

Entrepreneurship Education in the United States: Strengths and Opportunities for Growth*

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ABSTRACT

This paper explores the role of entrepreneurship education in a modern economy and how the government, academic, and nonprofit sectors in the United States have responded to this growing field. There are several sectors that play important roles in the entrepreneurship education landscape in the United States. Over the past decade, there has been increasing participation of Federal and state governments. This recent trend suggests the field may be increasing in maturity and legitimacy, showing promise for expanding the reach of entrepreneurship education programs. Programs sponsored by nonprofit organizations and private foundations complement government initiatives and display an effective means of leveraging knowledge and resources across the relevant sectors. Thus, new initiatives, whether initiated by government or academia, should learn from the successes of this sector as well as be carefully considered within the context of existent programs and services. Nonetheless, the potentially dynamic environment of the entrepreneurship education field in the United States offers a specific opportunity to leverage the experience in mentorship activities at the post-secondary education to address a possible gap in these activities at the secondary education level.

KEYWORDS: entrepreneurship education, United States, secondary education, post-secondary education, mentorship

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1. BACKGROUND

With the passage of the American Competes Reauthorization Act (H.R. 5116) on December 21, 2010, there is renewed interest in the role of entrepreneurship and its effect on innovation and competitiveness in the United States. A perennial question is whether entrepreneurs are naturally talented, possessing creative business sense, or whether entrepreneurship can be taught and if so, how? A review of the literature and programs in the United States indicates that this question is of strong interest. This paper explores the role of entrepreneurial education in a modern economy, specifically in the United States, first defining entrepreneurship, then examining the characteristics of entrepreneurs. The remainder of the paper reviews the state of entrepreneurship education in the United States, identifying gaps and opportunities for new initiatives to expand entrepreneurship education efforts.

2. INTRODUCTION

Entrepreneurs build new businesses that provide the basis for a thriving economy and sustainable prosperity. Klaus Schwab, founder and executive chairman of the World Economic Forum, notes their importance: “entrepreneurship is the engine fuelling innovation, employment generation, and economic growth” (World Economic Forum 2009). In a recent interview, Carl Schramm of the Kauffman Foundation notes that entrepreneurs are essential to reaching the goal of global economic recovery: “Historically through the last seven recessions it’s been entrepreneurs who essentially restarted the economy” (Riley 2009).

Many variables contribute to an individual’s decision to become an entrepreneur. Formal business education can influence individuals’ perceptions regarding the risks and rewards of entrepreneurship and perhaps boost their confidence in succeeding as entrepreneurs. Entrepreneurship education has several valuable short- and long-term benefits to the economy from motivating the completion of formal education from at-risk groups to increasing the pool of potential entrepreneurs and success in entrepreneurial activity (Hart 2003, Ronstadt 1985, Aspen Institute 2008).

Several sectors play important roles in the entrepreneurship education landscape in the United States. Over the past decade, the participation of federal and state governments has increased, which suggests the growing legitimacy of entrepreneurship education. In turn, this shows promise for expanding the reach of entrepreneurship education programs. But how education will be addressed within national-level initiatives remains uncertain.

Nonprofit organizations and private foundations that effectively leverage knowledge and resources across the relevant sectors may provide an example. These organizations represent a strong and diverse presence that implements education programs meeting local community needs. Thus, new initiatives, whether initiated by government or academia, should learn from the successes of the nonprofit sector and be carefully considered within the context of existent programs and services. In particular, the dynamic environment of the field offers an opportunity to address the possible gap in mentorship activities at the secondary education level.

A review of secondary and post-secondary academic curricula, nonprofit and governmental programs, the academic literature, and interviews with leaders in the field of entrepreneurship education

sets the stage for addressing the following questions (Peña et. al., 2010):

- What is entrepreneurship?
- What is the role of entrepreneurship education?
- What is the current landscape of entrepreneurship education programs in the United States?
- What are the strengths and weaknesses of current efforts and in what ways can these efforts be expanded?

3. WHAT IS ENTREPRENEURSHIP?

3.1 Defining Entrepreneurship

The German tradition of entrepreneurship is largely led by Joseph Schumpeter's (1911) notion that entrepreneurship is a process by which new firms displace less innovative incumbent firms and stimulate higher economic growth. The Austrian tradition of Israel Kirzner (1979) defines entrepreneurship as a process of discovery and spontaneous knowledge, where an individual recognizes previously unnoticed opportunities in the marketplace (Kirzner 1979).

At the national level, the rate of business owners in the workforce is a common indicator of the level of entrepreneurship. Beginning in the 1980s, this rate began to rise in both the United States and Europe. Before that time, mass production by large corporations had dominated the economy during the post-war period (Audretsch 2004). The reemergence of entrepreneurship throughout Europe and North America in the 1980s was due to a changing business environment in a globalized economy and a new reliance on knowledge-based economic activity to enhance competitive advantage (Audretsch, Thurik, Verheul, and Wennekers 2002). Audretsch et. al. (2002) label this new economic period based on knowledge and idea inputs as the “entrepreneurial economy.”

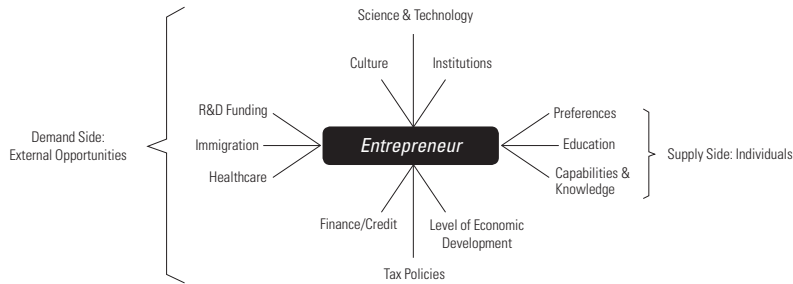
The increase in entrepreneurial activity lasted throughout the 1980s, with the rate of the business owners in the economy reaching just over 10% and staying constant through the 1990s (Audretsch & Thurik 2001). Although new research points to additional increases in business ownership rates, it also points to significant latent entrepreneurship—that is, the high desire of individuals to become entrepreneurs that has not yet been acted on (Grilo and Thurik 2005). This notion suggests that there may be barriers to becoming entrepreneurs or to conducting entrepreneurial activity.

3.2 Determinants of Becoming an Entrepreneur

Understanding the characteristics of entrepreneurship—the demand side or external factors, as well as the supply side or individual factors—provides the foundation for entrepreneurship education. External factors describe the environmental conditions that influence entrepreneurship creation, including the societal, technological, economic, and political aspects of the surrounding environment. Measures presented by the World Bank's (2010) Doing Business report succinctly capture many of these characteristics, such as time to start a business, acceptability of risk, access to capital, and regulations (e.g., permit approvals). Individual factors refer to the individual entrepreneur's abilities and perceptions. These include applying skills to solve problems creatively and willingness to take risks.

Economic, social, and cultural factors all contribute to an individual's decision to become an entrepreneur (Hart 2003). Figure 1 identifies the external and individual factors generally associated with entrepreneurship (Wennekers, Uhlaner, and Thurik 2002; Shane 2003; Audretsch et. al. 2002;

FIGURE 1 Determinants of Entrepreneurship.



Source: Modified from Wennekers, Uhlaner, and Thurik 2002; Shane 2003; Audretsch et. al. 2002; and Audretsch, Grilo, and Thurik 2007.

and Audretsch, Grilo, and Thurik 2007).

Research to identify the individual-level determinants for becoming an entrepreneur has identified two categories: (1) the individual’s personality traits and qualities, such as communication and analytic skills, and (2) the individual’s strategic actions, such as starting and growing a new business. Although these attributes are hypothesized as being important for entrepreneurial activity, by themselves they are neither necessary nor sufficient for developing an entrepreneur. Nonetheless, education, specifically entrepreneurship education, may have a direct effect on the individual’s knowledge and actions by making him or her more capable. For instance, entrepreneurship education can positively influence an individual’s perceptions of risks, rewards, and confidence in success (Timmons 1999). This paper emphasizes that although there is a diversity of thought on the determinants of becoming an entrepreneur, the developing maturity of entrepreneurship education theory and growth in the number of educational programs can contribute greatly to the entrepreneurial economy.

4. THE ROLE OF ENTREPRENEURSHIP EDUCATION

Globally, entrepreneurship education is a growing field. The World Economic Forum’s report *Educating the Next Wave of Entrepreneurs* drew recent international attention to entrepreneurship education (Volkman, Wilson, Mariotti, Rabuzzi, Vyakarnam, and Sepulveda 2009), and European governments have increasingly sought to cultivate entrepreneurship throughout the developed West and post-Communist East (Dana 2005). In 2005, the European Commission made entrepreneurship education one of the main objectives in its Lisbon Agenda (Euractiv 2004a), creating an action plan on entrepreneurship that proposed developing entrepreneurial “mindsets” by fostering the “entrepreneurial spirit,” presenting best practice models, and fostering entrepreneurial attitudes and skills in youth (Euractiv 2004b). Business schools throughout China and India have launched educational programs as well as scientific publications and journals devoted to entrepreneurship (Dana 2001).

This global increase in entrepreneurship education comes after decades of entrepreneurial growth in the United States (Plaschka and Welsch 1990). This growth is due to continued efforts from the private, public, and academic sectors to create a favorable environment in which individuals in the entrepreneurial economy can thrive. Entrepreneurship education can provide multiple short- and

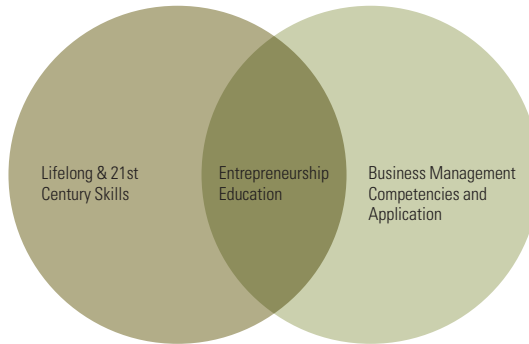
long-term benefits to the economy, including:

- *Increased entrepreneurial activity.* Teaching students to think entrepreneurially could “not only expand the pool of potential entrepreneurs but also help trigger wider interest in and support for those seeking to start and grow new companies” (Hart 2003, 250).
- *More entrepreneurial successes.* If entrepreneurship is taught effectively, it may generate more and better entrepreneurs and increase entrepreneurial success rates (Ronstadt 1985).
- *Greater diversity in entrepreneurship.* Entrepreneurship education allows a diverse set of individuals and groups to learn new skills and develop the networks to successfully engage in entrepreneurial activities. Such diversity among potential entrepreneurs means a broader source of ideas and perspectives in opportunity recognition and solution development.
- *More business-savvy population.* Entrepreneurship education teaches lifelong learning and 21st-century skills (Fiet 2001, Gibb 2002), as well as the practical application of business management competencies (Young 1997). For example, these relevant benefits of entrepreneurship education at the secondary education level include the use of strategies for idea generation, the capability to assess the feasibility of ideas, and the ability to translate problems into opportunities (Consortium for Entrepreneurship Education 2009). The more available these programs are, the more opportunities there are for youth and adults to acquire lifelong competencies and live more productive lives.
- *Improved creative and critical thinking.* Entrepreneurship education puts great emphasis on improving the cognitive abilities of the students with respect to creativity, opportunity recognition, and critical thinking. Students who choose to learn through entrepreneurship programs may have heightened creativity and critical-thinking abilities.
- *Better motivation for at-risk groups to complete formal education.* Entrepreneurship education may serve as an effective means to engage young people while training them to contribute to economic development and sustainable communities (Aspen Institute 2008). In some cases, entrepreneurship education programs may be especially appealing to at-risk youth and, if effectively targeted to this particular community, may help decrease economic inequity by stemming the tide of high-school dropouts in low-income communities.

Considering these benefits, entrepreneurship education may be described as a combination of teaching life skills and the successful application of those skills. In this way, entrepreneurship education serves as the nexus between entrepreneurial qualities conveyed as lifelong learning and 21st century skills and the practical application of business management competencies (Figure 2).

These benefits operate under one main assumption: that entrepreneurial knowledge can be taught. Opponents to this assertion posit that entrepreneurs are born gifted (see Janssen, Eeckhout, and Gailly 2007), but little empirical evidence supports this. On the other hand, multiple studies have reported positive impacts of entrepreneurship education (Janssen, Eeckhout, and Gailly 2007). And where cultural norms have been found to prohibit entrepreneurial activity, education can overcome aspects of this barrier (Lee, Chang, and Lim 2010). Further, survey results point to a common perception that administrative complexities associated with starting a business are a barrier to future entrepreneurs, a barrier that can be overcome through education and skill development (Grilo and

FIGURE 2. Entrepreneurship Education as a Combination of Lifelong Skills and Business Management Competencies.



Thurik 2005).

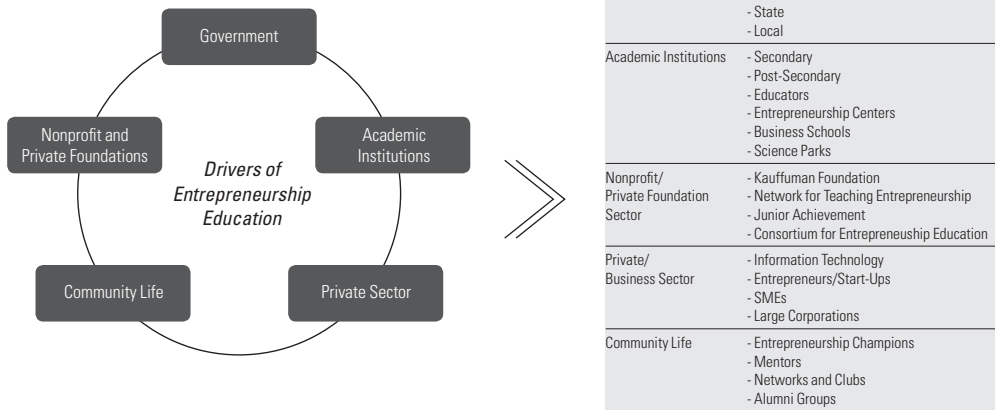
A large degree of scholarly discussion in the entrepreneurship education field is focused less on whether entrepreneurship can be taught, but instead on what to teach and how to teach it. This discussion can be categorized within six areas: goals, audiences, educators, pedagogies, content, and assessment (Alberti, Sciascia, and Poli 2005). Although there is some agreement within the research community regarding goals and the audience for teaching entrepreneurship education, areas of disagreement include the role of educators and the methods or models related to pedagogies, content, and assessment. Complicating this, in practice, the terms “entrepreneurship,” “enterprise,” and “small business” are often confused, and thus the educational content may differ depending on what perspective is taken (Alberti 1999, Bechard and Gregoire 2002). In addition, the research community does not agree about which environmental factors and individual-level characteristics influence the decision to engage in entrepreneurial activity (OECD 1998, Lumpkin and Dess 1996, Bull and Willard 1993). This may be caused in part by entrepreneurship’s multidisciplinary nature and by its applicability to all organizational forms (e.g., projects, firms, industries, and regions).

As a result, programs or curricula are generally meant to develop the skills and capabilities outlined in the particular theories of entrepreneurship favored by the individual program. A survey of the programs and services offered in entrepreneurship education programs in the United States reveals great diversity.

5. THE CURRENT LANDSCAPE OF U.S. ENTREPRENEURSHIP EDUCATION

In the United States, several groups drive the development and promotion of entrepreneurship programs (Figure 3). Historically, academic institutions partnering with nonprofit organizations have been at the forefront of implementing and testing new concepts at the secondary and post-secondary education levels. Over the past decade, federal and state involvement has increased with the launch of national initiatives and state legislation supporting entrepreneurship education. These have come in the form of traditional programs with customized educational content, as well as nontraditional initiatives supporting education, such as mentoring activities and website developments. Although nonprofit organizations continue to play an important role as a provider of and partner in entrepreneurship education programs, the recent trend of interest from federal, state, and local governments

FIGURE 3 Drivers in the Entrepreneurship Education Landscape.



Note: The chart provides a sample of major players and specific organizations involved in each sector.

increases public awareness of entrepreneurship and reach of entrepreneurship education programs.

This section focuses on three of the five main drivers that provide the majority of entrepreneurship education programs: (1) federal, state, and local governments; (2) academic institutions; and (3) nonprofit organizations and private foundations. In addition to scanning the entrepreneurship education literature for details about specific entrepreneurship education programs, we also reviewed relevant government, academic institution, and nonprofit organization websites and interviewed leaders managing entrepreneurship education efforts in these sectors.

The role of the three sectors in the entrepreneurship education landscape can vary from high-level coordination roles to the development of specific curriculum content (Table 1). Similar roles are most notable in the programs sponsored by state and local governments, academic institutions, and nonprofit organizations, which can work independent from or in partnership with one another.

TABLE 1 Sector/Sub-Sector Description and Roles in the Entrepreneurship Education Landscape.

Sector/Subsector	Description	Role
Federal Government	- Entrepreneurship specific: 4 mature programs across 4 agencies (SBA, USDA, DOC, and DOS) - Entrepreneurship non-specific: 93 programs across 13 agencies and offices*	- Youth programs - Small-business planning and advice - Newly-Established: High-level coordination and awareness of entrepreneurship; Mentorship
State and Local Governments	- 9 state legislations for secondary education - 14 state legislations for post-secondary education	- Curriculum development and requirement of secondary education programs - Establishment of incubator facilities and state-wide institutes Regional workforce development and partnerships
Secondary Education (High Schools)	- 4 typical models: Incorporated, Start-up, Intern, and Partnered	- Curriculum development - Business plan competitions and prizes - Community targeted youth programs - Small business planning and creation - Partnerships with nonprofit/foundation sector

Sector/Subsector	Description	Role
Community Colleges	Of a sample of 75 colleges*: - 13 offer only classes - 21 offer non-degree certificates - 6 offer associated degrees - 6 offer entrepreneurship option with other major -15 have institutes or centers	- Adult education and training needs of local community - Business plan writing support - Business counseling and incubators
Four-Year Universities	Of a sample of 81 universities*: - Most offer certificates at the undergraduate or graduate levels - 26 offer Bachelor degrees - 6 offer Masters degrees - 4 offer M.B.A. in entrepreneurship - 7 offer Doctoral degrees - 68 have institutes or centers	- Proof-of-concept or entrepreneurship centers - Chairs of Entrepreneurship (education and mentorship) - Business plan competitions, clubs, internships - Technology commercialization - Partnerships with nonprofit/foundation sector
Nonprofit Organizations and Private Foundations	- 2 models include volunteer-run or targeted community	- Curriculum development, content standards, certifications - Business plan competitions and prizes - Community targeted youth programs - Partnerships with state/local governments and academic sector

** An inventory of programs across Federal agencies, academic institutions, and nonprofit organizations was reviewed in Peña et. al. 2010. This scan included a sample (75 or 25%) of community colleges that are members of the National Association for Community College Entrepreneurship (NACCE), the top 27 four-year undergraduate and graduate institutions from Entrepreneur.com, Ivy League universities, and other universities with well-known entrepreneurship programs.*

5.1 Government-Funded Programs

The approaches of government to entrepreneurship education widely vary, as described in the subsections that follow.

5.1.1 Federal Programs

At the federal level, the range of programs spans both mature and newly established programs. These programs target education levels from youth to adult and provide a variety of content and information resources on entrepreneurship. State and local governments have enacted legislation primarily targeted at the secondary and post-secondary education levels.

Mature Programs: Several agencies have well established programs or projects in entrepreneurship education, notably the U.S. Small Business Administration (SBA), the U.S. Department of Agriculture (USDA), and the Department of Commerce (DOC).

The SBA's educational efforts separately target adults and youth. Created in 1964, the SBA's Counselors to America's Small Business (referred to as SCORE) is a volunteer-staffed organization managed by the Office of Entrepreneurship Education that provides services for nascent and in-business entrepreneurs (SCORE website 2010). SCORE's regional offices and website provide resources, business tools, expert advice, and workshops that assist and train entrepreneurs to better perform their tasks. For youth, the SCORE website also maintains a youth entrepreneurship page with applicable information and resources. The SBA provides youth-entrepreneurship-relevant information through its two main websites: Teen Business Link and Mind Your Own Business, which was devel-

oped in partnership with Junior Achievement, a nonprofit organization. These sites organize entrepreneurial and general business information and resources into youth-friendly packages, providing examples and ideas that relate to the student experience.

The USDA and DOC also provide educational content and mentorship activities, as well as general information through websites and links to other resources. For instance, within the USDA, programs such as 4-H help youth develop life skills, gain experience performing actual business tasks, and learn principles of economics, business, and marketing (4-H website 2010). The 4-H initiative also offers a national mentorship program serving at-risk youth that is aimed at increasing youth social competency, family relationships, and academic success at the post-secondary education level (4-H website 2010). At the DOC, the website Entrepreneurship.gov is an initiative sponsored by DOC but developed by The Ewing Marion Kauffman Foundation, a nonprofit organization (Kauffman Foundation 2010). The website provides publicly available information, such as a policy forum, notices of events and relevant resources and publications.

Although some of these programs emphasize teaching entrepreneurship by providing customized content, others are merely a source of information about entrepreneurship. SBA and DOC also emphasize the role of mentorship activities and partnerships with nonprofit organizations in helping to implement the project. An additional review of federal programs related to entrepreneurship demonstrated that in contrast to the few agency-sponsored entrepreneurship education programs, the many diverse programs and activities, as well as a steady commitment of funds, are directed toward disciplines related to, but not specifically targeted at, entrepreneurship, such as economic and financial literacy (Peña et. al. 2010).

Newly Established Programs: In October 2009, the Department of Commerce announced the creation of the Office of Innovation and Entrepreneurship. This new office focuses on encouraging entrepreneurs through education, training, and mentoring; strengthening interagency collaboration and coordination; and providing data, research, and technical resources for entrepreneurs, among other goals (DOC 2009). However, many of the other initiatives pursued over the past few years by President Obama and the current administration have not specifically called for new commitments in entrepreneurship education. Instead, they have focused on coordinating agency involvement, raising national awareness of the importance of entrepreneurship, and creating connections between U.S. and international entrepreneurs. Several examples follow.

The National Advisory Council on Innovation and Entrepreneurship, announced in June 2010 and coordinated through the Department of Commerce, advises on federal-level strategies and policies to foster entrepreneurial activity (DOC 2010). In April 2010, the Executive Branch hosted a Presidential Summit on Entrepreneurship, inviting entrepreneurs from Muslim majority countries and countries with a large Muslim minority, such as Pakistan and India (White House 2010). The Department of State (DOS) created a program to support international exchanges for women and entrepreneurship-specific mentorship activities through the TechWomen and E-Mentor Corps programs, respectively (DOS 2010, ImagineNations Network 2010). These new projects focus primarily on leveraging entrepreneurial activity within federal institutions, such as in federal research laboratories, and within the private sector, rather than focusing on youth, particularly youth at the secondary education level.

Overall, many of the new initiatives are still under development, and it remains to be seen how, and if at all, they will formally address the specific dimension of entrepreneurship education. Although the federal government may not necessarily be a major player in traditional entrepreneurship education, it remains an integral supporter of entrepreneurship, particularly in small business creation. These efforts are important and complement state and regional programs, which primarily

target youth at the secondary and post-secondary education levels.

5.1.2 State and Regional Programs

Unlike the federal efforts, local, state, and regional entrepreneurship education efforts have been a direct outcome of enacted legislation rather than agency or high-level coordinating initiatives. A primary motivation for this state government interest in entrepreneurship may be the influence of economic growth and job creation on state elections. States have primarily established state codes and initiated regional partnerships.

According to the 2007 Education Commission of the States, many states have taken legislative action over the past decade to support entrepreneurship education for kindergarten through 12th grade (K-12) or post-secondary school students (Zinth 2007). Nine states have enacted legislation supporting some form of entrepreneurship education in grades K-12¹. The educational format, however, can take different shapes. For example, legislation in California, Florida, and Iowa simply requires that the K-12 curriculum include the entrepreneurship concept within other disciplines, but Minnesota and Virginia mandate entrepreneurship programs. At the post-secondary level, 14 states have legislation supporting entrepreneurship². The programs supported by the legislation differ greatly across states. Iowa, Kentucky, and Oregon have policies supporting “entrepreneurial commercialization” at their universities. Florida and New York allow universities to act as “incubator facilities,” and Kentucky, Mississippi, and Oklahoma have generally encouraged rural economic growth through entrepreneurship. Illinois has implemented a unique way of coordinating entrepreneurship education efforts. Although Illinois has not adopted K-12 or post-secondary legislation, it has developed a state-wide Institute for Entrepreneurship Education charged with supporting entrepreneurship education by sponsoring internships, providing information resources, and participating at speaking events (IIEE 2010).

State governments have also realized that working regionally can prove an effective means of supporting entrepreneurs and stimulating state development. A noteworthy example originated with the Appalachian Regional Commission (ARC), a federal-state partnership for economic, community, and workforce development covering a 420-county region between New York and Mississippi and a population of 23.6 million people (ARC 2009a). Between 1997 and 2005, the Commission instituted an entrepreneurship initiative to provide financial, technical, and educational support to local entrepreneurs. The initiative also included a variety of local youth entrepreneurship efforts, such as regional conferences, scholarships, youth entrepreneurship awards, and a resource website (ARC 2009b).

Overall, due to state government commitment to entrepreneurship education, a variety of programs and initiatives from the local to regional levels have sprung up to meet the specific needs, such as rural workforce development of the states or region. This customization ensures that the entrepreneurship efforts target the appropriate population.

¹ These states are: California, Florida, Illinois, Iowa, Minnesota, Nebraska, Oregon, Virginia, and West Virginia.

² These states are: Florida, Illinois, Iowa, Kentucky, Massachusetts, Mississippi, Missouri, Nebraska, New York, North Dakota, Oklahoma, Oregon, South Carolina, and West Virginia.

5.2 Academic Institution Programs

As reviewed in the last section, state governments have a direct influence on how programs in academic institutions at secondary and post-secondary levels are implemented. The landscape of organizational models, goals, and educational content differs greatly between the secondary and post-secondary entrepreneurship education programs. Goals at the secondary education level are principally to foster life skills, self-esteem and confidence in the ability to succeed. At the post-secondary level, goals may be to guide individuals to leverage skills to start a new business, as well as become independent and engaged members of society.

5.2.1 Secondary Education

Teaching of entrepreneurship at the secondary-education level tries to foster creativity, the spirit of initiative, and independence as well as incorporate knowledge of skills, attitudes, and personal qualities appropriate to the age and development of the students. Typically, one of the following four types of programs is offered at this level of education:

- *Incorporated Model.* Entrepreneurship content is incorporated as a module into other business or marketing courses. Entrepreneurship receives less coverage in such courses than it might in a dedicated course, but often the program will run an entrepreneurship competition with support from local chapters of organizations to give students some applied experience.
- *Start-up Model.* Entrepreneurship education is offered as a means to keep at-risk students in school by helping them plan and operate a small, school-based or independent business. The program may involve courses during regular school hours or in an after-school program. These programs have the benefits of offering a traditional education of entrepreneurial and business principles, a real-world application in business operation, and the generation of valued income for the students.
- *Intern Model.* Students study entrepreneurship principles in regular courses while working with businesses in the local community, where they have the opportunity to apply those principles. For example, the entrepreneurship program in a rural school might emphasize business ideas that focus on agricultural products or services. These programs offer the benefits of developing student skills with academic and applied training while also promoting the local economy.
- *Partnered Model.* The local school or school district partners with or works in support of community and faith-based organizations to offer entrepreneurship programs. The courses and training may take place at the school or at other facilities.

Translating a program's goals into practice can vary based on the stakeholders involved in implementing the program. Programs typically strive to focus on one dimension, or integrate several dimensions, of entrepreneurship, including life skills, career options, and specific economic or financial content. For instance, programs aimed at self-employment and entrepreneurship as a future career options typically include role-playing, learning-by-doing, specific training on how to create a business through practical projects and activities, or experiential learning through internships with adult entrepreneurs in the community (Lourenco and Jones 2006). Alternatively, schools may utilize a broad-based curriculum developed either by the educator or a partner organization. For example, the

Network for Teaching Entrepreneurship (NFTE), a private organization helping to teach entrepreneurship since 1987 to at-risk youth, partners with schools (NFTE website 2009a). The curriculum created by NFTE focuses on fundamental economic and financial content, including ownership and wealth creation, market opportunity recognition and research, comparative advantage, laws of supply and demand, marginal utility and economics of one unit, return-on-investment and break-even calculation, and compound interest.

5.2.2 Post-Secondary Education

The growth of entrepreneurship courses at the post-secondary education level shows the desire of institutions to expand the entrepreneurial career options and meet demand for these courses from students. The Kauffman Foundation reported that by 2006 more than 5,000 entrepreneurship courses were being offered at 2- and 4-year colleges and universities throughout the United States, and over 500 of these higher education institutions were offering a formal entrepreneurship program involving majors, minors, or certificates (Kauffman Panel on Entrepreneurship Curriculum in Higher Education 2007). The Kauffman Foundation's vision of entrepreneurial education at the post-secondary level is to foster a "society of economically independent individuals who are engaged citizens, contributing to the improvement of their communities" (Kauffman Foundation 2009b). Goals for entrepreneurship education at the post-secondary level include the development of personal and career attitudes of entrepreneurial activity as well as business creation. But the content at the post-secondary education level can highly depend on the culture, mission, and infrastructure of the academic institution (e.g. vocational, community college, technical university). To expand upon these differences, we describe entrepreneurship efforts by community colleges and 4-year universities.

Community Colleges: The Consortium on Entrepreneurship Education (2009) explains the difference between community college entrepreneurship efforts and collegiate programs as "mostly concerned with adult education and entrepreneurship training needs in their local communities, as well as the full-time students on their campuses." Many colleges focus on local economic development, such as Sitting Bull College in North Dakota, which created a tribal business information center developed to the specific needs of the local community (Peña et. al. 2010).

Many community colleges offer individual classes in entrepreneurship; a smaller proportion have a nondegree certificate in entrepreneurship; but only a few have an entrepreneurship option within another major, such as business administration, an associate's degree in entrepreneurship, or a center or institute focused on entrepreneurship. This could be because community colleges often distinguish between those interested in business careers and those specializing in other occupations, such as auto mechanics or cosmetology, where entrepreneurial skills are necessary. Other initiatives that community colleges may establish to increase their participation in entrepreneurship education include the increased uses of small business centers, business counseling, noncredit classes, seminars, and continuing education classes for small business owners, as well as support for business plan writing, and business incubators for local potential entrepreneurs.

Four-Year Universities: The goals and content at 4-year universities rely more on a large-scale practical application of entrepreneurial skills. Courses designed to teach the creation and development of new business ventures first appeared in the United States during the 1960s. In 1971, the University of Southern California created the first master of business administration concentration in entrepreneurship; the following year the same university launched the first undergraduate concentration in entrepreneurship (Katz 2003a). By the 1980s, entrepreneurship courses were being offered at 300 universities; by the end of the 1990s, at 1,050 universities; and since 2000, at over 1,600 univer-

sities (Katz 2003a).

The range of entrepreneurship education programs in 4-year universities vary from basic courses and programs to dedicated research centers and faculty. Most schools offer certificates in entrepreneurship, either at the undergraduate or graduate level, rather than offer bachelors, masters, or doctoral degrees in entrepreneurship. In fact, scholars in the entrepreneurship education community have speculated that the United States lacks sufficient doctoral programs and tenure positions for entrepreneurship (Katz 2003a and Kuratko 2003). Despite this, the domain is a fast-growing topic in business and engineering fields, and coursework is typically provided through these university departments or a business-engineering partnership (Kuratko 2003). Recent initiatives are also attempting to expand the traditional base of students benefiting from entrepreneurship education. Some 4-year universities employ a chair of entrepreneurship, who helps students achieve successful entrepreneurial activities. This chair serves as an expert in the domain of entrepreneurship education and as a link to businesses, state or local education agencies, and academic institutions. In most cases, however, the roles and the expected outcomes for this positions is not clearly defined (Katz 2003b).

The Consortium on Entrepreneurship Education describes entrepreneurship education at 4-year universities as “a source of research, as well as an opportunity for business students to become successful business owners in the future.” Measurable goals to create a favorable business environment at the 4-year university level may include establishing university policies to promote entrepreneurship in scientific labs, institutional policies for intellectual property rights and licensing, links to incubators or science parks³, extensive networks with private industry and financial resources, and relevant institutional centers. Institutional entrepreneurship centers at 4-year universities typically:

- Focus on research, having associated faculty who conduct research and collaborative projects.
- Have business plan concentrations.
- Have entrepreneurship clubs for students.
- Conduct outreach in developing countries.
- Concentrate on entrepreneurship in specific sectors, such as technology or health care.
- Have internship programs.

As part of their entrepreneurial mission and strategy, 4-year universities may also utilize these centers to implement and commercialize innovation and knowledge transfer (The Economist 2009). Specifically, some universities have established proof-of-concept centers that allow students to be part of the entrepreneurial experience, provide more realistic training, and help bring products to commercial markets. The Kauffman Foundation recently examined how two proof-of-concept centers, the Deshpande Center at MIT and the von Lebig Center at the University of California San Diego (UCSD), facilitate commercialization of innovations (MIT website 2010, UCSD website 2010). Each center focuses on the cultivation of innovation at its engineering schools. The report describes how these centers can serve as successful models for other universities and points to the economic benefits of effectively leveraging university knowledge (Kauffman Foundation 2008).

³Specifically, successful science and research parks promoting clusters of innovation and new technology-based firms have a “profound impact on a region and its competitiveness,” in which a prime example is the Research Triangle Park in North Carolina (Lugar and Goldstein 1991, p.47).

5.3 Nonprofit Organizations and Private Foundations

The nonprofit organizations and foundations involved in entrepreneurship education range from the large institutions sponsoring national activities to state and local groups addressing the needs of and partnering with specific communities. The spectrum of nonprofit organizations offering entrepreneurship education related programs can include the following types of organizations:

- *Volunteer-Run Model.* Some organizations function primarily as a volunteer-led effort. For instance, Junior Achievement (JA) shifted towards volunteer-led educational programs in economics and business in both classroom-based and after-school programs. Programs and activities at the primary and secondary levels of education are presented by JA volunteers. Their domestic outreach, which includes 14,963 primary schools, 2,289 middle schools, and 2,968 high schools, indicates the successful implementation of a volunteer-run model (Junior Achievement website 2009a, 2009b).
- *Targeted Community Model.* NFTE was founded in 1987 in an effort to reduce dropout rates and improve academic performance of students. NFTE targets students from low-income communities with the view that entrepreneurial education reveals the real-world relevance of classroom learning, helps students build skills and creativity, and improves quality of life. NFTE reach, with over 230,000 students since 1987 and more than 1,300 active Certified Entrepreneurship Teachers in 12 metropolitan cities, suggests the potential impact of effectively targeting certain communities and addressing socioeconomic factors through entrepreneurship education programs (NFTE website 2009a-d).

Nonprofit educational programs might incorporate any of a number of services, including complete curricula, content standards, student mentoring, business plan competitions, resource and networking websites, and summer camps. In particular, funding for prizes or competitions can simultaneously encourage innovation and foster entrepreneurship education. Examples of funded competitions include NFTE's Young Entrepreneur of the Year Award, DECA's Competitive Events Program, and National Federation of Independent Business (NFIB) Young Entrepreneur Foundation Award (NFTE website 2009e, DECA website 2010a, NFIB 2010).

However, the large number and variety of organizations involved in entrepreneurship education, coupled with the absence of any national-level coordination, has resulted in a fair amount of overlap and duplication in curriculum materials, resources, website materials, and business plan competitions. In part to reduce duplicative efforts within the entrepreneurship education community, several nonprofit organizations, foundations, and scholars have developed and disseminated proposed standards and guidelines. Junior Achievement and NFTE have developed curricula for secondary education. The Kauffman Foundation has developed curricula and student activities for programs at both the secondary and post-secondary education levels. The most comprehensive standards are the National Content Standards published by the Consortium for Entrepreneurship Education (2004a)⁴. The National Content Standards contain 15 major standards built on a framework to highlight the acquisition of entrepreneurial skills through the lifelong learning process—from learning the basic

⁴ The Consortium's National Content Standards can be applied throughout the K-12 and post-secondary education system and contains 403 reference indicators and/or skills that may be applied to entrepreneurship education.

skills, such as economics and knowledge of free enterprise, to the creative application of these skills in creating and growing new business.

Several nonprofit organizations have also developed or endorsed certification and accreditation systems, resulting in a variety of systems in use across the nation. The Kauffman Foundation's Scholar Program and NFTE's Entrepreneurship Program offer certification to students who have completed the requisite hours of entrepreneurship education courses. NFTE's Entrepreneurship Teacher Certification offers entrepreneurship educators certification and career-development opportunities (NFTE website 2009d). DECA's Gold School Based Enterprise Certification offers accreditation to academic institutions based on their entrepreneurship education program (DECA website 2010b).

Focus on Partnerships: Two types of nonprofit partnerships are worth highlighting—partnerships with state and local governments and academic institutions. Public-private partnerships in entrepreneurship education have been used for:

- Financing pilot projects in academic institutions.
- Sponsoring and supporting specific initiatives, such as business plan competitions.
- Implementing nontraditional teaching methods that incorporate entrepreneurs and industry in teaching, mentoring, and coaching.
- Developing corporate social responsibility and ethical behavior.
- Linking academic institutions with industry.

Nonprofits are active partners in state and local entrepreneurship initiatives. Examples of public-private partnerships at this level have been initiated through the Kauffman Foundation's FastTrac and Urban Entrepreneurship Program (UEP), which focuses on teaching entrepreneurship education and providing guidance through expert facilitation (FastTrac website 2010). For instance, FastTrac and UEP are partners in Detroit's New Economy Initiative, with efforts to link the local government and nine Michigan-based foundations (UEP website 2010). Moreover, the FastTrac Launchpad program is unique in its partnership with the New York City government and the Deluxe Check Corporation in providing entrepreneurship education for those recently unemployed due to the recession (FastTrac website 2009).

The Kauffman Foundation has initiated public-academic partnerships through its Kauffman Campuses initiative. The initiative's mission is to "transform" higher level education by providing students with entrepreneurial training to strengthen the national economy (Kauffman Foundation website 2009). The Kauffman Campuses program's first phase began in 2003 and provided up to \$5 million in three-to-one matching funds to eight universities with diverse characteristics⁵. These universities have directed at least \$100 million toward developing interdisciplinary entrepreneurship education programs. Near the end of 2006, six additional universities were chosen to receive grant funding to support new entrepreneurship education programs. During this second phase, these six

⁵ The universities are: Florida International University, Howard University, the University of Illinois at Urbana-Champaign, the University of North Carolina at Chapel Hill, the University of Rochester, the University of Texas at El Paso, Wake Forest University, and Washington University in St. Louis.

⁶ The universities are: Arizona State University, Georgetown University, Purdue University, Syracuse University, the University of Maryland at Baltimore County, and the University of Wisconsin at Madison.

universities received a total of \$19.5 million in grant funding⁶. As part of the Kauffman Campuses initiative, all these universities have begun to shift their entrepreneurship programs away from their traditional business school homes toward a more interdisciplinary reach. The supported programs now include technology-transfer efforts and entrepreneurship education for liberal arts programs and minority groups in an effort to transfer entrepreneurial skills to a wider proportion of the nation's workforce (Kauffman Foundation website 2009, NACCE website 2009).

Overall, nonprofit organizations and private foundations represent a wide range of goals, educational content, and services with significant influence on the other drivers, including state and local government and academic institutions in the entrepreneurship education landscape. Thus, they represent a critical role in meeting the targeted needs and economic interests of local communities.

6. CONCLUSION

Action at the federal, state, and local levels points to the growing importance of entrepreneurship education in the United States. Academic institutions are also playing a bigger role in this field, particularly at the secondary level. These new activities complement the traditional programs in the entrepreneurship education field. Non-profits continue to be one of the primary drivers of entrepreneurship education, particularly by providing a platform through partnerships to share knowledge with government and academic institutions.

Government efforts have included mature mentorship and youth education programs, as well as newly established initiatives developing high-level coordination and mentorship networks. In addition to government efforts, traditional stakeholders, such as post-secondary institutions, have increased their involvement in entrepreneurship education. Community colleges typically focus on educating students in the context of engaging them as small business owners in the local community or based on the local community's workforce needs. Four-year universities guide individuals in applying their capabilities at a larger scale within the entrepreneurial economy. This increased involvement includes not only a growth in course offerings and degrees, but also establishing proof-of-concept or entrepreneurship centers, such as MIT's Deshpande Center. Although the integration of entrepreneurship activities is primarily within university business schools or engineering departments, there is an increasing trend to provide entrepreneurship education in other disciplines, such as the arts and humanities. Overall, post-secondary efforts encompass much more than connecting innovators with venture capitalists. Entrepreneurship education provides opportunities for local and small business owners—the foundation of the U.S. economy—to start and grow businesses, learn basic math skills, and become engaged members of their local communities.

Although U.S. entrepreneurship education supports current and prospective small business owners, gaps persist. There are three immediate areas for policy focus:

1. Providing incentives to increase mentorship as a means of encouraging students to engage in entrepreneurial activities and providing them with hands-on experience ;
2. Providing curriculum guidelines that can be adapted by each educational systems to facilitate effective implementation of programs and meet local community needs;
3. Coordinating across programs and levels of government to better leverage resources and best practices.

Mentors provide students with confidence and encouragement in their abilities to succeed as an entrepreneur. Nonprofit organizations incorporate expert facilitation in their many activities, employed by the Kauffman Foundation's FastTrac and Urban Entrepreneurship Program. Post-secondary institutions have established institutes and centers offering guidance and advice to prospective entrepreneurs. These activities provide a format for successful entrepreneurs to share their experience and answer questions from new entrepreneurs. Although these efforts have been effective, they could be better aligned with programs at the secondary-education level. Federal, state, and secondary-education programs could borrow from the 4-year universities, nonprofit organizations, and private foundations, who have long been investing in mentoring programs. For example, one aspect of secondary education programs is focused on experiential learning, in which hands-on training and mentorship are principal components. Leveraging entrepreneurship networks established by academic institutions, nonprofits, and regionally can offer secondary education programs a rich source of knowledge and individuals already committed to the entrepreneurial spirit.

Several nonprofit organizations have created content standards, curricula, and teaching methods for use in the academic sector. There is currently a large span of nonprofit or private foundation partnerships with academic institutions at the secondary and post-secondary education levels. These nonprofits can customize entrepreneurial concepts to the target population's appropriate education level, their institutional environment, and, in some cases, their local economy. Because of this, there is no standardized framework for teaching entrepreneurship that is followed by all organizations. A policy establishing general content guidelines may provide direction for stakeholders when implementing programs. This may be particularly beneficial for certain organizations, such as high schools, that would like to implement these programs but may lack curriculum or teaching materials and connections with nonprofits that offer these resources.

Coordination of entrepreneurship education in workforce development has taken place at the local and regional levels. New initiatives at the Federal level, such as the creation of the National Advisory Council on Innovation and Entrepreneurship, demonstrate a desire of the Federal government to coordinate entrepreneurship efforts. Although uncertainty remains in how education will be addressed within such efforts, these newly established Federal level activities could benefit by aligning their efforts with successful programs and partnerships. For instance, the development of an E-Mentor Corps through the Department of State's efforts could leverage the networks already created through other federal programs, particularly the Small Business Administration's SCORE program, and Federal-state partnerships, such as the Appalachian Regional Commission's regional workforce development and youth entrepreneurship activities. Overall, the development of an E-Mentor Corps is a step in the direction of a potential national and international network to support successful entrepreneurial activity.

Overall, the increased interest from governments and the effectiveness of diverse nonprofit organizations and private foundations in the entrepreneurship education landscape shows promise for additional growth. Such growth is necessary for global economic recovery and for the United States to remain competitive in the global economy.

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