

Business Plan Competitions: Start-up “Idols” and Their Twenty-First Century Launch Pads

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Business plan competitions (BPCs) promise to expand regional economies and catalyze new venture development. BPCs have evolved into a talent search and a launch pad for nascent entrepreneurs. “American Idol” style contests are hailed and criticized. An assessment of BPCs as both business and pedagogical processes adds to the literature on competitions. This analysis examines a sample of top-ranked programs in entrepreneurship, engineering and general business. Do competitions reward innovative business models? Are there variations in the selection of winners, products or services? The study examines how the “elite” nature of the contest sponsor affects winner selection.

INTRODUCTION

Entrepreneurial learning activities designed for university students receive unsystematic attention in the pedagogy literature. Higher education has a healthy appetite for expanding programs that promise to transform ideas into products and products into intellectual property that ultimately leads to commercial ventures. However, more research is needed to inform practice. One form of entrepreneurial learning -- *Business Plan Competitions* (BPCs) -- has been developed to achieve a variety of extrinsic and intrinsic expectations by their sponsors. This paper seeks to add to the knowledge base on business plan competitions by examining the landscape and outcomes within “benchmark” universities.

The intrinsic value university and community sponsors place in business plan competitions is evidenced by the growth in number of individually named BPCs in the twenty-first century. There was an estimated 40 to 50 competitions in the United States in the year 2000. According to data published by The Enterprize Institute, yearly introductions of new BPCs began to increase at an average growth rate of 22 percent during the years 2004 to 2009. New contest starts-ups declined only at the peak of the economic downturn in 2010. In Canada, Europe and on other continents, Business Plan Competitions proliferated since 2000. The value of the purses awarded to the top winners of such contests has expanded to provide cash to help new companies grow as well as in-kind services to provide professional advice and support. Game-like processes are common outside of the university setting as well. Despite evidence of growth, enchantment with the contest approach may be peaking. A Kauffman Foundation report (Fishback, 2007) examined the evolution of an “American Idol” model for contest-based processes used by venture capitalists and suggested it is in the process of giving way to “accelerators” and their new methods of

identifying and launching early stage companies on their way to becoming high-tech entrepreneurial ventures.

A more rigorous assessment of results of BPCs as business processes and as pedagogical processes will add value to the body of research on competitions. A literature review on business plan operations (Ross & Byrd, 2010) revealed little scholarly attention or empirical analysis has been directed toward understanding the outcomes of business plan competitions. As contests proliferate, there is a dearth of research on their goals, characteristics, operations, and outcomes.

This study undertakes an analysis of a sample of university-based business plan competitions held in 2010. It begins with the identification of a cohort of 109 of the premier, nationally-ranked undergraduate and graduate programs in entrepreneurship, engineering and general business. (Spreadsheet available upon request from authors.) We were particularly interested in the intersection of entrepreneurship and engineering programs. Entrepreneurship programs are often established with the mission of being “enablers” of venture-creation across campus while engineering programs are the most accessible source of commercially viable high technology products and processes. A number of those universities in our cohort are home to the oldest and most prestigious business plan competitions. This analysis seeks to discover if this landscape may provide benchmarks for understanding “best practices,” trends and outcomes in business competitions.

Guiding questions include the following.

1. Do nationally-ranked programs in entrepreneurship, engineering, and business provide nascent entrepreneurs with access to business plan competitions to aid in launching enterprises?
2. Do competitions appear to reward distinctive and/or innovative businesses rather than “tried and true” “first to market” enterprises?
3. Are there substantive differences in types of businesses that win contests in universities that have highly-ranked entrepreneurship programs compared those with programs that are unranked?
4. Do universities with highly ranked programs in entrepreneurship or engineering yield distinctive high-tech winners?

The study analyses the implications of using competition processes such as business plan competitions as a means to bring new ventures to fruition through entrepreneurship education.

THEORY AND CONCEPTS

Entrepreneurship programs often seek to fulfill a university’s ambition to serve as midwife (or show host) to the nascent high-technology enterprises originating in the laboratories and workrooms of engineering and science programs. Concerned that commercially viable ideas were hidden in the laboratories of universities, McKinsey & Company became interested in the potential of business plan competitions to “coax into the open not only the Andrew Groveses of the future but the latent network of advisers and financiers on whom they depend. (Dodt, 1999) Dodt reports that McKinsey staff used the student-run competitions of the Massachusetts Institute of Technology as a blueprint for a series of competitions to foster startups around the globe. There also are advocates for establishing internal idea competitions or business plan competitions within established *corporate* settings to stimulate the emergence of intrapreneurs within companies (Michalski, 2005)

Discovery and development of innovations arising from research in science and engineering labs may follow several paths in technology transfer to the commercial domain. One path leads from the university to a large or mature firm that is selling related technologies or seeking to expand into new fields through acquisitions of patents and licenses. A second path is through transfer of ownership of the patent or license to venture capital firms or intermediaries for commercialization. A third path is for the scientist to attempt to commercialize technology through forming a new venture. One study analyzed the mission statements of university technology transfer offices finding an overemphasis on royalty income and an

underemphasis on entrepreneurship (Markman, et al., 2005.) An important question is prompted by this insight. Could the convergence of high quality entrepreneurship programs and elite STEM programs serve as a counterbalance that steers more innovations toward venture development?

Top research universities are the birthplace of potentially disruptive technologies that change the competitive landscape. However, the incentive structure for bringing engineering technologies forward is often independent of the route imagined by the organizationally-focused entrepreneurship programs. Engineering schools have had their own forms of prize competitions. Events are organized to identify and give recognition for innovative technologies within their community of scholars and experts. One of the best known is the I2P (Idea to Product) Global Competition, an early-stage technology commercialization plan competition. The Lemelson-MIT Program funds three additional \$30,000 Lemelson-MIT Student Prizes at Rensselaer Polytechnic Institute, University of Illinois at Urbana-Champaign, and California Institute of Technology. Sub-disciplines within engineering sponsor distinctive challenge competitions such as the International Collegiate Programming Contest, held under the aegis of the Association for Computing Machinery (ACM). There also are alternative sources of funding that underwrite initiatives in Science, Technology, Engineering and Mathematics (STEM) programs. One example is the Kern Family Foundation, which funds Kern Entrepreneurship Education Network (KEEN), a collaboration of 20 private universities across the United States that are working to instill an entrepreneurial mindset in undergraduate engineering and technology students, according to the foundation's mission statement (Kern Family Foundation, 2010).

Entrepreneurial and competitive processes in the STEM programs provide unique and relevant support. Yet, an important question for academicians and practitioners is whether there is evidence that the availability of a top-ranked entrepreneurship program provides synergy and support to leverage the existing excellence in technical education on campus. The research at hand sought to determine what could be learned about the conduct of competitions in the exemplary university environments. In short, if business plan competitions aim to discover, strengthen and showcase the "best in class" of new ventures, would it not follow that the reputational leaders among entrepreneurship, engineering and business programs would provide useful templates for the general population of university programs?

DATA COLLECTION AND ANALYSIS

This study began with the construction of a matrix of 109 colleges and universities based on well-known categorical rating schemas for entrepreneurship, engineering, and business programs. Criticism abounds concerning ranking systems produced by popular business media (IHEP, 2007). There is evidence that rankings influence both student choice for enrollment and program development within universities. In 2001, G. Dale Meyer, then President of the International Council for Small Business, emphasized in a keynote address to a conference of entrepreneurship academicians that rankings of programs were an issue, that the criteria used at the time were vague, and that rankings can be biased. While there have been refinements in the ranking process, there are still problems. There is a concern that rankings may influence the drive by colleges to establish more indigenous business plan competitions as part of an effort to boost program reputation. With these caveats, nonetheless, we use the following published rankings as a starting point.

The top rankings for undergraduate and graduate programs in *entrepreneurship* were derived from the 2010 *Princeton Review – Entrepreneur.com*. These ratings were based on institutional self-reporting of program characteristics such as breadth of academic requirements, proportion of the student body enrolled in entrepreneurship courses and the percentage of entrepreneurship majors and faculty have launched a business, as well as the variety of non-curriculum based entrepreneurship clubs, activities, competitions and amount of scholarships. Entrepreneurship programs do not use reputational or peer assessments, unlike engineering and general business program rankings.

Rankings of undergraduate and graduate engineering programs were taken from a 2010 *U.S. News and World Report*. Undergraduate and graduate engineering programs accredited by ABET - Accreditation Board for Engineering and Technology, are rated through a survey of the peer judgments of

deans and senior faculty. Undergraduate programs are given separate rankings: one for engineering programs at colleges that offer doctoral degrees in engineering and another for engineering programs at colleges whose terminal degree in engineering is at the bachelor's or master's level.

Finally, this study also included rankings of the best undergraduate *business* programs, taken from a 2010 *U.S. News and World Report*, whose rankings are based on a survey of deans and senior faculty at undergraduate business programs accredited by the Association to Advance Collegiate Schools of Business (Best Business Programs, 2010.) Finally, rankings of the best MBA programs were taken from 2010 Bloomberg BusinessWeek ratings of full-time programs (Morgeson, 2008). We included both Tier 1 MBA programs and Tier 2 programs and compared this cohort group of to the various categorical engineering programs.

The programmatic rankings led to the identification of 109 universities for this analysis. The authors' hypothesis was that there would be considerable overlap and a relatively smaller cohort of universities. We expected to find more institutions with highly ranked programs in *both* entrepreneurship and engineering. That was not the case as one can observe on Table 1. There is little congruity between the 2010 ranking of entrepreneurship and engineering programs. Recognizing that entrepreneurship initiatives, such as business plan competitions, exist in excellent business programs in the absence of formal entrepreneurship programs, we expanded the cohort to examine the top-rated business schools. Here, too, less than half of the top ranked business schools are present in universities having top-ranked engineering programs. This holds at both the undergraduate and graduate levels. We decided to focus our attention on the original two program types: Engineering and Entrepreneurship.

TABLE 1
TOP-RANKED PROGRAMS IN ENTREPRENEURSHIP, ENGINEERING
AND BUSINESS IN THE UNITED STATES – 2010

Ranked Program and Level

Entrepreneurship-Undergraduate	n=25	ENT-U					
Entrepreneurship-Graduate	n=25	10	ENT-Gr				
Engineering UND w/out Ph.D.	n=30	0	0	ENG U			
Engineering UND with Ph.D.	n=25	0	5	----	ENG-w/PhD		
Engineering Graduate	n=25	2	5	0	19	ENG-Gr	
Business Undergraduate	n=26	6	9	0	12	12	BUS-U
Business Graduate - Tier 1	n=30	4	8	0	13	14	15
Business Graduate - Tier 2	n=25	3	6	0	19	5	10

Table 1 reveals that there are few universities with both top-ranked entrepreneurship programs as well as top-ranked engineering programs. Of the 37 institutions that had one of the top-25 undergraduate or graduate Entrepreneurship programs in 2010, only twelve universities also had a top-ranked Engineering program. Just seven universities account for the twelve incidences of overlap (see shaded area.) Much emphasis has been placed on the pedagogical value of developing student ability to engage in multi-disciplinary teamwork on undergraduate or graduate new venture teams. Still, there are few institutions where a cross-disciplinary match could be developed among students in similarly ranked programs. It is also striking that the highly ranked undergraduate engineering institutions do not have *similarly top-ranked* undergraduate business or MBA programs on campus. It is primarily in institutions with Ph.D. programs in engineering and MBA programs that we see parallel stature based on rankings.

The next step in our analysis was to determine whether students in any particular university environment would be more likely to have access on-campus to business plan competitions and whether the value of the prizes in those competitions differs. Local campus business plan competitions may lack

the prestige of large national invitational events, yet they are important as stepping-stones for students who are at the idea-stage of venture creation. Table 2 shows that universities with top-ranked undergraduate and graduate entrepreneurship all programs report that their students have access to and receive winnings from business plan competitions, according to the Princeton Review (2010.). It should be noted that some of these data could not be verified based on public information provided through university websites. This may reflect the fact that entrepreneurship programs often conduct private competitions within classes for credit but do not report outcomes to the public. To that end, there may be no monetary award and data on the ‘winners’ is not made public unless those students move on to compete in a national event.

One interesting finding was that few of the top-ranked undergraduate engineering programs at universities without engineering Ph.D. programs have on-campus business plan competitions. This cohort includes all of the key military academies, which may account for the mission-driven omission. Among universities with top-ranked graduate engineering programs, nearly all have business plan competitions on campus, reflecting the “Carnegie I” research university status and investment orientation. Counter intuitively, a lower percentage of universities with Tier 1 and Tier 2 MBA programs have business plan competitions on campus. One explanation may be a bias for “corporate careers” along with a preference for sending students to compete externally in a few high-profile national and international competitions. It should be noted that the data on Table 2 omits the “winnings” reported for the Rice University competition to avoid skewing the categories in which they would appear (Best Graduate Entrepreneurship Program and Best Undergraduate Engineering program with a Ph.D. program.) At \$1,091,000, it is reportedly the richest international competition with four times the total cash prize winnings of all of the contests.

TABLE 2
NUMBER OF INSTITUTIONS WITH BUSINESS PLAN COMPETITION ACTIVITY
AND THEIR AVERAGE PRIZE VALUE

Ranked Program and Level	Number	Percent Hosting BPC	Value of Business Plan Prize
Entrepreneurship - Undergraduate Only	n=15	100%	\$63,733
Entrepreneurship - Graduate Only	n=13	100%	66,158
Entrepreneurship - Undergrad and Grad	n=10	100%	67,650
Engineering UND w/out Ph.D.	n=8	27%	15,688
Engineering UND with Ph.D.	n=22	88%	59,638
Engineering Graduate	n=20	80%	59,989
Business Undergraduate	n=26	100%	60,800
Business Graduate - Tier 1	n=20	67%	66,316
Business Graduate - Tier 2	n=10	40%	64,026

The third step in our analysis was to identify a sample of universities that would enable us to conduct an exploratory study of the content of the business plans that are selected as winners – “our entrepreneurial idols.” Table 3 shows the results of an opportunistic sample of 20 universities from the larger pool of 109. Two factors drove our selection methodology. The first criterion was to select equal numbers of institutions that excelled in entrepreneurship *or* engineering. This distribution included programs recognized for undergraduate education only as well as those in the top tier at *both* undergraduate and graduate level. The second criterion was the availability of public information

provided by the universities explaining the nature of their 2009-2010 business plan competition and identifying the winners and the nature of their winning enterprise. Transparency was important because the competition process, eligibility requirements, selection methods and structure could be examined and verified. University press releases were used to glean details on the ventures, the industry in which the firm operates, and the backgrounds of the students receiving top accolades and prizes. Third, when there was a surfeit of institutions who that these criteria, we chose institutions that added geographic diversity or balance in terms of private-public status.

TABLE 3
SAMPLE OF RANKED UNIVERSITIES
IN THE ANALYSIS OF BUSINESS PLAN COMPETITION WINNERS

ENTREPRENEURSHIP

Rank <u>UND</u>		Rank <u>UND</u>	Rank <u>GRAD</u>	
6	University of Dayton	3	1	Babson College
8	University of Notre Dame	4	4	Brigham Young University
15	University of Oklahoma	5	14	University of Southern California
16	Lehigh University	7	12	Syracuse University
17	CUNY – Baruch College	9	10	Washington University – St. Louis

ENGINEERING

Rank <u>UND</u>		Rank <u>UND</u>	Rank <u>GRAD</u>	
9	Bucknell University	3	3	University of California – Berkeley
13	University of Wisconsin – Madison	4	4	Georgia Institute of Technology
17	Gonzago University	8	13	Purdue University
21	University of San Diego	11	17	Princeton University
22	Duke University	13	25	Johns Hopkins University

We expected to find differences in the industries chosen by entrants in each institutional category. We hypothesized that the top-ranked engineering programs (and top-ranked graduate programs in general) would show a preponderance of engineering and technology applications for industries, business process innovations, and innovations in biotechnology and life sciences. Conversely, we expected the list of winners to reward more innovative consumer products and services in the top-ranked entrepreneurship programs (especially in undergraduate programs.) Our analysis of business plan competitions shows slight differences between the industry categories in which winners presented. Table 4 reveals the distribution of industries in which students competed across the four institutional categories. A more detailed distribution of winning plans by industries is available as an addendum.

TABLE 4
COMPARISON OF WINNING BUSINESS PLAN CONTENT
IN 20 ELITE UNIVERSITIES HOSTING BUSINESS PLAN COMPETITIONS

INDUSTRY	TOP-RANKED ENTREPRENEURSHIP n = 39 winners	TOP-RANKED ENGINEERING n = 32 winners
	Percentage	Percentage
Media / Internet Applications	28.20	28.13
Medical Products and Services	23.00	18.75
Consumer Products and Services	20.50	0.00
E-Commerce and IT	10.25	18.75
Food/Beverage/Nutrition	7.60	6.25
Energy	5.12	12.50
Entertainment/Sports/Education	5.10	12.50
Other	0.23	3.12
TOTAL	100.00	100.00

Proposals for media and internet products and services represent the largest proportion of winners in both types of programs. However, the scale is tipped toward the top tier engineering universities in the E-commerce and IT category. Consumer services and products were found more frequently in universities with top-tiered entrepreneurship programs. As expected, competitions in top-ranked engineering universities reward no consumer products and services among their top winners. It is somewhat unexpected that medical products and services did not weigh even more heavily in engineering environments. Perhaps that reflects both a higher threshold and performance standard in such institutions and alternative professional channels for transforming ideas into commercialized products. Further research may be needed to determine if the “energy” category is understated in the engineering environment because such schools typically have their own challenge competitions for alternative fuels and technologies.

DISCUSSION

With regard to our first question “Do nationally-ranked programs in entrepreneurship, engineering, and business provide nascent entrepreneurs with access to business plan competitions to aid in launching enterprises?” we offer a qualified “yes.” There is an apparent imbalance at the undergraduate level between universities having top-ranked entrepreneurship programs and those with top ranked engineering programs. This can be explained by the fact that the colleges in the elite undergraduate engineering cohort are extremely specialized and include most of the military academies. In addition, we speculate that the role of undergraduate engineering programs to equip students with the complex body of knowledge needed to succeed as a novice engineer in specialized industries is incompatible with efforts to pursue business formation. It also should be noted that Bureau of Labor Statistics data on “self employment” shows that the engineering profession ranks among the careers with the lowest percentage of employment outside of larger organizations.

Entrepreneurs at top-ranked engineering graduate programs may follow a different route to participate in business plan competitions. When competitive programming is used to tease innovative concepts out of the laboratory, even the language describing that process is different. While entrepreneurship programs and business schools are concerned with the development of organizations and their growth and management, the engineering environment is focused on product and process. For example, the *Idea to*

Product® (I2P) Program at University of Texas at Austin is considered a “commercialization” competition rather than a “business” competition. The implication is that the end-result is process oriented rather than focused on the institutionalization and organization of a business entity.

Many universities with top engineering programs are invited members of elite “*Pyramid Competitions*.” By this, we mean that business plan competitions are held or hosted by member universities who participate in regional “brackets.” The best business plans are selected to advance to national or international finals. Venture Capital Investment Competition (VCIC®) is one example that caters to the elite universities. This competition includes over 20 of the institutions on our list of top-tier Engineering programs who compete against the best of the best. University programs invest time and energy in aiding self-identified entrepreneurs to prepare for the marathon of national competition rather than on the costly and time-consuming process of operating an internal competition process.

Access to some form of local competition may be perceived as the stepping stone to the “grand-national” style competitions. For example, Rice University, which hosts the “world’s richest and largest business plan competition,” does not require its competitors to be winners of prior contests. It merely specifies that the business plan must be prepared under faculty supervision and have a faculty sponsor. Nevertheless, experience counts; all six winners in the 2011 Rice Business Plan Competition had previously won or competed in events hosted by their own and other university competitions.

Some top-ranked universities appear to eschew hosting large internal competitions in favor of encouraging participation in regional or national intercollegiate competitions. Engineering programs as well as entrepreneurship programs increasingly are designing “*Parallel Competitions*” or “specialty” tracks to encourage entries with unique characteristics. Some contests may differentiate categories such as technology and consumer products and lifestyle enterprises. Engineering universities sometimes make a distinction among their specialties. The Johns Hopkins University identifies a “life sciences” track. The more common additions in recent years are tracks (or awards) designed for proposals that emphasize sustainability (Best Green/Clean Tech) or social-needs. Duke University, for example solicits applications for a Healthcare and Life Sciences track, an IT & Media Track and a Products & Services Track.

Do competitions appear to reward distinctive and/or innovative businesses rather than “tried and true,” conventional, or “first to market” enterprises? While we do not present detailed evidence in our discussion here, our data shows that there is only a modest representation of the conventional dorm-room entrepreneurial ideas taking home the grand prize in competitions at elite universities. There were no t-shirt vendors, tattoo-and-graphic novel parlors, or beer delivery services among the top winners.

Are there substantive differences in types of businesses that win contests in universities that have highly ranked entrepreneurship programs compared those with programs that are unranked in those areas? We see subtle differences in the types of industries that are designated “winners” in different environments. However, an interesting question (which is difficult to document) is the nature of the pool from which the winners were chosen. We suspect that there are key differences, but a more detailed survey of BPC directors would be needed. Longitudinal data would determine if 2010 was typical of the types of businesses advanced to the final rounds of such contests. Some of the more interesting business plan proposals have been developed within the constraints of microenterprises or “bottom of the pyramid” endeavors. For example, Georgia Institute of Technology hosts the “Ideas to SERVE (I2S) Competition” for early-stage business concepts that designed to address social issues or sustain the environment. Princeton University’s TigerLaunch added a “social entrepreneurship track” in 2010 to complement the engineering school’s venture competition and in 2011, alumni funding has led to establishment of a “Green Business Plan Competition.”

IMPLICATIONS FOR RESEARCH AND RECOMMENDATIONS

Community sponsors hope to expand regional economies and catalyze opportunities for new venture development among high-value industries. Typically, the wish list includes technology-based businesses that will spawn new jobs and energize economic expansion. BPCs have evolved into a talent search and a launch pad for nascent entrepreneurs, with the intention of retaining entrepreneurial talent in the locale

where it was educated. Huffman and Quigley (2002) describe the role of universities as having a geographic “sorting function” in attracting and retaining talent in a particular region via retention activities. The initial veneration and support afforded the winners of business plan competitions is believed to contribute to that result. One question that this study does not address is how many of the “winners” have or will contribute to the future economies of the communities in which they were educated.

Advocates for the development of business plan competitions believe that they are a vehicle to incentivize and thereby stimulate innovation as well as reveal marketable intellectual assets hidden in university closets. While the “prize” money offered by some institutions is nominal, the true bonus for well-informed competitors is found in a range of other incentives. Roldan (2005) found that data collected from 45 participants in the University of San Francisco Business Competition showed the primary reasons for participating were 1) potential funding from investors, 2) feedback from investors and executives, 3) overall learning experience. Prize money garnered a distant fourth place.

Universities are seeking to reinforce the likelihood that the entrants will move beyond the idea and seed stage by providing incentives that emphasize retention within a network of services. Business plan competitions provide in-kind services such as incubator/accelerator space, consulting-time from faculty and business coaches, skills training and legal or accounting advisors in the same manner that community ‘enterprise zones’ offer in-kind and indirect incentives such as tax credits, rebates, abatements from programs offering small business loans. A more detailed study would need to look at the types of support structures surrounding the business planning process in the institutions considered here. There would also be value in pursuing answers to the following questions using a much larger sample of institutions with business plan competitions

- Are there regional variations in the selection of winners and their product or service mix?
- Do institutional characteristics account for differences in the backgrounds of individual entrepreneurs who are chosen as the top competitors?
- Do institutional characteristics account for differences in the backgrounds of individual entrepreneurs who are chosen as the top competitors?

There should be concern about finding more effective ways to help the entrepreneurial engineer or scientist to exhibit their innovations. In the world of technology innovation, it is the engineer, rather than the business manager, who becomes the venture “idol.” Scientist Raymond Sekula (2009) founded a life sciences firm that won both the Rice and the MootCorp® business plan competitions. He advocates for engineers to enter such events for their technical assistance in navigating the road to investment. He quotes Joel Adams of Adams Capital Management: “When I’m valuing a company, I usually subtract \$100,000 for every MBA on the team and add \$100,000 for every engineer.” Sekula cites a list of “top” business plan competitions. But it noteworthy that of the 23 competitions based in the United States, only nine are affiliated with one of the universities or the top-tier programs included in our study. There is value in understanding more about the relationship between entrepreneurship programs and engineering programs in institutions of higher education. If the former are charged with bridging the divide, more research is needed to provide a better understanding of what facilitates the most efficient and effective use of resources.

IMPLICATION FOR PRACTICE

Ten years after his Coleman White Paper on issues in Entrepreneurship Education, G. Dale Meyer followed up his earlier voiced concern with a renewed set of challenges to academic entrepreneurship (Meyer, 2010.) These questions are ones that are relevant to the meaning of this study. Are rankings of top-tier academic programs a useful guide?; Are business plans and competitions that make their proponents “American Idols” the best way to educate or produce new ventures? Are Entrepreneurship Programs more or less effective than STEM programs in developing and launching new ventures? Meyer

notes there are a number of “elephants in the room.” He continues “I have been known for pointing out such elephants – such as the worship of the rational business plan in curricula; the blind pursuit of magazine entrepreneurship reputation rankings; and that academic entrepreneurship is not the property of B-Schools.” Research on Business Plan Competitions provides one avenue to explore many of those larger pedagogical questions.

Like programs in other industries, educational initiatives mature, achieve their mission, encounter changing needs and may lose the champions or sponsors who keep programs alive. The decline in the growth rate of business plan competitions in 2010 raises a question of whether some competitions are may need an “exit or harvest strategy.” Some examples in recent years reflect the better form of change. The business plan competition at The Citadel no longer exists because a key benefactor was interested in funding a different and equally attractive initiative within the university: a positive outcome for all concerned. The entrepreneurship club at one of the top engineering universities - Union College – canceled its several year old business plan competition in 2009 and began collaborated with neighboring Rensselaer Polytechnic Institute's (RPI) to launch the Tech Valley Business Plan Competition (Kolodny, 2010). Smaller institutions may discover that regional collaboration attracts a deeper pool of entrants as well as a richer purse from equity investors. The appeal of participation in a few grand-national competitions may be the next stage of the future entrepreneurship education.

Nevertheless, local competitions remain important proving grounds for technology business teams that ultimately seek recognition through the top regional, national and international competitions. It will be useful to track the evolution of the business plan competition model over time as a way of understand better ways to assist nascent entrepreneurs in showcasing and launching their enterprises.

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ADDENDUM

**NUMBER OF WINNING BUSINESS PLANS BY INDUSTRY
IN 20 ELITE UNIVERSITY COMPETITIONS**

INDUSTRY	ENTREPRENEURSHIP		ENGINEERING	
	Undergrad +		Undergrad +	
	Undergraduate	Graduate	Undergraduate	Graduate
Alternative Energy	1	1		3
Recycling Processes and Services				1
Food & Beverage Products / Services		2	2	
Nutraceuticals		1		
Media and Advertising Services	1		1	2
Social Media / Networking	2	5	1	1
Consumer Internet Applications		2	3	1
Collaborative Media		1		
Entertainment / Gaming		2	1	
Sports & Fitness Internet Service			1	
Sports Technology Products			1	1
Educational Products / Technology	1			
Transportation - Medical		1		
Information Technology - Medical	1			
Medical Devices	3	2		2
Medical Processes, Therapies - Pharma	1		4	
Safety Apparel & Equipment		1		
Consumer Services	2	1		
Consumer Products - Technical	1	1		
Consumer Products - Conventional		1		
E-Commerce / Online Sales		1		
Business Services - Productivity		2	1	2
Information Technology - Services			1	
Information Technology - Financial Service			1	
Information Technology - Graphics	1			
Manufacturing Processes / Technology				1
Automotive Technology		1		
Building Materials			1	
Total Winners	14	25	18	14