “that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before. We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academia and civil society.”<sup>15</sup> Schwab and the WEF (the convenors of the annual global economic conference in Davos) have been enormously influential among industry and governments, and laid the groundwork for the other studies about the future of work mentioned previously.

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<sup>14</sup> Snow, The Rede Lecture, 1959, doc.15 (my emphasis).

<sup>15</sup> Schwab, “Fourth Industrial Revolution,” WEF.

If Snow's lecture decried literary intellectuals who were disdainful of understanding even rudimentary scientific theory, German novelist Christa Wolf takes aim at relationship-deprived physicists in her eloquent reflection on the aftermath of the Chernobyl disaster. She describes the bright young scientists at Livermore Laboratories in California, who were working on U.S. President Ronald Reagan's Strategic Defense Initiative, as "star warriors ... modern day Fausts ... who have not signed a pact with the devil ... but rather with the fascination with a technical problem."<sup>16</sup> Starved of familial affection, "[w]hat they do know, these mere children with their highly trained brains working feverishly night and day—what they do know is their machine. Their lovely, beloved computer."<sup>17</sup> However, she also concedes that scientific advances cut both ways, for in the days following the explosion, her narrator's brother undergoes lifesaving surgery to remove a malignant tumour from his brain.

In her slender 1994 volume, *Systems of Survival: A Dialogue on the Moral Foundations of Commerce and Politics*, the American/Canadian urban activist and thinker Jane Jacobs explores the origin and conundrum of two moral and value systems we continue to struggle with today. She calls them the Commercial and Guardian Moral Syndromes: "As individuals trying to be good, we aim at being both loyal and honest, for example. But in working life, these two virtues are often in conflict. ... Does this mean, as is so often contended, that we can be 'good' only in our private lives and that moral behavior must bend or break when we participate in the world's work?"<sup>18</sup> Through an orchestrated dialogue among a group of young professionals, arranged by their one-time publisher, Jacobs enjoins the reader to consider and respond to the many complex scenarios and nuances of citizenry in a capitalist democracy.

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<sup>16</sup> Wolf, *Accident: A Day's News*, 62.

<sup>17</sup> *Ibid.*, 63.

<sup>18</sup> Jacobs, *Systems of Survival*, xi-xii.

Historical understanding is central to Jacobs's writing and in her final work, *Dark Age Ahead*, she offers examples of the rise and fall of vital civilizations and warns readers of how five crucial pillars of North American culture are insidiously decaying: community and family; higher education; science and science-based technology; taxes and governmental powers; and self-policing of professions like law, medicine, accounting and engineering. While one might quibble with her choice of pillars, the underlying cause of decay of all the civilizations she discusses harken back to the European Dark Ages: "The Four Horsemen of the Apocalypse, conventionally depicted as Famine, War, Pestilence, and Death, had already been joined by a fifth demonic horseman, Forgetfulness."<sup>19</sup>

All Five Horsemen are with us still today. Almost prophetically, in anticipation of changes to the American political scene, Jacobs's final word regards the core values of American and also Canadian culture: "History has repeatedly demonstrated that empires seldom seem to retain sufficient cultural self-awareness to prevent them from overreaching and overgrasping. ... Any culture that jettisons the values that have given it competence, adaptability and identity becomes weak and hollow. A culture can avoid that hazard only by tenaciously retaining the underlying values responsible for the culture's nature and success."<sup>20</sup>

While all of the well-researched reports on the future of work agree on the need to cultivate "human skills," and while some of them are quite specific about how much retraining members of the current workforce will soon be facing, not one of them references a liberal education as even a partial remedy. Perhaps this is because professional development and upskilling programs—whether delivered by industry, colleges, or universities—rarely if ever focus on the liberal arts and sciences. Truly, this has to change. This next section highlights a

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<sup>19</sup> Jacobs, *Dark Age Ahead*, 8.

<sup>20</sup> *Ibid.*, p. 176.

program offered by Simon Fraser University in Vancouver between 1995 and 2011 that provided a liberal arts grounding to a field of practice, e.g., business management and public safety leadership. Each of the texts referenced above found their way into the curriculum of this program—and, as one student told me after his first two semesters, “this program uses a part of my brain I didn’t know I had!”

### **Case Study: Integrated Studies Programs—Program in Business and Liberal Studies<sup>21</sup>**

In the spring of 1995, CP Rail Systems approached Simon Fraser University with the request to develop part-time undergraduate and graduate programs for its employees. CP Rail's shopping list included a bachelor's degree completion program to be delivered initially at SFU's downtown Vancouver Harbour Centre campus, but which in time should be accessible as well through distance education anywhere in Canada, and a flex-time MBA program, also accessible to CP Rail employees across the country. These educational pursuits were not to impede the employees' full-time performance on the job, the requisite courses had to be available in a timely fashion, and the credential had to be attainable within a reasonable period of time. Underlying this list of requirements was both a desire to upgrade employees' flexibility and adaptability with a university education and a growing impatience with the barriers to university credit courses and programs faced by mid-career adults.

CP Rail's request list came to Simon Fraser close on the heels of a report on adult and part-time study from the university's Extension Credit Programs office.<sup>22</sup> This report contained recommendations to improve access, efficiency, and responsiveness, notably through the

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<sup>21</sup> In 1995, I researched and drafted the program proposal and evaluation plan under Mark Selman, Director of Extension Credit Programs; following approval of the Integrated Studies Programs by SFU's Senate, I served as Director until 2001.

<sup>22</sup> Mark Selman with assistance of Maureen Nicholson, “Report on Adult and Part-Time Study at Simon Fraser University.”

development of mid-career, cohort-model programs at the undergraduate as well as graduate levels. Such programs would be intended for part-time students who wished to proceed directly through a planned program with a definite objective. As well, these programs would reflect the university's commitment to the value of the liberal arts in providing the foundation for a goal-oriented, practical education.

SFU's response was to develop a degree completion program that would afford CP Rail employees the opportunity to complete the final 60 credits—or final two years—of a Bachelor of General Studies degree on a part-time basis over three years. In order to ensure that a financially viable cohort of at least 30 students could be pulled together, a second sponsoring employer, BC Hydro, was invited to participate in the pilot program. Within a scant two weeks of unveiling the program to employees in May, the two organizations reported over 160 expressions of interest.

By mid-July the field was narrowed to a pilot class of thirty-four, and in September the group began studies at the Harbour Centre campus while continuing to work full time.

In keeping with general objectives expressed by both employers, the program curriculum was designed to develop core

**Fig. X.2. Conference Board of Canada  
Employability Skills**

- Communication skills
- [Information management]
- [Number facility]
- Critical thinking and problem-solving
- Personal management skills:  
adaptability, responsibility, initiative,  
and self-confidence
- Teamwork skills

competencies, which largely coincided with The Conference Board of Canada's published "Employability Skills Profile."<sup>23</sup> As a result, the program aimed to broaden employees' perspectives, helping them learn to think more critically, communicate more clearly and

<sup>23</sup> Conference Board of Canada, "Employability Skills." These have been updated since the ISPs were developed in 1995-96; added skills in brackets in box on p. 12.

persuasively, understand the context of Canadian business, and develop team-building and other managerial and leadership skills. Overall, the program helped those with specialized technical backgrounds become more flexible and better able to take on new roles in their organizations.

<b>Fig. X.3.</b>	
<b>ISP in Liberal + Business Studies: Sample Curriculum</b>	
<u>Liberal Studies Core</u>	
<ul style="list-style-type: none"> <li>• Math/Statistics</li> <li>• Intro + Advanced Academic Writing</li> <li>• Social Science Methodologies</li> <li>• Cooperation + Difference</li> <li>• History of Critical Thinking</li> <li>• Humanistic Tradition</li> </ul>	
<u>Canadian Studies + Business Core</u>	
<ul style="list-style-type: none"> <li>• Canada's Political Economy</li> <li>• Technology + Canadian Society</li> <li>• Financial Management</li> <li>• Organization Theory</li> <li>• Marketing</li> <li>• International Partnerships</li> <li>• Human Resource Mgmt.</li> <li>• Administrative Policy</li> </ul>	
<u>Interdisciplinary Seminars</u>	
<ul style="list-style-type: none"> <li>• Ethical Decision-Making</li> <li>• Critical Analysis of Business Texts</li> <li>• Contemporary Leadership</li> </ul>	
<u>Capstone Research Project</u>	

One of the overriding concerns at the outset was to ensure that the expectations of the partners were fully understood and addressed. While in 1995, as today, almost all industry-sponsored continuing education programs were short and focussed on technical skills, this was something different. The type of training called for here was of a generalist nature, the type that focuses on “human skills,” and which in the broadest sense encompasses an entire undergraduate education. Toward this end, the employees, their supervisors, and senior managers were all asked to state in writing their perception of program objectives. Perhaps the most significant aspect of this objective-setting exercise was the high priority that both management groups placed on the students' exposure to a broad range of subjects in addition to business, on liberal arts courses as a

counterpoint to specialized technical training, and on the development of broadly-based critical skills. The curriculum was then developed in correlation with the articulated objectives.

There are two other aspects of university education that were brought into greater focus through the development of the ISP. The first relates to admissions criteria and the extraordinary

weight universities still place on grade point average. GPA on its own—especially of high school or other academic work done in the distant past—is generally a poor indicator of academic ability in the present. Mid-career applicants come to the table with previous education, training, and work experience, all of which require some consideration. The second aspect relates to how to meet both the needs of mature, working students with diverse educational backgrounds and the expectations of employers *without diminishing academic standards*. Everyone involved in the ISPs—the university, their business partners, and the program students—wanted to be certain that the value of the university degree offered was not compromised in any way. This goal required interrogating the traditional model of a four-year undergraduate degree, thoughtfully identifying the underlying criteria of achievement and excellence, and ensuring everyone understood the expectations.

Because the majority of candidates did not have the requisite 60 transfer credits or published grade point average requirement, we explored existing Prior Learning Assessment models. But we discarded these, including portfolios and multiple challenge exams, as too cumbersome, time-consuming, and often vague. Instead we opted for a “readiness model” developed in collaboration with the University’s Educational Development Office. This meant identifying knowledge and skill sets necessary to succeed in the first half of the program and devising diagnostic tests to determine readiness for third-year university studies. It also meant building a curriculum that compensated for gaps in foundational knowledge (in particular, math and writing), while acknowledging advanced levels of knowledge in the field of practice.

Knowing we were breaking new ground, we developed a comprehensive evaluation plan that included comparisons of achievement in common or comparable courses delivered in standard BA and BBA programs at the main campus. With all these defined elements in hand,

three supportive deans (Faculty of Arts and Social Sciences, Faculty of Business Administration, and Continuing Studies) succeeded in convincing the University Senate to approve the pilot program. The rest, as they say, is history.

### **ISP Outcomes**

The cohort model, in combination with a dedicated student advisor/coach and faculty vetted for experience teaching mid-career adults, proved highly successful. Retention and completion rates remained high, the CGPA<sup>24</sup> in the first three cohorts was comparable to programs on the main campus,<sup>25</sup> the program expanded to include additional cohorts of the Liberal and Business Studies program not only at SFU's downtown Harbour Centre, but also at four other locations around the province; the ISP in Justice and Public Safety Leadership was offered in collaboration with the Justice Institute of BC for five years; and the ISP in Aboriginal Leadership and Administration in collaboration with Nicola Valley Institute of Technology for two years. In all, the Integrated Studies Programs ran for 16 consecutive years and graduated over 800 students.<sup>26</sup>

### **Applying the ISP Model to Reskilling the Disrupted Workforce**

What all of the ISPs had in common was a keen audience of mid-career adults with a minimum of five years' work experience. In a sense, this constituted what could be called Reverse Work-Integrated Learning or Reverse WIL. That work experience and the years of life experience that went hand-in hand with acquiring it provided the students with an intellectual maturity that most younger, less or inexperienced students simply don't have. Perhaps this is one

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<sup>24</sup> Cumulative Grade Point Average

<sup>25</sup> Dunlop and Burtch, "Doors Close, Windows Open." Unfortunately the evaluation data after 2003 never made it from the Office of Continuing Studies to the University Archives; these files appear to have been lost.

<sup>26</sup> Simon Fraser University, "Continuing Studies Community Reports, 2005/06-2011/12." These annual reports provide student enrolment numbers and graduation stats for each program.

of the reasons WIL is rapidly being included in an increasing number of academic programs: if nothing else, it broadens the experiences of the student beyond the classroom and allows the student to draw connections between classroom learning and the workplace. Although the first ISP cohorts worked full time and were fully supported by their employers, later cohorts included laid off and unsponsored workers who were re-tooling for new job opportunities. In either case, the interplay between workplace issues and classroom learning remained an essential element of the program.

Whether in the context of a degree completion program or a post-graduate diploma, the key elements of the ISPs are relevant to any new programs developed today: a cohort model, a clearly articulated correlation between goals and curriculum, a liberal studies core of courses to ensure development of those “human skills,” combined with upper level studies relevant to the field of practice in question. In light of rapid and ubiquitous advances in automation, we must now add both the goal and curriculum to ensure basic digital fluency,<sup>27</sup> regardless of the field of practice, which every worker or citizen will require to navigate the workplace/society of the near future.

### **Conclusion**

Perhaps if more employers, politicians, labour organizations and funders better understood the correlation between the human skills they demand in their workers and the outcomes of a liberal education; if more students realized the relevance of liberal arts courses to their future working lives, there would be greater concern for maintaining or growing liberal arts and sciences programs, and expanding interdisciplinary programs that draw from these diverse fields of study. Perhaps then we could face the uncertain future with greater confidence, knowing

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<sup>27</sup>Such as, for example, Bryn Mawr College, “Bryn Mawr Digital Competencies Framework” (2016).

we—and our future leaders—have the necessary historical perspective and educated mindfulness to define and safeguard the values undergirding our working lives, our communities, our nations, our world.

### Bibliography

Association of American Colleges & Universities. “Liberal Education and America’s Promise: Essential Learning Outcomes.” Accessed March 12, 2019. <https://www.aacu.org/leap/essential-learning-outcome>.

Bryn Mawr College, “Bryn Mawr Digital Competencies Framework” (2016). *Blended Learning Research and Open Educational Resources*. 3. Last revised October 2016. <https://repository.brynmawr.edu/oer/3>.

Bughin, Jacques, Eric Hazan, Susan Lund, Peter Dahlström, Anna Wiesinger, and Amresh Subramaniam. *Skill Shift: Automation and the Future of the Workforce*. Discussion Paper. McKinsey Global Institute: May 23, 2018. <https://www.mckinsey.com/featured-insights/future-of-work/skill-shift-automation-and-the-future-of-the-workforce>.

Conference Board of Canada. “Employability Skills.” Accessed July 25, 2020. <https://www.conferenceboard.ca/edu/employability-skills.aspx>.

Deloitte. *The Intelligence Revolution: Future-proofing Canada’s workforce*, 2018. <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/human-capital/ca-EN-HC-The-Intelligence-Revolution-FINAL-AODA.pdf>

Dunlop, Catherine C. and Brian Burtch. “Doors Close, Windows Open: A British Columbia Case Study on Widening Access.” *Journal of Adult and Continuing Education* (July 1, 2003) <https://doi.org/10.7227/JACE.9.1.2>.

Fedderson, Kim. “The Common Sense Assault on a Liberal Education.” *College Quarterly* 7, no. 2 (Spring 2004). <http://collegequarterly.ca/2004-vol07-num02-spring/fedderson.html>

Jacobs, Jane. *Dark Age Ahead*, Toronto: Random House Canada, 2004.

Jacobs, Jane. *Systems of Survival: A Dialogue on the Moral Foundations of Commerce and Politics*. New York: Vintage Books, 1994.

Jaschik, Scott. “Obama vs. Art History.” *Inside Higher Ed* (January 31, 2014 ). Accessed <https://www.insidehighered.com/news/2014/01/31/obama-becomes-latest-politician-criticize-liberal-arts-discipline>.

Markow, Will and Debbie Hughes with Andrew Bundy. *The New Foundational Skills of the Digital Economy: Developing the Professionals of the Future*. Washington, D.C.: The Business-Higher Education Forum/Boston: Burning Glass Technologies, 2018. [https://www.burning-glass.com/wp-content/uploads/New\\_Foundational\\_Skills.pdf](https://www.burning-glass.com/wp-content/uploads/New_Foundational_Skills.pdf).

Rivera, Diana, Yasmin Rajabi, Joshua Zachariah and Rob Willoughby. *Ahead by a Decade: Employment in 2030*. Toronto: The Brookfield Institute for Innovation + Entrepreneurship, 2020. <https://brookfieldinstitute.ca/ahead-by-a-century-employment-in-2030/>

Royal Bank of Canada, “Future Launch,” accessed September 2019, <https://twitter.com/rbc/status/969240944913547264?lang=en>.

Royal Bank of Canada. *Humans Wanted: How Canadian youth can thrive in the age of disruption*. Royal Bank of Canada: 2018. [https://www.rbc.com/dms/enterprise/futurelaunch/\\_assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf](https://www.rbc.com/dms/enterprise/futurelaunch/_assets-custom/pdf/RBC-Future-Skills-Report-FINAL-Singles.pdf)

Schwab, Klaus. “The Fourth Industrial Revolution: what it means, how to respond. World Economic Forum Global Agenda. Accessed 15 February 2019. <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>,

Selman, Mark with assistance of Maureen Nicholson. “Report on Adult and Part-Time Study at Simon Fraser University.” SFU Extension Credit Programs. Unpublished manuscript, December 1993.

Simon Fraser University. “Continuing Studies Community Reports, 2005/06-2011/12.” <https://www.sfu.ca/lifelong-learning.html>.

C.P. Snow, The Rede Lecture, 1959, Cambridge University Press, 3 The Scientific Revolution, doc. 15. <http://s-f-walker.org.uk/pubsebooks/2cultures/Rede-lecture-2-cultures.pdf>. Published as “The Two Cultures and the Scientific Revolution” by Cambridge University Press.

Strada Education Network and Gallup, Inc.. *From College to Life: Relevance and the Value of Higher Education*. May 2018. <https://go.stradaeducation.org/from-college-to-life>

Wolf, Christa. *Accident: A Day's News*. Translated by Heike Schwarzbauer and Rick Takvorian. New York: Farrer, Straus and Giroux, LLC, 1989. Rpt. Chicago: The University of Chicago Press, 2001.

World Economic Forum. Centre for the New Economy and Society. *The Future of Jobs Report 2018*. [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2018.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf).

- Association of American Colleges + Universities
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