



## **Creating an Entrepreneurial Pipeline between B.U. and B.C.C.**

The Catalysts for Enterprise Development at the Confluence  
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### **Abstract.**

In today's unstable economy filled with issues surrounding job security and the distribution of wealth in the United States, solutions must be presented to support socioeconomic mobility. This mobility, although can be achieved in a multitude of ways, must include the centralized theme of entrepreneurship in order to be even considered feasible. Through the entrepreneurship mindset, individuals can not only develop their own passions and creativity into their means of individual capital generation, but also help create a more general dynamic equilibrium in the nation's economy, through employment opportunities and local economic reinvestment of capital. However, this mindset must be provided through educational opportunities first and foremost, as these opportunities will have the longest lasting effect on an individual's personal growth and development.

Specifically, this paper explores the comparison of entrepreneurial educational opportunities between public universities and community colleges, and how each affects its students, faculty, and local community. Then, the potential for collaboration between institutions was researched, and how that could apply for the specific situation between Binghamton University and Broome County Community College. Finally, distinct recommendations were created with regard to the introduction of an entrepreneurial pipeline between the two institutions and the benefits that could result for all parties involved.

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## **I. INTRODUCTION**

The historic Broome County area, located in the southern tier of New York is home to multiple institutions of higher learning that provide many benefits the surrounding area and community. Two schools in particular that continually impact the southern tier are Broome Community College and Binghamton University. Broome Community College, which was established in 1946, is a two-year college that is a member of the SUNY school system. As of 2010, BCC had enrollment of over 6,000 students, as well as an employed academic staff of over 400 members (BCC Course Descriptions). Binghamton University is a public research university also located in the southern tier, which was also established in 1946. As of 2010, BU had an enrollment of over 14,000 students, and is comprised of six colleges and schools, providing students with a vast array of options for areas of study (Binghamton University). In such a flourishing area such as Broome County, there are many opportunities within the community for entrepreneurship, including both existing and potential ones at BCC and BU. However, in order for these opportunities to be maximized to the fullest, the resources between these two institutions must be shared through the creation of an entrepreneurial pipeline between the two schools.

## **II. Resources available at Binghamton University**

Being at the forefront of technology and innovation, Binghamton University provides its students and staff with a plethora of scientific resources for study and research, as well as various business-oriented resources as well. These resources come in the form of BU’s Innovation Technology Center (ITC), Small Business Development Center (SBDC), and Business Plan Competition for those students enrolled in the School of Management.

### **A. ITC**

Binghamton’s Innovation Technology Center is at the heart of the research, experimentation, and studies done at the university. It is here that Binghamton Scholars conduct their groundbreaking work in areas ranging from neuroscience to nursing. With its new building recently being completed, the ITC reached sponsored research amounts of \$44 million in 2009-2010. This is a dramatic increase of 76% over the past five years, helping to strengthen the validity of the research done. Specifically, one prime example of a program at the Center of Excellence that shows its impact on the world is the Small Scale Systems Integration and Packaging. This project has led

to the creation of over 700 jobs across New York State, and has created an economic impact of over \$11 million since its conception (Binghamton University).

### **B. SBDC**

The Small Business Development Center in Binghamton, in affiliation with Binghamton University, is a resource for students and community members that provide free business management for both established and start up businesses. Beginning in 1984, the SBDC in Binghamton has assisted over 12,000 clients and has helped to raise \$157 million in public and private funding for businesses, as well as helped to create over 9,000 jobs throughout the southern tier of New York State (citation). The overall goal of the SBDC is to “assist entrepreneurs, business and industry in the solution of their problems, which leads to increased profitability for the entrepreneur and increased investment and job creation for the community” (Binghamton University). Essentially, this service aims to provide individual consultation, a small business startup program, a women business owner’s roundtable, as well as other specific training events and projects for members of the community. This allows for the growth and stability of small business within the greater Binghamton area.

A major downside to all of the services provided by Binghamton University mentioned above is that none of these teach the fundamental concept of entrepreneurship to the students at BU. The ITC, being more technologically based, does help ignite the creativity of those who research there, but is geared more towards its faculty and staff, and does not promote the business side of innovation. The SBDC on the other hand, does give students a taste of entrepreneurship, but this concept must be learned secondary to the student’s actual major, thus inhibiting the amount of time and effort that can be spent by the student in this field of study, as opposed to it being the centralized theme within the student’s major. Both of these services are a fundamental example as to the centralized theme for public universities across the nation, namely being lacking an entrepreneurial focus. This however is the opposite of many community colleges across the nation, as can be shown at BCC.

## **III. Resources Available at BCC**

As previously mentioned, Broome County Community College is a prime example of an institution that has an entrepreneurial focus for both its students and the surrounding community. Following the trend of community colleges across the nation, BCC provides high valued education at affordable costs for those looking to pursue their interests in the field of small business development.

### **A. Entrepreneurial Certificate Program**

Being a community college, BCC currently offers both entrepreneurial programs that benefit both the community, as well as the students attending the school. In terms of the community, BCC’s most enviable resource is its Entrepreneurship Certificate

Program. This program is designed improve both startup and existing businesses. Providing knowledge in the form of financial and business techniques ultimately benefits startup businesses with the implementation of such classes into the school. Existing businesses can benefit from this program by strengthening their financial and managerial skills through classes. Lastly, one very important benefit to its students is that the only requirement to be a part of this program is a simple placement test (BCC Course Descriptions).

### ***B. Entrepreneurship Courses***

For its students, BCC offers a vast variety of entrepreneurship courses that not only provide the foundation for students regarding small business practices, but also allow students to make this area of study their major, resulting in a business degree without multiple courses taken involving entrepreneurship. These courses include Introduction to Business, Introduction to Entrepreneurship, Entrepreneurship Law, and Business Plan Development. Introduction to Business is a basic 3-credit course that studies the background of modern business practices by means of organization and management, human resources, financing, accounting, and marketing. This serves as a good basis for the other entrepreneurial courses offered at BCC. Another course, Introduction to Entrepreneurship is a 4-credit course that is designed for students who are considering a new business venture. This course specifically emphasizes the identity of entrepreneurship in today's economy, the struggles and challenges associated with entrepreneurship and small business startup, marketing, business organizations, among other issues relevant to aspiring entrepreneurs. A third course offered, Entrepreneurship Law, is another 3 credit course that introduces students to the continuously shifting legal environment associated with business and entrepreneurship. Students in this course will work towards familiarizing themselves with sources of the legal regulatory environment, litigating court environment, pending and existing legislation, as well as the typical legal owner's legal liabilities. A final course recognized as entrepreneurial at BCC is Business Plan Development, which is a 3 credit class where students learn about the requirements associated with creating an in depth and detailed business plan. The major sections covered in this course relating to small business are management and organization, product and market planning, as well as financial planning (BCC Course Descriptions).

Even with the four courses mentioned that are associated with entrepreneurship, more do currently exist within Broome County Community College. This not only shows the focus of entrepreneurship for BCC as an individual school, but also the focus of community colleges as a collective whole with regard small business support and development.

## **IV. Creating an Entrepreneurial Culture Through Collaboration**

Within today's educational system, both students and professors play a major role in the success of any specific institution or program. Often times, without the support of both of these groups, the achievements of any school can potentially be

compromised. While these ties and relationships with students and professors within one school have proven to be effective, the relationships of students and professors across more than one institution can have an even more positive impact on not only both schools involved, but also the surrounding community through creativity (Mitchell Stevens). With resources and programs being allocated between institutions, a mutually beneficial symbiotic relationship can be created for schools within the same vicinity, specifically BCC and BU.

### ***A. Community College Resources for Entrepreneurship***

Across the nation, it is becoming more and more evident that Community Colleges are providing students with more entrepreneurial resources than public institutions of higher learning. One example of this trend is the formation of the National Association for Community College Entrepreneurship. The NACCE is a non-profit organization that was founded in 2002 with the vision of “creating economic vitality through entrepreneurship” (NACCE). Serving both college administrators and faculty members, this group believes that community colleges are in excellent position to promote entrepreneurial thinking due to their accessibility and local community ties, and thrives on the concept of information exchange and networking. This networking is mainly accomplished through the form of symposiums, webinars, a quarterly journal, and a website, among others (NACCE). This allows members of the NACCE to share their information regarding entrepreneurship education with community colleges across the nation.

This idea of a national community college entrepreneurial force is exhibited by the research done by John E. Rouche and Barbara R. Jones regarding the entrepreneurial community college. According to Rouche and Jones, the American spirit of innovation and creativity are alive and well within community colleges across the nation, and through their constant ability to do more with education with consistent less funding, it is more than possible for them to provide students with “entrepreneurship in the form of education”, and help to “create engineers of innovation and transformation through the application of equal and positive pressure to the external driving forces of change” (John E. Roueche).

### ***B. Possibilities of a Unified Front Between Community Colleges and Public Universities***

The possibilities of a unified front in terms of resources within a specified area can be shown through the 2008 program that was created in Michigan, known as Bold Voices, Bold Choices. This action plan was created in order to help make the state of Michigan the place to start, grown, and retain business for young entrepreneurs.

Starting with its inception in 2007, a group known as the Council for Labor and Economic Growth (CLEG for short) asked the Committee on Creating a State of Entrepreneurship to conduct research and create recommendations as to how entrepreneurship can be supported through schooling, the workforce, and economic development partnerships (Bold Voices Bold Choices). After conducting research via gathering input through focus groups, interviews, and surveys, the committee came to the conclusions that entrepreneurial communities will exist within the 21<sup>st</sup> century in

those that are most prosperous, agile, and competitive, and that Michigan fit this description, thus giving it much entrepreneurial potential. Upon reaching these conclusions, the committee then set forth to create a plan that allowed for the capacity of change within Michigan to harvest a more inviting entrepreneurial culture. Now although there are many steps outlined within the plan to reach this goal, underlying theme within the plan is that a unification of resources must be established if Michigan were to promote entrepreneurialism (Bold Voices Bold Choices). These resources included the leveraging of global partnerships, improved access to credit and capital, and the increased support of entrepreneurial education, among others.

Across the nation, many successful entrepreneurial and technology programs, both education and community based, work with the basic concept of success through collaboration (Chell). This is shown through the dissection and study of actual existing examples that promote this concept.

## **V. BEST PRACTICES:**

When attempting to initiate new and innovative ideas, it is always beneficial to create a model to act as a basis. Like all patterns in the world, this model must compare to already existing implemented programs that have proven successful time and time again. By properly researching already successful programs, the initiation of new programs will have a higher rate of success, allowing for more time and effort to be spent on the implementation of new innovative programs, as opposed to their creation.

### ***A. 3/2 Program Between SUNY Potsdam and Clarkson University***

Between Clarkson University and SUNY Potsdam there exists a program that allows students to begin their education in the field of Math and Sciences at SUNY Potsdam, and then after three years of study, transfer to Clarkson University for the final two years of their education, studying engineering and concluding a five year program. More specifically, this program begins when freshman students at SUNY Potsdam, who are enrolled in sciences and mathematics, decide they have a dual interest in both mathematics/science, as well as engineering. Due to the fact that SUNY Potsdam and Clarkson University are within walking distance of one another, these specific freshman students are given the opportunity to pursue their mathematics and science passion for three years at SUNY Potsdam, thus earning them a Bachelor of Arts degree from Potsdam. This BA degree includes fulfilling all requirements in a major of chemistry, geology, mathematics, or physics, as well as fulfilling the general education requirements as specified in the SUNY Potsdam General Education Manual (Misiaszek). These general education courses must include specific preparatory courses for an engineering curriculum. Then, after they complete their BA degree, students can then transfer to Clarkson University to complete a BS degree in engineering. Overall, this has been an extremely effective program, allowing students to tailor their education to their own specific interests, as opposed to being stuck in the stereotypical collegiate educational system, with very little room for exploration in the

fields of math and science (Misiaszek).

Along with its partnership with Clarkson University, SUNY Potsdam even allows for students to contact the director of this program, Professor Lawrence Brehm, and discuss the possibility of transferring to other engineering colleges of their choice. One such school that is the second most transferred school behind Clarkson University is the Thomas J Watson School of Engineering at Binghamton University. This is a fantastic example of students being given the opportunity to create their own paths in education, thus promoting creativity and innovation through

### ***B. Community College Entrepreneurial Pathway Project***

In California's Central Valley area, there exists a project that hopes to become a reputable model in terms of how four year public institutions and community colleges can create lasting partnerships through and "entrepreneurial education pathway". This program is designed to impact students from their high school graduation and entrance to college until their self-employment. This program is known as the Community College Entrepreneurial Pathway Program, and acts as a catalyst for growth and innovation in the Central Valley for not only students and their institutions, but also the community. Currently, this program amalgamates ten community colleges with the Lyles Center for Innovation and Entrepreneurship at California State University, Fresno.

Originally provided a mere \$300,000 from the Coleman Foundation (more specifically Timothy Stearns, who is the Chair in Entrepreneurial Studies in Lyles Center), the CCEPP began its endeavor by "identifying and supporting Coleman Scholars on community college campuses". These scholars were in fact college faculty, and are credited as being the motivating energy behind the program's initial growth and prosperity. As with any successful program or plan, it is those that take care of the little things that make the big things happen, which this is a prime example of. Basically, the way this program works is the ten schools involved with this program work together in an effort to create a basis curriculum that can be applied in class rooms all across the country, emphasizing the skills and knowledge required for students who are seeking self employment.

In an effort to spread their success, the CCEPP holds nine group meetings per year to share their best practices and other information with schools and groups across the country, in hopes that this action will lay the foundations of an interlocking network of programs and courses that will mold into a reliable entrepreneurial guide for all to follow.

## **VI. RECOMMENDATIONS**

After extensive research within the field of entrepreneurship, and also between the relationships of public universities and community colleges, it is my personal recommendation that due to the fact that public universities, specifically SUNY system colleges are significantly further behind community colleges in terms of providing entrepreneurial education and resources, it is my personal recommendation that more

direct pipelines between the sects of institutions needs to be established.

It is clear through research of both past and present practices of all types of institutions that the more resources available to a specific group, the more progress can be made in their respective field. This holds true for the current educational system, in that the more resources (capital, faculty and staff, etc) available, the more likely the institution will be able to thrive and develop, giving its students more opportunities to succeed in their chosen field of study by providing them with knowledge. However, due to today's current economy and market, budgets are getting tighter and schools are being provided with less funding than years past. Fundraising efforts can only go so far, and with restrictions on tuition fees, educational institutions are constantly being expected to do more with less. Because of this, I think that it is essential for schools to combine their resources and provide its students with the best educations possible.

In the field of entrepreneurship, there are very few programs available at Binghamton University. Fortunately, BU is at the forefront of technological innovation and has much to offer to other schools and the local community. BCC on the other hand is not quite as technologically reliant as Binghamton University, but has many programs in the field of entrepreneurship that provide both students and community members with the opportunity to be self employed, as described in part 1. However, I believe that if both of these schools were to share their resources, specifically in the area of entrepreneurship, both schools and the surrounding community would reap the benefits of the symbiotic relationship.

More specifically, I think that this partnership could be either a 3/2 program, where students could initially go to BCC to fulfill their entrepreneurial passion, then to Binghamton University to complete a technological degree, or students could be enrolled in one school, but be allowed to commute and take classes at the other school to get the best educational opportunities that both schools have to offer. This however, can only be accomplished if there were a predetermined list of transferrable credits between the two institutions, similar to that of the 3/2 program between SUNY Potsdam and Clarkson University.

Overall, I am confident that a pipeline created between these two schools can not only benefit both institutions' students, faculty, and the surrounding community, but will also act as a precedent for other community college and public university relationships to follow for years to come. However, only through collaboration can both schools reach their full entrepreneurial potential for all parties involved. As the late Henry Ford once said, "Coming together is the beginning. Keeping together is progress. Working together is success."

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### Works Cited

BCC Course Descriptions. 27 April 2011

<[http://catalog.sunybroome.edu/content.php?filter%5B27%5D=-1&filter%5B29%5D=&filter%5Bcourse\\_type%5D=-1&filter%5Bkeyword%5D=entrepreneurship&filter%5B32%5D=1&cpage=1&cur\\_cat\\_oid=1&expand=&catoid=1&navoid=5&search\\_database=Filter](http://catalog.sunybroome.edu/content.php?filter%5B27%5D=-1&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=entrepreneurship&filter%5B32%5D=1&cpage=1&cur_cat_oid=1&expand=&catoid=1&navoid=5&search_database=Filter)>.

Binghamton University. 2011. 29 April 2011 <<http://www.binghamton.edu/>>.

"Bold Voices Bold Choices." Making Michigan the place to start, grow and retain a business. December 2008.

Chell, Elizabeth. "Social Enterprise and Entrepreneurship Towards a Convergent Theory of the Entrepreneurial Process." International Small Business Journal (2011).

Coker, Rachel. Binghamton University ITC. 2009. 1 May 2011  
<<http://discovere.binghamton.edu/video/eavesdropping-on-bacterial-conversations-2480.html>>.

John E. Roueche, Barbara R. Jones, George R. (FWD) Boggs. The Entrepreneurial Community College. Washington DC, 2005.

Misiaszek, Asad Islam and E. T. 3-2 Program, Mathematics & Engineering. 2011. 2 April 2011  
<[http://www.potsdam.edu/academics/AAS/Math/3\\_2\\_mathematics\\_engineering.cfm](http://www.potsdam.edu/academics/AAS/Math/3_2_mathematics_engineering.cfm)>.

Mitchell Stevens, Elizabeth Armstrong, Richard Arum. "Empirical and Theoretical Advances in the Sociology of Higher Education." Annual Reviews (2005): 127-151.

NACCE. National Association for Community College Entrepreneurship. 2011. 1 May 2011 <<http://www.nacce.com/>>.

Taylor, Genelle. "Building an Entrepreneurial Pathway One Campus at a Time." 2009. Coleman Foundation. 28 April 2011  
<[http://www.colemanfoundation.org/clm\\_downloads/nacce\\_spring09\\_pathways.pdf](http://www.colemanfoundation.org/clm_downloads/nacce_spring09_pathways.pdf)>.

- Vangelis Souitaris, Stefania Zerbinati, and Andreas Al Laham. Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. July 2007. 2 April 2011 <[http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6VDH-4KRY3P9-1&\\_user=681878&\\_coverDate=07%2F31%2F2007&\\_rdoc=1&\\_fmt=high&\\_orig=gateway&\\_origin=gateway&\\_sort=d&\\_docanchor=&view=c&\\_searchStrId=1718707596&\\_rerunOrigin=scholar.google&\\_acct=C000037398](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VDH-4KRY3P9-1&_user=681878&_coverDate=07%2F31%2F2007&_rdoc=1&_fmt=high&_orig=gateway&_origin=gateway&_sort=d&_docanchor=&view=c&_searchStrId=1718707596&_rerunOrigin=scholar.google&_acct=C000037398)>.
- Watson, Gregory. Entrepreneurship, Education, and Ethics. February 2011. 31 March 2011 <<http://www.gregwatson.com/entrepreneurship-definition/>>.