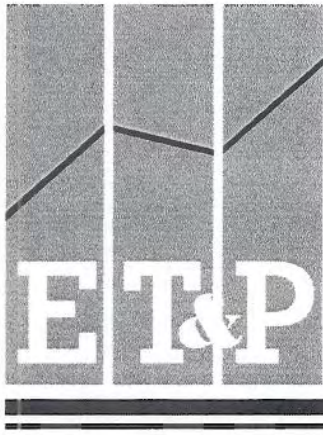




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The Emergence of Entrepreneurship Education: Development, Trends, and Challenges

Donald F. Kuratko

Entrepreneurship has emerged over the last two decades as arguably the most potent economic force the world has ever experienced. With that expansion has come a similar increase in the field of entrepreneurship education. The recent growth and development in the curricula and programs devoted to entrepreneurship and new-venture creation have been remarkable. The number of colleges and universities that offer courses related to entrepreneurship has grown from a handful in the 1970s to over 1,600 in 2005. In the midst of this huge expansion remains the challenge of complete academic legitimacy for entrepreneurship. While it can be argued that some legitimacy has been attained in the current state of entrepreneurship education, there are critical challenges that lie ahead. This article focuses on the trends and challenges in entrepreneurship education for the 21st century.

Introduction: A Perspective on Entrepreneurship

The entrepreneurial revolution has taken hold across the globe and has undeniably impacted the world of business forever. For example, witness the powerful emergence of entrepreneurial activity in the U.S. during the last 10 years. New business incorporations averaged 600,000 per year. Although many of these incorporations may have previously been sole proprietorships or partnerships, the trend still demonstrates the popularity of venture activity, whether it was through start-ups, expansions, or development. More specifically, 807,000 new small firms were established in 1995, which is an all-time record. Since 1980, Fortune 500 companies have lost more than 5 million jobs, but more than 34 million new jobs have been created. In 1996, a small business created 1.6 million new jobs. Fifteen percent of the fastest-growing new firms (i.e., "gazelles") accounted for 94% of the net job creation, and less than one third of these gazelles was involved in high technology. Small businesses (i.e., those with fewer than 500 employees) employ 53% of the private work force and account for 47% of sales and 51% of private sector gross domestic product (GDP). Sixteen percent of all U.S. firms have been in existence for less than 1 year. Sixty-seven percent of all new inventions are created by smaller firms (Reynolds, Hay, & Camp, 1999).

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Given these findings, it would seem safe to assume that new firms with employees may number to more than 600,000 in a given year, and that another couple of million new business entities—in the form of self-employment—may also come into being each year. Approximately one new firm with employees is established every year for every 300 adults in the U.S. As the typical new firm has at least two owners—managers, one of every 150 adults participates in the founding of a new firm each year. Substantially, more—1 in 12—are involved in trying to launch a new firm. The net result, then, is that the U.S. has a very robust level of firm creation. Among the 6 million establishments (single-site and multisite firms) with employees, approximately 600,000 to 800,000 are added each year. That translates into an annual birth rate of 14 to 16 per 100 existing establishments (Reynolds, Hay, & Camp, 1999). The U.S. has achieved its highest economic performance during the last 10 years by fostering and promoting entrepreneurial activity (Minniti & Bygrave, 2004).

In summary, entrepreneurial firms make two indispensable contributions to the market economies. First, they are an integral part of the renewal process that pervades and defines market economies. Entrepreneurial firms play a crucial role in the innovations that lead to technological change and productivity growth. In short, they are about change and competition because they change market structure. The market economies are dynamic organic entities always in the process of “becoming,” rather than an established one that has already arrived. They are about prospects for the future, not about the inheritance of the past (Kuratko & Hodgetts, 2004).

Second, entrepreneurial firms are the essential mechanism by which millions enter the economic mainstream. Entrepreneurial firms enable millions of people, including women, minorities, and immigrants, to access the pursuit of economic success. The greatest source the U.S. strength, for example, has always been the American dream of economic growth, equal opportunities, and upward mobility. In this evolutionary process, entrepreneurship plays the crucial and indispensable role of providing the “social glue” that binds together both high-tech and “Main Street” activities (Small Business Administration [SBA], 1998).

Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks—in terms of time, equity, or career; the ability to formulate an effective venture team; the creative skill to marshal needed resources; and fundamental skill of building solid business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion. (Kuratko & Hodgetts, 2004, p. 30)

In this light, entrepreneurship is more than the mere creation of business. Although that is certainly an important facet, it is not the complete picture. The characteristics of seeking opportunities, taking risks beyond security, and having the tenacity to push an idea through to reality combine into a special perspective that permeates entrepreneurs. An “*entrepreneurial perspective*” can be developed in individuals. This perspective can be exhibited inside or outside an organization, in profit or not-for-profit enterprises, and in business or nonbusiness activities for the purpose of bringing forth creative ideas. Thus, entrepreneurship is an integrated concept that permeates an individual’s business in an innovative manner. It is this perspective that has revolutionized the way business is conducted at every level and in every country. The revolution has begun in an economic sense, and the entrepreneurial perspective is the dominant force!

The younger generation of the 21st century is becoming the most entrepreneurial generation since the Industrial Revolution. As many as 5.6 million Americans younger than

age 34 are actively trying to start their own businesses today. One third of new entrepreneurs is younger than age 30, more than 60% of 18- to 29-year-olds say they want to own their own businesses, and nearly 80% of would-be entrepreneurs in the U.S. are between the ages 18 and 34! (Tulgan, 1999).

With those explosive numbers have come similar increases in the field of entrepreneurship education. The recent growth and development in the curricula and programs devoted to entrepreneurship and new-venture creation have been remarkable. The number of colleges and universities that offer courses related to entrepreneurship has grown from a handful in the 1970s to 1,600 (Katz, 2003). In the midst of this huge expansion of courses remains the challenge of entrepreneurship's complete academic legitimacy. In order to understand the challenges that lie ahead, we first focus on the sources of our current understanding of entrepreneurship and then we examine a historical view as well as the more current view of entrepreneurship education.

Sources of Entrepreneurial Understanding

Researchers are continually striving to learn more about the entire entrepreneurial process to better understand the driving forces within entrepreneurs (Bull & Willard, 1993; Bygrave & Hofer, 1991; Gartner, 2001). Three major sources of information supply the data related to the entrepreneurial process or perspective. The first source is research-based as well as popular publications. The following are among the more important of these publications:

- *Academic journals.* These are refereed journals that contain articles dealing with research—methodology, results, and applications of research—that are well designed and tightly structured. Examples include the *Journal of Small Business Management*, *Entrepreneurship Theory and Practice*, *Journal of Business and Entrepreneurship*, *Journal of Business Venturing*, *Strategic Management Journal*, *Journal of Small Business Strategy*, *Academy of Management Review*, and *Academy of Management Executive*.

- *Textbooks on entrepreneurship.* These texts typically address the development and operation of small firms and entrepreneurial organizations. Sections or chapters are frequently devoted to research on entrepreneurs. Examples include *Entrepreneurship: Theory, Process, Practice* (2004) by Kuratko and Hodgetts; *Strategic Entrepreneurial Growth* (2004) by Kuratko and Welsch; and *New Venture Creation* (2002) by Timmons.

- *Books about entrepreneurship.* Most of these books are written as practitioners' "how-to" guides. Some deal with the problems facing an individual who starts a business; others deal with specific aspects of the subject. Examples include *The Business Planning Guide* (1995) by Bangs; *Start-up* (1992) by Stolze; and *In the Owner's Chair* (1992) by Torrence.

- *Biographies or autobiographies of entrepreneurs.* Examples include *Business at the Speed of Thought* (1999) by Gates and *Radicals and Visionaries* (2000) by Wawro.

- *Compendiums about entrepreneurs.* These are collections that deal with several selected individuals or that present statistical information or overviews of perceived general trends. Examples include Chamberlin's *Enterprising Americans* (1963), which provides a summary of trends, and *The Entrepreneurs* (1974) by Sobel, which is a compendium of information about selected living entrepreneurs.

- *News periodicals.* Many newspapers and news periodicals run stories on entrepreneurs either regularly or periodically. Examples include *Business Week*, *Forbes*, *Fortune*, and *The Wall Street Journal*.

- *Venture periodicals.* A growing number of new magazines are specifically concerned with new business ventures. Most, if not all, of each issue's contents are related to entrepreneurship. Examples include *Black Enterprise*, *Entrepreneur*, *FSB, Inc.*, and *Family Business*.

- *Newsletters.* A number of newsletters are exclusively devoted to entrepreneurship. The *Liaison* newsletter from the U.S. Association for Small Business and Entrepreneurship is an example.

- *Proceedings of conferences.* Publications relating to annual or periodic conferences deal at least in part with entrepreneurship. Examples include *Proceedings of the Academy of Management*, *Proceedings of the International Council for Small Business*, *Proceedings of the U.S. Association for Small Business and Entrepreneurship*, and *Frontiers in Entrepreneurship Research* (proceedings of the Babson College Annual Entrepreneurship Research Conference).

- *Government publications.* The U.S. government publishes a wealth of information on entrepreneurship, small-business operations, and specific small businesses. Examples include the SBA pamphlets as well as the more recent National Federation of Independent Business publications.

The second major source of information about entrepreneurial perspective is direct observation of practicing entrepreneurs. Through the use of interviews, surveys, and case studies, the experiences of individual entrepreneurs can be related. An analysis of these experiences can provide insights into the traits, characteristics, and personalities of individual entrepreneurs and leads to the discovery of commonalities that would help explain the perspective.

The final source of entrepreneurial information is speeches and presentations (including seminars) by practicing entrepreneurs. This source may not go as far in-depth as the other two do, but it does provide an opportunity to learn about entrepreneurial perspective. Entrepreneur-in-residence programs at various universities illustrate the added value that oral presentations may have in educating people about entrepreneurship.

All of these sources have provided the background for the development of entrepreneurship education as we know it today in the 21st century. We now examine the emergence of entrepreneurship education from the past 25 years.

The Emergence of Entrepreneurship Education

It is becoming clear that entrepreneurship, or certain facets of it, *can* be taught. Business educators and professionals have evolved beyond the myth that entrepreneurs are born, not made. Peter Drucker, recognized as one of the leading management thinkers of our time, has said, "The entrepreneurial mystique? It's not magic, it's not mysterious, and it has nothing to do with the genes. It's a discipline. And, like any discipline, it can be learned" (Drucker, 1985).

An additional support for this view comes from a 10-year (1985 to 1994) literature review of enterprise, entrepreneurship, and small business management education that reported, "... most of the empirical studies surveyed indicated that entrepreneurship can be taught, or at least encouraged, by entrepreneurship education" (Gorman, Hanlon, & King, 1997, p. 63).

Given the widely accepted notion that entrepreneurial ventures are the key to innovation, productivity, and effective competition (Plaschka & Welsch, 1990), the question of whether entrepreneurship can be taught is *obsolete*. Ronstadt (1987) posed the more

relevant question regarding entrepreneurial education: What should be taught and how should it be taught?

In regards to what should be taught, there have been certain major themes that characterized entrepreneurs and new-venture creation. The following list summarizes some of the most significant themes that are now part of entrepreneurship research and education:

- The entrepreneurial and managerial domains are not mutually exclusive but overlap to a certain extent. The former is more opportunity-driven, and the latter is more resource- and “conversation”-driven (Ireland, Hitt, & Sirmon, 2003).
- Venture financing, including venture capital and angel capital financing as well as other innovative financing techniques, emerged in the 1990s with unprecedented strength, fueling another decade of entrepreneurship (Shepherd & Zacharakis, 2001, 2002; Dimov & Shepherd, 2005).
- Corporate entrepreneurship and the need for internal corporate venturing have gained much attention during the past few years (Miles & Covin, 2002; Kuratko, Ireland, & Hornsby, 2001; Kuratko, Ireland, Covin, & Hornsby, 2005; Morris & Kuratko, 2002; Zahra, Kuratko, & Jennings, 1999).
- Entrepreneurial strategies have been identified that show some important common denominators, issues, and trade-offs between entrepreneurship and strategy (Hitt, Ireland, Camp, & Sexton, 2001).
- The great variety among types of entrepreneurs and the methods they have used to achieve success have motivated research on the psychological aspects that can predict future success (Kickul & Gundry, 2002).
- The risks and trade-offs of an entrepreneurial career—particularly its demanding and stressful nature—have been subject of keen research interest relevant to would-be and practicing entrepreneurs alike (McGrath, MacMillan, & Scheinbert, 1992).
- Women and minority entrepreneurs have emerged in unprecedented numbers. They appear to face obstacles and difficulties different from those that other entrepreneurs face (Chaganti & Greene, 2002; Greene, Hart, Gatewood, Brush, & Carter, 2003; Gundry & Welsch, 2001).
- The entrepreneurial spirit is universal, judging by the enormous growth of interest in entrepreneurship around the world in the past few years (McDougall & Oviatt, 2003; Zahra, Hayton, Marcel, & O’Neil, 2001).
- The economic and social contributions of entrepreneurs, new companies, and family businesses have been shown to make immensely disproportionate contributions to job creation, innovation, and economic renewal, compared with the contributions that the 500 or so largest companies make (Chrisman, Chua, & Sharma, 2003; Upton, Teal, & Felan, 2001).
- Ethics and entrepreneurship have become a fast growing area of research due to the more recent scandals found in corporations (Kuratko & Goldsby, 2004; Morris, Schindehutte, Walton, & Allen, 2002).

A Historical Context of Entrepreneurship Education

Katz (2003) developed the most comprehensive chronology of entrepreneurship education. While he included economic and agricultural literature and experiences dating back to 1876, and others have touted the Harvard courses taught in 1947, the reality of entrepreneurship education as a force in business schools began in the early 1970s. The University of Southern California launched the first Master of Business Administration

Table 1

Entrepreneurship Education Articles (1980s)

Author	Year published
Frontiers of Entrepreneurship Research	1981-1989
Hornaday	1982
Loucks	1982
Clark, Davis, and Harnish	1984
Sexton and Upton	1984
McMullan, Long, and Wilson	1985
Vesper	1986
McMullan and Long	1987
Ronstadt	1987
Sexton and Upton	1987
Zeithaml and Rice	1987
Hills	1988
Klatt	1988
Solomon	1988
Vesper and McMullen	1988

(MBA) concentration in entrepreneurship in 1971, followed by the first undergraduate concentration in 1972. From there, the field of entrepreneurship began to take root. By the early 1980s, over 300 universities were reporting courses in entrepreneurship and small business, and by the 1990s that number grew to 1,050 schools (Solomon, Weaver, & Fernald, 1994). Therefore, the real emergence of entrepreneurship education took place in the 1980s. (See Table 1 for a listing of the most significant articles in the 1980s.)

Zeithaml and Rice (1987) reviewed some of the pioneering universities of entrepreneurship education in U.S. They concluded with several suggestions for the future of education and research in the entrepreneurship domain, which include: (1) the opportunity existed for entrepreneurship programs to evolve in a manner that is consistent with recent conceptualizations of entrepreneurship; (2) a second, compatible direction some programs may wish to take would involve a heavy commitment to research; (3) a third direction would be research on the teaching methods commonly used in entrepreneurship programs; and (4) evidence exists that entrepreneurship courses, programs, and centers may be sources of funds for a university or college.

Zeithaml and Rice (1987) contended that education in entrepreneurship covered the entire scope of business administration, and as such was the closest approach to the original concept of management education available in universities at that time. With the continued increasing fragmentation of business education into narrow specializations, they believed that a field of study that takes a broad, integrative, pragmatic, and rational approach to business would find itself increasingly popular with those who aspire to be entrepreneurs, managers, and top executives.

Also, Ronstadt (1987) proposed that entrepreneurial programs should be designed so that potential entrepreneurs are aware of barriers to initiating their entrepreneurial careers and can devise ways to overcome them. He proposed a two-continuum model of curricular design for entrepreneurship education. His "structured-unstructured" continuum addressed various methods of transferring information and expertise. Among the methods he discussed were lectures, case studies, and feasibility plans. He labeled his second continuum "entrepreneurial know-how/entrepreneurial know-who." This continuum

represented the belief that success in entrepreneurship is dependent not only on knowledge but the network of individuals with whom an entrepreneur is connected. Ronstadt (1987) contended that an effective program must show students "how" to entrepreneurially behave and should also introduce them to people who might be able to facilitate their success.

Four years later, Robinson and Hayes (1991) conducted a survey of universities with enrollments of at least 10,000 students to determine the extent of the growth in entrepreneurship education. While significant growth was cited, two specific challenges were pointed out: (1) the challenge in developing existing programs and personnel, thus improving the quality of the field. There are several obstacles that need to be overcome to facilitate the development of quality in the field. At the heart may be the lack of good solid theoretical bases upon which to build pedagogical models and methods; and (2) the lack of formal academic programs, representing a lack of commitment on the part of institutions.

Robinson and Hayes (1991) believed that entrepreneurship education had come a long way in the past 20 years, yet there were several weak points in the field that were identified through their research. Of primary concern is the lack of depth of most of the programs that were then started. Further growth would depend upon how new programs were integrated with and nurtured by the established entrepreneurship education system. (See Table 2 for a listing of the most significant articles in the 1990s.)

The Current State of Entrepreneurship Education

Today, entrepreneurship education in U.S. has exploded to more than 2,200 courses at over 1,600 schools; 277 endowed positions; 44 refereed academic journals, mainstream management journals devoting more issues (some special issues) to entrepreneurship; and over 100 established and funded centers. The discipline's accumulated "wealth" has grown to exceed \$440 million with over 75% of those funds accruing since 1987 (Katz, 2003).

Solomon, Duffy, and Tarabishy (2002) conducted one of the most comprehensive empirical analyses on entrepreneurship education. In their review of entrepreneurship pedagogy, they stated:

A core objective of entrepreneurship education is that it differentiates from typical business education. Business entry is fundamentally a different activity than managing a business (Gartner & Vesper, 1994); entrepreneurial education must address the equivocal nature of business entry (Gartner, Bird, & Starr, 1992). To this end, entrepreneurial education must include skill-building courses in negotiation, leadership, new product development, creative thinking, and exposure to technological innovation (McMullan & Long, 1987; Vesper & McMullen, 1988). Other areas identified as important for entrepreneurial education included awareness of entrepreneur career options (Donckels, 1991; Hills, 1988), sources of venture capital (Vesper & McMullen, 1988; Zeithaml & Rice, 1987), idea protection (Vesper & McMullen, 1988), ambiguity tolerance (Ronstadt, 1987), the characteristics that define the entrepreneurial personality (Hills, 1988; Hood & Young, 1993; Scott & Twomey, 1998), and the challenges associated with each stage of venture development (McMullan & Long, 1987; Plaschka & Welsch, 1990).

More specifically, they found that "experiential learning" is widespread and diverse in its application from the literature. The reported types of learning tools were:

Table 2

Entrepreneurship Education Articles (1990s)

Author	Year published
Kent	1990
Plaschka and Welsch	1990
Ronstadt	1990
Van Clouse	1990
Donckels	1991
Preshing	1991
Robinson and Hayes	1991
Solomon and Fernald	1991
Stumpf, Dunbar, and Mullen	1991
Block and Stumpf	1992
Gartner, Bird, and Starr	1992
McGrath et al.	1992
Hood and Young	1993
Solomon and Fernald	1993
Gartner and Vesper	1994
Katz, Gundry, Low, and Starr	1994
Low, Venkataraman, and Srivatsan	1994
Solomon et al.	1994
Wolfe and Bruton	1994
Bangs	1995
Frontiers of Entrepreneurship Research	1990-1999
Katz, Gundry, Low, and Starr	1995
Mitchell and Chasteen	1995
Katz, Gundry, Low, and Starr	1996
Kuratko	1996
Robinson	1996
Brawer	1997
Gorman et al.	1997
Vesper and Gartner	1997
Scott and Twomey	1998
Truell, Webster, and Davidson	1998
Gates	1999
Reynolds et al.	1999
Stewart et al.	1999
Tulgan	1999
Vesper	1999
Vesper and Gartner	1999

business plans (Gartner & Vesper, 1994; Gorman et al., 1997; Hills, 1988; Preshing, 1991; Vesper & McMullen, 1988); student business start-ups (Hills, 1988; Truell, Webster, & Davidson, 1998); consultation with practicing entrepreneurs (Klatt, 1988; Solomon et al., 1994); computer simulations (Brawer, 1997); behavioral simulations (Stumpf et al., 1991); interviews with entrepreneurs, environmental scans (Solomon et al.); "live" cases (Gartner & Vesper, 1994); field trips and the use of video and films (Klatt, 1988).

Solomon et al. (2002) concluded that pedagogy is changing based on a broadening market interest in entrepreneurial education. New interdisciplinary programs use faculty teams to develop programs for the nonbusiness students, and there is a growing trend in courses specifically designed for art, engineering, and science students. In addition to courses focused on preparing future entrepreneurs, instructional methodologies are being developed for those who manage entrepreneurs in organizations; potential resource

Table 3

Entrepreneurship Education Articles (The New Millennium)

Author	Year published
Frontiers of Entrepreneurship Research	2000–2005
Charney and Libecap	2000
Shane and Venkataraman	2000
Stevenson	2000
Brockhaus, Hills, Klandt, and Welsch (Eds.)	2001
Gartner	2001
Hitt et al.	2001
Honig	2001
Ireland, Hitt, Camp, and Sexton	2001
King	2001
Meyer	2001
Minniti and Bygrave	2001
Reynolds, Camp, Bygrave, Autio, and Hay	2001
Solomon	2001
Upton et al.	2001
Hindle	2002
Solomon et al.	2002
Katz	2003
Peterman and Kennedy	2003
Shepherd	2003
Baron and Ward	2004
Baumol	2004
DeTienne and Chandler	2004
Honig	2004
Kuratko	2004
Minniti and Bygrave	2004
Shepherd	2004
Hindle	2006

people (accountants, lawyers, and consultants) used by entrepreneurs; and top managers who provide vision and leadership for corporations that must innovate in order to survive (Block & Stumpf, 1992). Educators are challenged with designing effective learning opportunities for entrepreneurship students. Sexton and Upton (1984) suggested that programs for entrepreneurship students should emphasize individual activities over group activities, be relatively unstructured, and present problems that require a “novel solution under conditions of ambiguity and risk.” Students must be prepared to thrive in the “unstructured and uncertain nature of entrepreneurial environments” (Ronstadt, 1990). (See Table 3 for a listing of the most significant articles after 2000.)

Additionally, a number of major academic institutions have developed programs in entrepreneurial research, and every year Babson College conducts a symposium entitled “Frontiers in Entrepreneurship Research” on one of the campuses. Since 1981, the conference has provided an outlet for the latest developments in entrepreneurship (*Frontiers of Entrepreneurship Research*, 1981–2005). In 1998, the National Consortium of Entrepreneurship Centers (NCEC) was founded for the purpose of continued collaboration among the established entrepreneurship centers, as well as the newer emerging centers, to work together to share information, develop special projects, and assist each other in advancing and improving their centers’ impact (contact:

<http://www.nationalconsortium.org>). The consortium also established the 21st Century Entrepreneurship Research Fellows. This growing collection of scholars in the field of entrepreneurship has developed a mission to identify leading edge research issues and domains and develop high-profile research initiatives that demonstrate the highest level of scholarship to entrepreneurship centers and the academic community at large. The consortium has become the focal point for the entrepreneurship centers across the U.S. to continue the advancement of entrepreneurial excellence. Most of the university centers for entrepreneurship have focused on three major areas: (1) entrepreneurial education; (2) outreach activities with entrepreneurs; and (3) entrepreneurial research. These centers have been and will most likely continue to be the leaders in developing entrepreneurial research. Today, the trend in most universities is to develop or expand entrepreneurship programs and design unique and challenging curricula specifically designed for entrepreneurship students, more significantly, national recognition is now being given to the top entrepreneurial schools through awards such as the United States Association for Small Business and Entrepreneurship's (USASBE) National Model Programs and the national rankings such as those done by the *U.S. News and World Report* and *Entrepreneur Magazine*. This kind of experience is offered to students in innovative entrepreneurship programs recognized by the USASBE. The highlights of these programs can be found at <http://www.usasbe.org>. These awarded model programs include undergraduate major and concentrations, graduate-level programs, innovative pedagogy, and specialized programs. All of these universities have produced entrepreneurship education that has had real impact on students and a lasting impact on the entrepreneurship field. However, Vesper (1999) warned that there was an "unfinished business" left from the 20th century. He saw this in terms of legitimacy, paradigms, content, balance of research, autonomy, and permanence. While it can be argued that legitimacy has been attained in the current state of entrepreneurship education, there are critical challenges that lie ahead.

Future Challenges for Entrepreneurship Education

Entrepreneurial educators must be more than cheerleaders. We can no longer simply say 'entrepreneurship is different.' Entrepreneurship is now a part of the mainstream. Perhaps the greatest danger of all is that the hardy band of entrepreneurial scholars will become like many successful businesses. Business and scholars fail by not valuing change. Guarding the past, espousing orthodoxy, and refusing to see the wisdom inherent in the challenges of the young and inexperienced will lead to the same problems in education as in business (Stevenson, 2000, p. 7).

With that thought in mind, I would like to propose some of the current challenges I believe are confronting entrepreneurship education. Using Solomon et al. (2002) and Katz (2003) research studies, as well as my own observations over 23 years, 10 specific issues appear on the forefront.

The Maturity/Complacency/Stagnation Trap

Katz (2003) argues that the presence of entrepreneurship courses in all Association to Advance Collegiate Schools of Business as well as over 1,000 nonaccredited schools points to a maturing of the entrepreneurship field. He adds the infrastructure numbers of 300 endowed positions, 100 centers, 44 academic journals, and the "legitimization" of the field by the mainstream media (*Business Week* and *U.S. News & World Report*). This

is all true and I agree that it points to legitimization, but I respectfully disagree about maturity. The skirmishes and small battles are being won in business schools because of the sheer power of the already mentioned numbers and the tenacity and passion of individual faculty members. However, the “real war” continues to wage for complete respectability and leadership. How many full *departments* of entrepreneurship exist? How many young faculties are being granted *tenure* purely for their research and teaching in entrepreneurship? How many *deans* are rising from the ranks of entrepreneurship faculty? How many business schools are ranking the *pure entrepreneurship journals* on their “A” list? A partial legitimacy—yes; maturity—no! This is the time for all of those questions to be answered in the positive. Real maturity and complete academic legitimacy of the entrepreneurship field have yet to be experienced.

Katz (2003) contends that because the field has matured, there is now a danger of being “complacent with success.” He argues that as entrepreneurship educators, we may be forgetting our earlier “lean and mean” mind-set that helped fuel the tremendous growth of our field. There is truth here but I am not so sure there was ever a “lean and mean” mind-set. I believe there was a “pioneering passion” in some and a “survival” mentality in others. It was an age of fighting for a cause. It was our crusade! Today, as I mentioned earlier, the war is still waging at the highest levels. Because today it is about *leadership*! We need to ignite the young entrepreneurship faculty. Our collective leadership must inspire the next generation of entrepreneurship faculty to take our discipline to the next plateau. The entrepreneurship’s rightful place in business schools of the 21st century will be one of leadership—curriculum, research, faculty, and funding. We stand at the cusp of this monumental step. Faculty—young and old—must bind together to climb the next plateau and move entrepreneurship into its leadership position.

The Research/Publications Dilemma

Katz (2003) poses the dual problems of a publications glut—too many journals (44) chasing too few quality articles; and the push for leading-edge entrepreneurship researchers to publish in the “mainstream management journals.” It is interesting to note that these problems may be seen as opportunities. First, it is indeed gratifying to see *Academy of Management Journal*, *Academy of Management Review*, *Academy of Management Executive*, *Strategic Management Journal*, and the *Journal of Management* publishing more entrepreneurship research. This increase is in direct proportion to the change in the journal review boards to include more scholars in the entrepreneurship field. I believe that the trend should be encouraged to continue. The larger issue centers around business schools counting and respecting the mainstream entrepreneurship journals. While it is beginning to happen, this process is slow and agonizing for our faculty. Yet, this challenge may be the “linking pin” to the publication’s dilemma. If we, as entrepreneurship faculty, push for the ranking of our respected journals—*Journal of Business Venturing*, *Entrepreneurship Theory and Practice*, *Journal of Small Business Management*, etc.—then more quality research venues will be open for young faculty to legitimately pursue. The careers of young faculty may very well ride on this challenge. There exists the simple fact that research drives business schools. Therefore, research in entrepreneurship should be an accepted and respected part of this drive.

The Faculty Pipeline Shortage

There are two simultaneous problems here. First is the shortage of entrepreneurship faculty at every academic rank, and second is the lack of doctor of philosophy (PhD)

programs to provide pure entrepreneurship faculty. It is true that we need more business schools to develop sound PhD programs in entrepreneurship. Taking the lead from Indiana University, Colorado University, Syracuse University, University of Georgia, and Case Western Reserve University, more of our leading business schools need to establish programs. However, until more programs develop, faculty can be trained ("retreaded") if we make an effort. For years, Babson College has produced the Symposium for Entrepreneurship Educators program to develop faculty. Syracuse University has developed and promoted an "experiential classroom" for entrepreneurship education. It has produced remarkable results in helping faculty move into this field. These programs must be continued, supported, and enhanced. Organizations such as USASBE, NCEC, and the Academy of Management's Entrepreneurship Division, along with the Coleman Foundation and the Kauffman Foundation, need to support this effort as part of their mission. If the business schools will not develop the PhD programs, then the entrepreneurship faculty must develop the needed education themselves. We have pioneered an entire academic field that has exponentially grown in 30 years, why should we stop short now?

The other issue, however, is the lack of faculty at every rank. This challenge relates back to the respectability of entrepreneurship research and journals in our business schools. Resolve that issue and more entrepreneurship faculty will receive tenure and promotion. Thus, the ranks will grow in number rather than shrink. Once again, entrepreneurship is legitimized but not respected. It is time for the entrepreneurship field to move into a leadership position within our business schools.

The Technology Challenge

Solomon et al. (2002) found a negative trend with regards to technology in their national survey on entrepreneurship education. "A surprising trend emerged from the data regarding entrepreneurship education and the use of technology only, 21% of the respondents indicated they use distance-learning technologies in their entrepreneurship education courses or concentrations." Entrepreneurship cannot be a field that succumbs to stagnation. It must recognize and apply technologies in the educational setting. In many respects, entrepreneurship education may actually transform the educational setting. For example, some universities, such as George Washington University, are applying unique technological applications. They developed a software tool entitled, "Prometheus." Other examples include Ball State University's MBA in Entrepreneurship via television (Kuratko, 1996) where the entrepreneurship classes are taught in a state-of-the-art television studio. Another example is Indiana University's Kelley School of Business on-line MBA entitled "Kelley Direct," where the entire MBA degree is accessed through the Internet (see <http://www.indiana.edu>). There is no question that this mode of delivering entrepreneurship education will continue to expand in the 21st century.

The "Dot-Com" Legacy

In the 1940s, it costs \$20 billion to invent the atomic bomb. Twenty years later, it took another \$20 billion to put man on the moon. In 1999, the dot-com burned right through \$20 billion to achieve . . . well, nothing really. The dot-com burst hurt more than the cash-burning Internet start-ups and the venture capitalists (VCs) that funded them. This plague spread like wildfire, collapsing the true entrepreneurial talent of building one's dream into an enduring entity. Our classrooms became infatuated with the drive for investment and liquidity, fast cash, quick exits, and no real commitment. We pursued an

"investment mentality" rather than facilitating the search for an "enduring enterprise." We must again focus on the real goals of entrepreneurs (Kuratko et al., 1997) and the motivation that permeates from them. We must educate our next generation of entrepreneurs to learn from the dot-com evaporation and return to the roots of business formation and development. Exit strategies are fine, but they should not dominate the pursuit of entrepreneurial opportunity. Useem (2001) referred to the dot-com individuals as "opportuneurs" rather than entrepreneurs because they decoupled wealth from contribution, replaced risk taking with risk faking, and exploited external opportunity rather than pursuing inner vision. It should be the mission of all entrepreneurship educators to teach the students of today back to the *true* entrepreneur idea.

The Academia vs. Business Incongruence

It has been argued for, and financially supported by, some foundations such as the Coleman Foundation, the integration of entrepreneurs ("E's") into the classroom setting with academics ("A's"). Even with a certain foundation's constant efforts, the question still remains as to whether we have "bridged" the gap or simply slowed the division. What meaningful dialogues have occurred that have truly impacted our curricula? We need to be sure that our practicing entrepreneurs present more than interesting stories and delve into the real problems and issues involved with their ventures. This is our challenge as entrepreneurship educators. Students need the exposure to those entrepreneurs who have paid the price, faced the challenges, and endured the failures. We must take the lessons learned from our experienced entrepreneurs' "make a difference" idea.

The "Dilution Effect"

As entrepreneurship has become more "legitimized" in our universities, there is a danger of diluting its real meaning. While "entrepreneurial" is a valid term and I use it myself, we must be careful not to allow everything to become "entrepreneurial" simply because it sounds vogue or it fits within certain grant proposals or endowment packages. As examples, entrepreneurial finance, entrepreneurial management, and entrepreneurial marketing are fine, however, let us be sure they are in fact entrepreneurial and relate to the entrepreneurship process rather than a mere title. There seems to be a real use and abuse of this term for purposes other than enhancing the field of entrepreneurship education. As entrepreneurship educators, we must be the guardians of the true meaning and intent of the word "entrepreneurship."

The Security-Risk Dilemma

Risk has many permutations for an entrepreneur. It may be financial, career, family, social, or psychic (Kuratko & Hodgetts, 2004). Whatever its form, risk is certainly an important component in the entrepreneurial process. It is true that entrepreneurs are calculated risk takers who prepare themselves to delve into moderate risks rather than the mythical high-risk "gambler" approach. However, it is rare to find risk as part of any curriculum (Kuratko, 1996). Worse, it is becoming rare to find educators who will "risk" anything for their curricula or programs in entrepreneurship. Too many faculty pursue tenure as their only goal and they leave the challenges of entrepreneurship education "later in their career." What message is being conveyed in our classrooms? That students should take risks while faculty pursue security! It is a real dilemma that exists in

academia. We need our younger faculty to pursue their academic dreams in the entrepreneurship field and not in other disciplines. I realize that tenure is important in our careers and I am not espousing that our younger professors ignore the steps needed to ensure their successful attainment of that goal. However, let us be calculated and passionate in our pursuit of this "brass ring" within our profession. Let us not extinguish every flame of risk and challenge in order to become the ordinary. And, senior faculties, who have long been tenured, should stand ready to sponsor and support our younger, aggressive entrepreneurship professors. This is a very visible dilemma that we must begin to address.

The Administrative Leadership Revolving Door Problem

In the last 25 years, we have witnessed an exponential growth of the entrepreneurship field, yet the administrative support in our universities has been sporadic at best. The reason I have heard so often is the constant "changing of the guard." Presidents, provosts, and deans are continuously changing among universities, and with those position changes come values and vision changes. Entrepreneurship courses and programs have suffered through differing philosophies of senior officers in our universities. While we cannot put an artificial freeze on these positions (assuming the person supports entrepreneurship), we can move the entrepreneurship field into a leadership role at our institutions. It is hard for any senior officer to ignore a program that stands in a leadership and influential position among students, alumni, business leaders, donors, and other faculty. This is the base of real leadership power, and entrepreneurship deserves nothing less in the 21st century!

The "Power of One" Challenge

It has been pointed out that so many entrepreneurship programs have been started and driven to success by one professor or director. Critics argue that our field is weak because many E-Programs hinge on that one person's drive and determination. I argue that it is our strength! The courage and passion of individuals who have developed courses, programs, centers, etc., that are now beginning to take root in our universities are a real tribute to the emotion that exists within the entrepreneurship field. The "power of one" to make a difference is more apparent in the entrepreneurship field than in any other academic discipline.

Conclusion: A Call to Action

After reviewing the major challenges that are confronting all of us as entrepreneurship educators, the question remains, "So what can I do?" The answer is neither complex nor profound. The answer is really an aggregation of numerous small but needed actions. I have indicated a few of these in the proceeding 10 challenges. Each of us can make a difference if we try. Remember, the journey of 10,000 miles always starts with the first step! Let me conclude with a few thoughts on our personal call to action.

It has been said that one definition of *insanity* is "doing the same thing and expecting different results." Therefore, the emerging generation of entrepreneurship educators must avoid the *paradigm paralysis* that has consumed so many business disciplines. John Maynard Keynes said, "The greatest difficulty in the world is not for people to accept new ideas, but to make them forget about old ideas."

Clearly, for entrepreneurship education to embrace the 21st century, professors must become more competent in the use of academic technology and also expand their pedagogies to include new and innovative approaches to the teaching of entrepreneurship. For example, the use of video conferencing and streaming of video case studies show promise as viable uses of educational technology. The ability to bring new "live" perspectives from different geographic locations and schools will add to the richness of the educational experience. Cyberspace has virtually erased time and distance transforming the theory of education into the practice of implementation (Solomon et al., 2002, pp. 82–83).

Entrepreneurship is new and it is about continual innovation and creativity. It is the future of business schools and it should begin to move into a leadership role. Today, the words used to describe the new innovation regime of the 21st century are: *dream, create, explore, invent, pioneer, and imagine!* Entrepreneurship educators must have the same innovative drive that is expected from entrepreneurship students. Vesper (1999) made us think out of the box when he stated:

Entrepreneurship in universities has so far been developed as an add-on to business education, first as an elective course, then more courses, and finally as a concentration, major or program. So far it has largely been tucked in and around the existing core. Its teachers presently must be approved by established faculty from other fields. Its courses currently must fit into the existing curriculum, grading system, and calendar. It serves the students who, for the most part, apply for a conventional business education. But what might be different if we had started first with a *school of entrepreneurship* and then added a few courses for a concentration or major in middle management? (Vesper, 1999, p. 14).

It is an interesting thought and certainly a way to think about the entrepreneurship discipline in a different way. A noted author on creativity, Dauten (1986), once said, "Different is not always better, but *better is always different!*"

There can be no lethargy if we are to move the entrepreneurship cause to the next level. The skeptics are still alive and well. Renewed energy is needed to stimulate institutional reform and continue to establish entrepreneurship education legitimacy. We need to attract and develop the next generation of teachers. The war is not over. Vigilance and persistence are still the order of the day. And it is worth the effort (Meyer, 2001, pp. 7–8).

I believe we are at a point in time when the gap between what can be imagined and what can be accomplished has never been smaller. We must remember that "tomorrow belongs to those who have vision today! It is our time, it is our vision, and it is our leadership role. As Booker T. Washington so eloquently stated, "*Success is to be measured not so much by the position that one has reached as by the obstacles which have been overcome while trying to succeed.*"

Even more appropriate, I would like to paraphrase Robert F. Kennedy in a speech made over 30 years ago, because its message directly focuses upon all of us today. You are living in one of the rarest moments in education history—a time when all around us, the old order of things is crumbling and a new world society is painfully struggling to take shape. If you shrink from this struggle, and the many difficulties it entails, you will betray the trust that your own position forces upon you. You possess one of the most privileged positions, for you have been given the opportunity to educate and to lead. You can use your enormous privilege and opportunity to purely seek your tenure and

security. But entrepreneurial history will judge you, and as the years pass, you will ultimately judge yourself, on the extent to which you have used your abilities to pioneer and lead our universities into a new horizon. In your hands is the future of your entrepreneurial world and the fulfillment of the best qualities of your own spirit.

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