

APPLIED ENTREPRENEURSHIP POLICY: ONTARIO'S COLLEGES IN THE AGE OF GLOBALIZATION

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ABSTRACT

In the age of globalization, postsecondary institutions in Canada have been called upon to be more innovative to support the development of a workforce that is better able to respond to the rapidly changing environment. This exploratory study proposes a framework to examine applied entrepreneurship as a conceptual framework by exploring the differences between colleges that use innovation (research and development) and entrepreneurship/small business (SMEs and start-ups). A purposive sampling procedure was used for this study with 10 Ontario colleges randomly selected. By examining the strategic mandate agreements of Ontario colleges, the researchers analyzed the data by carefully reviewing the excerpts, quotations, or entire passages in which innovation policy was related to course-based research and entrepreneurship policy related to self-employment (SME). The data revealed that the innovation approach delivered by colleges reflects research directed to an applied approach and is primarily directed to practical or commercial objectives, serving the needs of local employers and supporting economic development. In terms of entrepreneurship policy, the data suggest that there is limited alignment with an applied entrepreneurship approach. Inclusion of applied entrepreneurship in the strategic planning processes of colleges is an important step toward the attainment of innovation and entrepreneurship outcomes.

INTRODUCTION

Entrepreneurship in public policy has been integrated into strategic plans at all levels of government in Canada. In the early 1990's, the Canadian government commissioned a 4-year study by Michael Porter from Harvard University that revealed Canada's challenges in the global arena (Porter, 1990). Porter (1990) stated that a nation's competitive advantage is based on its ability to be innovative and enterprising when addressing problems and argued that Canada could not continue to sustain a high standard of living by merely exporting its natural resources and operating by the standards of the industrial age.

It was also during the 1990's that the dominant economic system, described as the *industrial age*, gave way to a new era of globalization that was brought about, in part, by the disintegration of the Soviet Union caused by the collapse of the Berlin Wall and the end of the cold war. Unlike the cold war system, globalization is a dynamic ongoing process; globalization involves the integration of markets, nation-states, and technologies to a degree never previously witnessed and in a way that enables individuals, corporations, and nation-states to reach around the world farther, faster, and cheaper than ever before (Friedman, 2000).

In the age of globalization, postsecondary institutions in Canada have been called upon to be more innovative to support the development of a workforce that is better able to respond to the rapidly changing global environment. Some researchers have argued that entrepreneurship, and entrepreneurship policy, are important drivers of economic growth (Praag & Versloot, 2007). In the last two decades, entrepreneurship education and entrepreneurial cultures within postsecondary environments have been implemented to varying degrees throughout the educational system across Canada (Parsley & Djukic, 2010). However, it could be argued that for postsecondary institutions to embrace and adopt entrepreneurial cultures fully, strategic planning processes must recognize and incorporate such imperatives in their strategic objectives and planning documents.

This exploratory study examines one section of the postsecondary landscape in Canada: Ontario colleges. The paper presents a framework by which to examine applied entrepreneurship

as a conceptual framework by exploring the differences between colleges and universities that use innovation (research and development) and entrepreneurship/small business (SMEs and start-ups). By examining the strategic mandate agreements of Ontario colleges, gaps related to applied entrepreneurship are explored, the balance between innovation policy and entrepreneurship policy is examined, and the use of applied enterprise in the strategic mandate agreements is discussed.

LITERATURE REVIEW

Globalization has been described as the dominant economic view of today in which a global knowledge economy has emerged. Globalization is driven by the application of new technologies and collapsing barriers to international trade and investment that accelerated the evolutionary path from a low- to a high-skills economy (Brown & Lauder, 2012). According to Friedman (2000), Globalization 1 took place between 1945 and 1989 and was a response to falling transportation costs including rail, steam-power, and the automobile. People could get to places faster and cheaper. The cold war was characterized by an international system that was divided by two competing ideologies: capitalism and communism. When communism disintegrated, capitalism became common throughout the world. Friedman also described a second wave within Globalization 2 which occurred between 1990 and 2002 and was precipitated by falling telecommunication costs and the proliferation of microchips, satellites, fiber optics, Internet fiber optics, and the Internet.

Globalization is a fact of life, as pointed out by Schwab and Smadja (1996) of the World Economic Forum, who identified four basic elements of economic globalization:

- (1) the lightning speed with which capital moves across borders,
- (2) the redistribution of economic power,
- (3) the reduction of jobs in this emerging environment, and
- (4) the popular skepticism of this emerging economic reality.

In his book, *The Weightless Society*, Leadbeater (2000) also described globalization. He concluded that turning ones back on the global economy would mean ignoring the most vital forces in modern societies: the accelerating spread of knowledge and ideas. He characterized three forces that drive globalization: financial capitalism, knowledge capitalism, and social capital, which contributes to a thriving knowledge society that is cosmopolitan and open, rewards talent and creativity, and invests in people and education. Luczkiw (2007) called this phenomenon a major paradigm shift, which is a result of the interplay of three critical forces: the movement of talent, capital, and knowledge across borders. Thanks to the power of the Internet, anyone, anywhere, with strong commitment and perseverance, can disrupt most existing industry groups (Christensen, Parsons, & Fairbourne, 2010).

According to Friedman (2000), the second wave of globalization, Globalization 2, took place after 1990. Friedman believed that this wave is made up of the three biggest forces on the planet: the market, Mother Nature, and Moore's Law, which are all surging very quickly and at the same time. Globalization ties economies together more tightly than ever before, making workers, investors, and markets much more interdependent and exposed to global trends, without walls to protect them.

Moore's Law is the theory that the speed and power of microchips will double every two years (Luczkiw, 2007). In their book, *The Second Machine Age*, Brynjolfsson and McAfee (2014) argued that with relentless increases in the power of software, computers, and robots, many more traditional white- and blue-collar jobs are being replaced. At the same time, new jobs are being created, all of which require more complex and knowledge-based skills. The rapid growth of carbon in the atmosphere and environmental degradation and deforestation because of population growth on earth are believed to destabilize the world's ecosystems at an increasingly

rapid pace. In sum, it could be argued that the world is immersed in three climate changes: digital, ecological, and geo-economical.

This shift to the second part of globalization was further characterized by Tapscott and Williams (2010), who described it as a new engine of innovation and wealth creation and a powerful new force that radically drops collaboration costs. As such, globalization enables communities to collaborate on shared concerns, endeavors, and challenges (McAfee, 2009). Enterprise 1.0 offered the first wave of Internet tools, but several years of experimentation and adaptation have created new and better online tools for collaboration and connection (McAfee, 2009). In the new 2.0, interactivity of the Internet has emerged with new social media platforms (Tapscott & Williams, 2010). For the first time in history, people everywhere can participate fully in the collective achievement of their new future.

The global narrative of the past 25 years is now economic and financial as much as social, cultural, or political. Identities are defined and reinvented around money. Individual economic futures increasingly depend on financial success (Das, 2011). Entrepreneurship became one of those narratives that would be used as a strategic imperative to usher in a new prosperity that is built within the structure of globalization. Earlier pundits encouraged citizens to compete against other nations by using their creativity, innovation, and skillful use of knowledge and resources to “create what has never existed before” (Land & Jarman, 1992, p. 21). In his book, *Global Paradox*, Naisbitt (1995) stated, “The bigger the global economy, the more powerful its smallest players” (p. 1). As all of the big players become smaller, the study of the smallest economic player, the entrepreneur, is merging with the study of how the global economy works (Luczkiw, 1995). In a presentation to the World Economic Forum, Michael Porter (1990) identified two existing models that make a country and organization competitive: the first model uses efficiency as the source of competitive advantage and is mainly operated by multinationals; the second model is based on innovation and growth to meet the individualized needs of the consumer. This atmosphere emphasizes self-reliance and promotes job creation because entrepreneurship and innovation will lead to the creation of new enterprises and business ecosystems.

However, negative views about globalization do exist. Critics of the globalization movement were skeptical of the promises of higher wages, better jobs, and greater levels of standard of living (Krugman, 2012; Madrick, 2014; Stiglitz, 2015). The optimism about globalization was part of the policy shift that started in the early 1980's in the United States (Reagan), the United Kingdom (Thatcher), and also in Canada (Mulroney). In the late 1960's and 1970's, Western economies were gripped by *stagflation*, which is a combination of low growth, high unemployment, and inflation that resisted Keynesian or interventionist policy to fix broken economies. The election of these economically right-wing governments hastened a return to free markets; efficient markets were favored over efficient governments. All three governments were elected with a mandate to reverse their respective country's economic and social woes (Das, 2011). By the late 1980's, neoliberal ideals (as the Chicago School ideas were then called) dominated economic thinking (Johnson & Kwak, 2011). This, coupled with the demise of the Soviet Union, created the conditions for the rediscovery of entrepreneurship. Disciplined by competition with each other, all nations, including developing ones, would make what they manufactured best. Trade would soar, information would spread at the speed of light, wages would rise, and poverty would decline dramatically. Rich countries would benefit along with poor. Economists first argued that if inequality of incomes were rising, it had little to do with globalized trade and almost everything to do with inadequate education and changing technologies (Madrick, 2014).

Twenty-five years after the start of globalization, the payoffs have not materialized. One area of growing disparity is income inequality. Studies by Reich (2012) described the growth in income polarization in the United States. He argued that the incomes of the top 20% have pulled away from the rest because of their ability to break free from the constraints of local and national labor markets. Piketty (2014) illustrated the emergence of extreme income inequality and the

concentration of income and wealth in the hands of the plutocracy (Freeland, 2014). Global capitalism, intended to boost the quality of life of people around the world, widens the gap between rich and poor (Bjerke & Ramo, 2011). This argument was further supported by Nobel laureates Stiglitz and Krugman (Krugman & Wells, 2013).

Additional problems have been associated with free-trade theory. In developed nations, where manufacturing job losses were most prevalent, many higher paying jobs were lost as jobs were off-shored. Many workers were unable to maintain full employment and their standards of living were diminished. Promises of adequate social programs to offset reduced wages resulting from the implementation of free trade have rarely been kept (Stiglitz, 2015).

Globalization also brought with it increasing destabilization of financial markets with the liberalization of capital markets and the interconnected nature of economies. In the 1990's, there were several examples of such destabilization, including the Asian financial crisis, the collapse of Long Term Capital Management, and crises in the financial markets of Russia, Mexico, Brazil, and Argentina. In addition, the dot.com bust of the early 21st century created booms and busts in assets markets (Partnoy, 2004). This culminated in the great recession of 2008, which was brought down by the collapse of the U.S. housing market and the corresponding derivatives and financial instruments that were distributed to global investors (Roubini, 2009). The finance of the global economy has emerged; that is, the conversion of everything into monetary form (Das, 2011). Increased wealth and consumption, increased borrowing, and some pursuits of making money are no longer directly linked to the production of goods. Speculators can make money from trading oil even if they do not actually produce, refine, or consume oil (Partnoy, 2004).

Critics of globalization and the accompanying neoliberal perspective also emerged in the education sector (Ball, 2007). Pundits pointed to corporate organization, privatization, entrepreneurship, and interinstitutional competition as key factors in the hijacking of higher education by business elites and their political puppets (Bauman, 1998). Pressure on universities to increase collaboration with the business sector have met with some resistance on campuses among faculty who are sensitive to the differences between the values and conventions of academe and those of business (Clark, Moran, Skolnik, & Trick, 2009). Some might argue that instead of educating students for citizenship and democracy, schools are preparing them for a stratified labor force for the advancement of globalization (Bauman, 1998). Bowles and Gintis (2011) developed what they referred to as the correspondence principle, claiming that the primary aim of education in society involves a “correspondence” between the fundamental social relationships that exist in schools and workplaces (Rosenberg, 2003). Bowles and Gintis (2011) began by assuming that education must perform the stabilizing function of affirming dominant social institutions and cultural forms, but it should also play the personal developmental and egalitarian roles envisaged by Marx (Livingstone, 2009). The benevolent assumptions of the functionalist sociology of Talcott Parsons attempted to show that schools in capitalist societies consistently impede full personal development. Instead, they legitimate rather than reduce social inequality in the process of performing this stabilizing function (Bowles & Gintis, 2011). At stake is whether postsecondary education continues to fulfill a progressive mandate centered on education as a tool for social justice and change, or whether it succumbs to a neoliberal agenda driven by government austerity and private interest.

The context described above is a critical component of the understanding of why higher education internalized the global shifts and shocks of the past 25 years and, more importantly, why entrepreneurship policy was integrated into the strategic planning processes of postsecondary institutions. The next section of the literature review explores the research related to entrepreneurship policy in higher education followed by an examination of how Ontario's colleges have responded to globalization and entrepreneurship within their strategic plans.

Entrepreneurship Policy in Higher Education

A strong belief that entrepreneurship is a crucial driver of economic growth for both developed and developing nations has emerged among both scholars and policymakers (Praag & Versloot, 2007). Governments' basic policy response to globalization was to develop policy that would create jobs. "The Job Generation Process" (Birch, 1979), an early study, moved new, small, and growing businesses to the attention of policymakers in much of the developed world. According to Schumpeter (2011), entrepreneurship is a driving force of innovation and more generally an engine for economic development. Endogenous growth theorists (Aghion & Howitt, 1997) highlighted the importance of human capital and research and development (R&D) as additional explanations for increasing returns in the aggregate production function. More recently, several scholars have proposed entrepreneurship as a third driver of economic growth. These scholars have suggested that entrepreneurs, with the development of new companies, are able to exploit the opportunities provided by new knowledge and ideas that are not fully understood and commercialized by the mature incumbent firms (Audretsch, Keilbach, & Lehmann, 2006). Entrepreneurship represents a missing link between investment in new knowledge and economic development, thus serving as a conduit for both entirely new knowledge and knowledge spillovers (Audretsch et al., 2006).

Entrepreneurship policy, then, primarily concerns the creation of an environment and support system to foster the emergence of new entrepreneurs and the start-up and early-stage growth of new firms to outsmart or outmaneuver economic rivals (Lundstrom & Stevenson, 2005). Schools, colleges, universities, think tanks, design centers, and research laboratories are on the front line in the search for competitive advantages. It could be argued that it is within this perspective that higher education also has adapted entrepreneurship policy as part of its strategic plans. This does not only consist of entrepreneurship education, or programs that teach entrepreneurship, but also entrepreneurship as a culture and mindset that is pervasive throughout the school.

Other researchers have raised concerns about the effectiveness of entrepreneurship education efforts (Harris, Forbes, & Fletcher, 2000). In fact, some have found formal entrepreneurship training to be disadvantageous (Raffo, Lovatt, Banks, & O'Connor, 2000). However, the feedback received from those being trained is that they benefit from applied as well as the theoretical perspectives (Feldman, 2001). Regardless of one's point of view, it is important to note that entrepreneurship education has been implemented in higher education since the early 1990' with its foundations grounded in human capital theory.

Some researchers are critical of the role of entrepreneurship in public policy. In general, public policy in entrepreneurship facilitates investment in knowledge-creating activities, such as research and education, and encourages agents of change, or entrepreneurs, to innovate. In this regard, policy targets include higher education, scientists, schools, and research institutions, as well as nascent entrepreneurs. Policy instruments include funding for research and science as well as funding to start new businesses and efforts to support individuals in becoming entrepreneurs (Audretsch & Link, 2012). Some have argued that these types of investments lead to poor results and point to a lack of empirical evidence to support public investments. Shane (2010) provided eight key conclusions from his research that support his claims of poor return on investment in entrepreneurship. These include:

- (1) Encouraging start-ups in general is lousy public policy because we have no evidence that people create too few or the wrong businesses in the absence of government intervention, and there is much evidence that these policies lead people to start marginal businesses that are likely to fail, have little economic impact, and generate little employment.
- (2) Investing a dollar or an hour of time in the creation of an additional average new business is a worse use of resources than investing a dollar or an hour of time in the expansion of an average existing business.

- (3) No evidence supports the notion that new firm formation causes economic growth; rather, economic growth probably causes people to start businesses. Controlling for other differences across countries, in the number of people who run their own businesses is negatively associated with economic growth.
- (4) People are more likely to start companies in poorer and more agricultural places than in places that are richer and more reliant on manufacturing.
- (5) People in places with high rates of unemployment are more likely to start businesses than people in places with low rates of unemployment.
- (6) New firms do not create more jobs than existing firms; to get to 50% of net new jobs created by so-called new firms, one must consider all firms that are nine years old and younger to be new.
- (7) All of the job growth created by a given cohort of new firms comes in its first year; in every subsequent year, the cohort loses more jobs because of company failure than it adds as a result of company expansion.
- (8) The jobs in start-ups pay less, offer fewer benefits, and are more likely to disappear over time than jobs in existing companies.

Critics of Shane's perspectives have argued that enterprise education needs to develop beyond the economist viewpoint of business start-up and business growth and promote the notion that evaluations of enterprise education should encompass prime pedagogical objectives of enterprise education, thus enabling students to grow and develop and to shape their own identities in the light of their learning experiences (Edwards & Muir, 2012).

Despite the debate, Canadian schools of higher education continue to resource entrepreneurship education as a government priority (Parsley & Djukic, 2010). Over the last decade, government programs have promoted R&D within the higher education sector to increase the production and development of new knowledge and the attraction and retention of world-class researchers. Taken together, R&D and new knowledge are entrepreneurial opportunities. As such, higher education institutions are in a position to play a significant role in developing an entrepreneurial advantage in Canada. Providing potential entrepreneurs with appropriate skills and support is an important element required to build a global competitive advantage.

In the province of Ontario in Canada, there are two systems of higher education generally recognized: universities and colleges. Globalization impacted both types of postsecondary institutions. Clark et al. (2009) suggested that there are three important implications:

- (1) Globalization has heightened the public perception of the importance to the province's economic well-being of the knowledge and skills produced by post-secondary institutions by their teaching and research;
- (2) The heightened public interest in the contribution of higher education to economic growth and security puts considerable stress on colleges and especially universities in dealing with the age-old tension between economic and broader intellectual cultural objectives; and,
- (3) Globalization has spawned apparent pressure to blur the boundaries between higher education and industry.

The next section explores in greater detail the origin, evolution, and role of Ontario's colleges since their creation in 1967 to the present.

Ontario's Colleges: Strategic Planning and the Strategic Mandate Agreement

The province of Ontario is the largest and most populated in Canada. Postsecondary education is delivered by 20 provincially chartered universities, and there are 24 publically funded colleges in Ontario, with an annual budget of \$7.5 billion, using 2013–2014 estimated operating and capital expenditures (Ministry of Training, 2015). The colleges, which were established in the late 1960's, are organized into what in most jurisdictions would recognize as a

state system (Lang, 2009) and were designed to be completely separate from the universities. Colleges were created as an instrument of public policy and their role was to be predominately economic (Dennison & Levin, 1988).

Colleges were intended to prepare workers for the provincial economy, particularly workers in the middle of the occupational hierarchy. The universities each have their own charters, are highly autonomous, and are a system only in the sense that they are financed under a single funding formula. In contrast to the predominantly economic mission of colleges, universities in Ontario have attempted to balance their economic role with their broader intellectual, cultural, and civic functions (Fisher & Rubenson, 1998).

Colleges distinguish themselves from their university counterparts by focusing on applied, rather than theoretical, research. *Applied research* has been defined as research directed primarily toward specific practical or commercial objectives (Clark et al., 2009). The colleges' role in applied research was legally recognized in the *Ontario Colleges of Applied Arts and Technology Act* in 2002 (Clark et al., 2009)(Clark, Moran, Skolnik, & Trick, 2009). The Act states that the colleges can undertake applied research to educate their students, meet the needs of employers, and support community economic development (Clark et al., 2009).

From a strategic planning perspective, colleges have pivoted over the past 15 years to differentiate themselves from universities. In terms of strategic planning, the literature has shifted from a rational, structured, technical approach (Friedman & Hudson, 1974; Kaufman & Herman, 1991) to more interactive, political, collaborative, creative paradigms (Bryson, 2011; Cook, 1995; Newberry, 1992). Critics of strategic planning practice include Mintzberg (1994), who argued for that there should be a distinction between strategic planning and strategic thinking and believed these processes to be, in some cases, mutually exclusive. He suggested that often what is presented as strategic planning is actually no different from long-term planning.

Other literature has linked strategic planning and organizational learning (Bartlett & Ghoshal, 1998), education reform (D'Amico, 1989) and accountability (Dunn, 1998; Gaither, 1996). Other links with strategic planning in the literature present various other factors related to the success or failure of strategic planning; prevalent among these is leadership (Turan & Sny, 1996), cultural context (Carlson, 1991), and politics (Moore, 2000).

As fiscal pressure mounted in the public sector over the past decade, the Ontario government recently developed strategic mandate agreements to develop a more focused approach that would differentiate colleges and universities. The rationale was to spend money with little or no overlap, which would result in increased efficiencies in the system.

When the colleges were first created, the goal was to replicate the same institutional model across all regions, thereby instituting a relatively homogeneous product (Clark et al., 2009; Clark, Moran, Skolnik, & Trick, 2009). Strategic mandate agreements were introduced to ensure that Ontario's postsecondary system would build on individual strengths. The agreements are legal documents, signed by all publicly funded colleges and universities, that help guide future growth by encouraging more focus on unique strengths and avoiding or limiting expansion in academic areas in which programs already exist (Ministry of Training, 2014). Therefore, strategic mandate agreements are negotiated with individual institutions based on Ontario's Differentiation Policy Framework for Postsecondary Education. Research has shown that differentiated postsecondary education supports greater quality, competitiveness, accountability, and sustainability by allowing institutions to spend resources more efficiently and to focus on their areas of strength (Government of Ontario, 2013). As strategic mandates began to change this dynamic, researchers have suggested that applied entrepreneurship may serve as one of the factors that may help each college to distinguish its unique value proposition.

Applied Entrepreneurship and Conceptual Framework

As stated earlier, postsecondary education in Ontario includes two systems of publicly funded institutions. Figure 1 illustrates Ontario's landscape of higher education and demonstrates

the differences between colleges and universities using innovation (R&D) and entrepreneurship/ small business (SMEs and start-ups).

In Ontario, colleges focus on Quadrants 3 and 4, and universities focus on Quadrants 1 and 2. Evidence suggests that there is a limited number of training approaches in entrepreneurship that go beyond Quadrant 2. The dominant traditional paradigm of entrepreneurship programs is largely an academic-university paradigm; insufficient research has been conducted on Quadrant 3. Since 2002, colleges in Ontario have initiated applied research (Quadrant 4) to differentiate themselves from the traditional research that has been conducted on universities. The applied research approach focuses on helping Ontario’s businesses, industries, and community organizations by enabling college researchers to engage in high priority applied research and development, innovation, and commercialization activities. To this extent, research has been differentiated between colleges and universities in Ontario. The gap, however, can be found in entrepreneurship. Figure 1 addresses this gap in applied entrepreneurship, specifically, in Quadrant 3. Policy and programs in colleges and universities currently do not distinguish between entrepreneurship as an academic approach and as an applied approach. Entrepreneurship programs may be useful from a university-academic approach but do little to instill and encourage entrepreneurship and small business start-ups in an applied manner (Gibb, 2006).

- Quadrant 1: This quadrant consists of academic university researchers whose primary purpose is to contribute to scholarly pursuits and whose research contribution is to build theory with empirical analysis.
- Quadrant 2: This quadrant consists of academic researchers and students from university, whose primary purpose is to commercialize and scale research-backed scientific discoveries.
- Quadrant 3: This quadrant consists of applied instructors and students from college, whose primary purpose is to commercialize competency-based training, resulting in small business creation.
- Quadrant 4: This quadrant consists of applied researchers from college whose primary purpose is to conduct course-based research from which students and community organizations such as small business owners receive benefits.

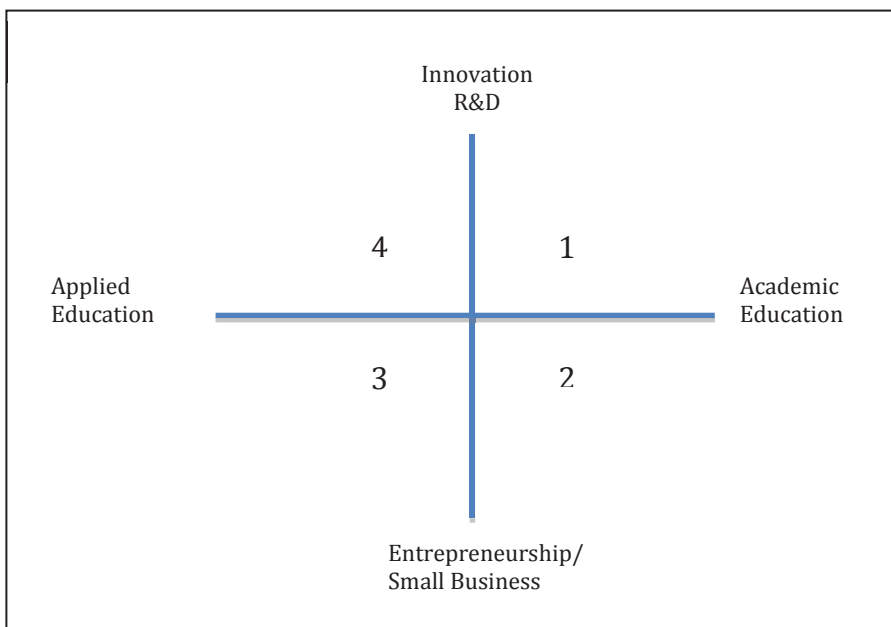


Figure 1: Ontario’s higher education landscape with respect to innovation and entrepreneurship.

The next section addresses the conceptual framework. Figure 2, which illustrates applied entrepreneurship in Ontario colleges, introduces an applied entrepreneurship conceptual framework for colleges in Ontario. This framework is suggested as a new perspective in conceptualizing and delivering entrepreneurship and small business education in an applied context.

The variables that explain the conceptual framework consist of the following definitions:

Students: Students are the learners in the applied context who bring their individual values, intrinsic motivation, interests, strengths and talents, drive, and determination in the learning environment. The interaction between the student and the learning environment is important to nurture applied entrepreneurship.

Idea: The idea is the learner's ability to create a concept through creativity and innovation. The idea carries with it the need to compete and/or cooperate to supply the economic and/or society with a need that sufficiently meets demand. The idea needs to be well researched and ready to be tested. There must be capacity on the part of the school to allow students to communicate their ideas until it fits the opportunity.

Opportunity: Opportunities are necessary in order for the idea to meet the demand in the economy/society. These opportunities are based on trends and their impact at the global, national, and regional levels in order to for the ideas to find niches in the marketplace.

Resources: Resources comprise the school and community resources to support the student and the idea. Resources consist of refer to funding, faculty, staff, technology, facilities and community expertise to assist in the launch of a new venture to commercialize applied competencies and skills.

Competencies and Technical Skills: Community colleges in Ontario were established to respond to labour-market needs in communities across the province. Applied education largely consists of hands-on technical training in many diverse fields. These skills can be applied not only to employment but for those individuals who wish to be self-employed.

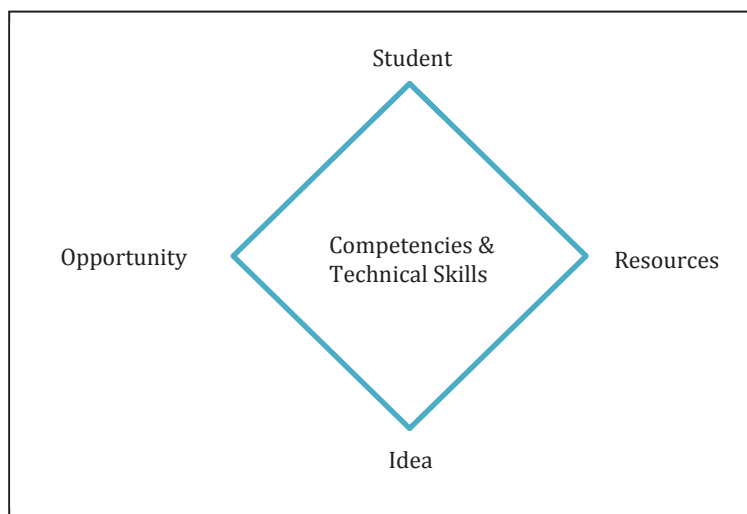


Figure 2: Applied entrepreneurship in Ontario colleges.

METHODOLOGY

The research design is exploratory. The main purpose of this study was to ascertain the strategic objectives of Ontario's community colleges as related to entrepreneurship and small business enterprise. Four key objectives drove the research:

- (1) Identify entrepreneurship policy, in terms of self-employment, in Ontario colleges' Strategic Mandate Agreement,
- (2) Explore gaps in the Strategic Mandate Agreement which pertain to applied entrepreneurship, as defined by the conceptual framework,
- (3) Explore the balance between innovation policy (course-based research) and entrepreneurship policy (self-employment) in the Strategic Mandate Agreements, and
- (4) Identify the use of applied entrepreneurship, as defined in the conceptual framework in the Ontario's colleges Strategic Mandate Agreements.

An exploratory study was selected because of the uniqueness of applied entrepreneurship. Because applied enterprise is an emerging model, an exploratory study is useful to answer broad questions such as "What is going on here?" Because the research needs to explore strategic success factors, this research design is most suitable for those objectives. Therefore, the study needs to take a broad view of Ontario's colleges to gather information so that a description of what is occurring can be made as it relates to the conceptual framework.

Sample

A purposive sampling procedure was used for this study. Purposeful sampling is a non-random method of sampling in which the researcher selects information-rich cases for in-depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research (Corbin & Strauss, 2008; Yin, 1994). There are 24 publicly funded colleges in Ontario, of which 2 are French-speaking schools. The sample for this study includes 10 English-speaking schools selected based on geographic regions of Ontario (Table 1) and the language fluency of the research team. The selected 10 colleges included 2 from the north, 2 from the south, 2 from the east, and 2 from the Greater Toronto Area (central). The study analyzed 10 Strategic Mandate Agreements using a document analysis. Document analysis is a systematic procedure used to review and evaluate documents (Bowen, 2009). In this particular study, electronic strategic mandate agreements were obtained.

Table 1: *Publicly Funded Colleges Identified*

Geographic Region	Schools
North	Northern, Sault
South	Niagara, Mohawk
East	Algonquin, St. Lawrence
West	Fanshawe, St. Clair,
Central	Humber, Seneca

Procedure

The research team randomly selected 10 colleges in Ontario based on geographic location in the province, and subsequently downloaded 10 Strategic Mandate Agreements from their respective Web sites. Specifically, the procedure involved finding, selecting, appraising, and synthesizing data contained in the Strategic Mandate Agreements. This analysis yielded data that included excerpts, quotations, or entire passages in which innovation policy related to course-based research (R&D) and entrepreneurship policy related to self-employment (SME) were explicitly mentioned in the Strategic Mandate Agreement and then organized them into major themes and categories using content analysis (Labuschagne, 2003). The researchers

carefully examined and interpreted the data to elicit meaning, gain understanding, and develop empirical knowledge (Corbin & Strauss, 2008).

In addition, the researchers coded the data using content analysis, which is the appropriate technique for the objective and systematic study of message characteristic in natural language (Holsti, 1969). The researchers then proceeded to develop a classification scheme to count the number of times words were said based on the research questions identified earlier.

Instrument

A research framework was developed based on the conceptual framework (Figure 2). From the conceptual framework, an instrument was created to collect the data. The instrument centered on five themes to investigate in the Strategic Mandate Agreements: differentiation between schools, aspirations to include entrepreneurship, contextual justification to include entrepreneurship, teaching and learning entrepreneurship, and whether there is evidence to suggest that innovation and/or entrepreneurship appears to be valued.

Measures, Analysis, and Data Sources

An artifact data worksheet was developed (Table 2), and data were collected from 10 Strategic Mandate Agreements. The researchers then analyzed the data using document analysis, organizing words and phrases into a summary table and an artifact worksheet summary (Table 3). The researchers carefully aggregated the data into themes and patterns as they related to applied entrepreneurship.

Table 2: *Artifact Data Worksheet*

Question	Description
1	Type of Document: Strategic Mandate Agreement
2	Unique Characteristic of the Document: Legal Contract
3	Date of Document: 2014–2017
4	Author (Creator) of the Document: Board of Trustees (College)
5	Audience of Document: Ministry of Education; Public
6	What role does entrepreneurship and/or innovation play in differentiation?
7	Is entrepreneurship and/or innovation part of the school’s aspirations?
8	Does entrepreneurship and/or innovation play a role in teaching/learning?
9	How are entrepreneurship policy and/or innovation policy justified in the document?
10	Does the school have a balanced approach to innovation policy (R&D) and entrepreneurship policy (SME)?

RESULTS

College differentiation (Question 6) was employed to distinguish each school’s strategy relative to entrepreneurship. A Likert scale was created in which 0 signified no differentiation, 1 signified some differentiation, and 2 indicated significant differentiation. Three schools, one in the north, one in the south, and one in the east, had no significant references to entrepreneurship. Three schools, one in the north, one in the east, and one in the west had some references to entrepreneurship and four schools, one in the south, two in the center, and one in the west had extensive reference to entrepreneurship as a differentiator of the school.

College aspirations (Question 7) related to future strategy with respect to entrepreneurship. A Likert scale was created in which 0 signified no aspiration, 1 indicated some aspirations, and 2 signified extensive aspirations. All but one college, in the east had some

reference to the development of entrepreneurship in the near future but had no significant mention of entrepreneurship in future aspirations.

Entrepreneurship in teaching and learning (Question 8) was acknowledged by all but two schools (one in the north the other in the south). The statements were generally made in terms of program delivery methods, such as experiential learning, operating a business related to a program cluster, technology-enabled learning, cross-cultural international experiences, and industry and community partnerships, which engage students and faculty in entrepreneurship. The documents expressed entrepreneurship in terms of entrepreneurial learning methods, but none of the documents mentioned entrepreneurship in terms of a teaching approach or philosophy in terms of challenging the traditional model of knowledge delivery in the classroom. This question was labeled as either a Y for yes or N for no.

The justification to pursue entrepreneurship (Question 9) was observed in two ways. The first was internally focused, whereby schools validated entrepreneurship by focusing on learning activities within the school. The second was externally focused, whereby schools validated entrepreneurship as a result of the changing regional and global environment and offered entrepreneurship as a viable policy to meet the changing nature of the global economy. The results revealed that six schools were internally focused, one school was externally focused, and three had a balance between both internally and externally focused approaches. Specifically, schools in the north and south were internally focused; only one in the center and west, two schools in the east, and one in the west were balanced; and only one school in the center was externally focused. A Likert scale was created in which 0 represented internal focus, 1 represented externally focused, and B signified a balanced approach.

The documents were explored (Question 10) relative to whether schools were oriented toward entrepreneurship policy (SMEs) and/or innovation policy (R&D). Responses to this question were labeled EP for entrepreneurship policy, IP for innovation policy, or B for a balanced approach. The results showed that 4 schools positioned themselves as innovation policy schools, while one school towards an entrepreneurship policy and 5 schools had a balanced approach between innovation and entrepreneurship policy. Specifically, both schools in the north and one each in the south and east had an innovation policy; one school in the south had an entrepreneurship policy; and both schools in the center and in the west and one in the east had a balanced approach.

Table 3: *Artifact Worksheet Summary*

Question	N1	N2	S1	S2	C1	C2	E1	E2	W1	W2
6	1	0	2	0	2	2	0	1	1	2
7	0	0	0	0	0	0	0	1	0	0
8	Y	N	Y	N	Y	Y	Y	Y	Y	Y
9	0	0	0	0	0	1	B	B	0	B
10	IP	IP	EP	IP	B	B	IP	B	B	B

LIMITATIONS

This study analyzed only one type of document (i.e., Strategic Mandate Agreements). To have a more complete study, document analysis must be combined with other qualitative research methods as a means of triangulation, or the combination of methods in the study of the same phenomenon (Denzin, Lincoln, & Lincoln, 2000). By triangulating data the researcher attempts to provide a confluence of evidence that breeds credibility (Eisner, 1991). The qualitative researcher is expected to utilize multiple (at least two) sources of evidence, to seek convergence and corroboration through the use of different data sources and methods. Apart from documents, such sources include interviews, observation, and physical artifacts (Yin, 1994).

A mixed method approach would also be useful, combining quantitative and qualitative research techniques (Bowen, 2009). These additional approaches would minimize the limitations related to insufficient detail and biased selectivity. Insufficient detail in this study refers to fact that the strategic mandate agreement was not produced for research purposes but created independent of the research agenda and therefore previous studies located in documents are not being considered. Consequently, the agreements do not provide sufficient detail to answer the research questions completely. Bias selectivity refers to the incompleteness of documents selected. From a college context, the available (selected) documents (Strategic Mandate Agreements) were created as a contract with the government (Ministry of Education), and are likely to be aligned with policies and procedures with a political agenda and may not reflect an emphasis on empirical validation.

CONCLUSION AND IMPLICATIONS

For colleges in Ontario to be relevant in the age of globalization, they must adopt unique policies reflected in strategic plans that differentiate colleges from universities. The innovation approach delivered by colleges reflects research directed to an applied approach rather than a curiosity perspective and is directed primarily to specific practical or commercial objectives; that is, serving the needs of local employers and supporting community economic development. In terms of entrepreneurship policy, colleges have an opportunity to differentiate themselves further.

The sample of colleges in this study had no framework closely aligned with an applied entrepreneurship approach. If the colleges continue to strive to prepare students for the world of work and employment as well as to help communities to improve their quality of life and standard of living, then colleges must strive to incorporate an entrepreneurship policy that reflects an applied education philosophy. Colleges have a significant opportunity to leverage their expertise in applied education and support applied entrepreneurship. By creating the capacity to develop and support small businesses, colleges can continue to make a difference in the economic viability and success of their communities. It can be argued that the Strategic Mandate Agreements provided a unique opportunity to set the priorities of each college. Inclusion of applied entrepreneurship in the strategic planning processes of colleges is an important step toward the attainment of applied entrepreneurship goals. It is only when colleges can balance innovation policy with entrepreneurship policy that will they be effective in delivering entrepreneurship outcomes that serve both local communities and the broader Canadian society.

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