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The Partnership for Knowledge Entrepreneurship
The Catalysts for Intellectual Capital 2020
2009 Leadership Institute

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Abstract

There is much room for improvement in expanding community-university research partnerships, which offer many benefits to those involved, including Binghamton University students. Expanding these collaborative efforts is elemental in the revitalization of the Greater Binghamton Region by getting need-to-know information to local municipalities in a cost-efficient manner. Through an analysis of current partnerships, this paper will show how increasing research collaborations can create a positive feedback loop for the three partners – community, university, and students. Having the community actively reach out to the university will improve the relations between the two, and will get students familiarized with the area by forming connections and getting involved in community affairs. Therefore, increased utilization of university research can be an effective means of integrating students with the community (and vice versa), as well as gaining valuable knowledge and insight into community building and redevelopment.

Keywords: Community-university partnerships; Collaboration; Experiential learning; Win-win-win situation; Cost-efficiency; Community redevelopment

Binghamton Keywords: Center for Integrated Watershed Studies; Premier Public University; Geography Department of Binghamton University

I. The Foundations for Creating an Improved Future

The location of Binghamton University in the Southern Tier of New York State is one that creates the possibility of collaboration between the Greater Binghamton Region and the university. Considering that the twentieth century “smokestack” industries have left this region in particular, and the United States generally, a forward-looking approach to economic development is necessary for the continued vibrancy of the region. This is a significant reason for the community to reach out and tap into the vast resources that the university has to offer and can provide. These include nearly four thousand new and eager young minds that arrive every Fall, plus the numerous and diverse faculty who reside within and around the region. While the university’s tangible economic benefits are easily recognizable, the intangible benefits of having the Premier Public University in the Northeast within the region are equally important. This includes, but is not limited to, the superb education provided to students, as well as the knowledge created through, for example, the Center of Excellence. According to

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New York's Empire State Development website, "the establishment of 'Centers of Excellence'...support high technology ventures through a collaborative approach among the State, academia, private venture capital companies, and other private and public sector parties" (Empire State Development, 2002). Binghamton University has one of six Centers of Excellence, focusing "on the development of new electronic applications that will enhance the way people live and interact with their surroundings" (Empire State Development, 2002). Furthermore, by getting students involved in the community, their education extends beyond the campus and lets them appreciate and expand their academic horizons. The Greater Binghamton Region benefits from, firstly, having students in the community, and, secondly, getting practical knowledge to real-world problems based on their academic studies.

Under the Partnership for Knowledge Entrepreneurship, the framework for the Catalysts for Intellectual Capital Leadership Institute of Spring 2009, it is evident that creating smaller businesses can attract university graduates to and keep them within the region. Indeed, the creation of many small businesses is and will continue to be the guide to a bright and successful future. Another examination of this conceptual framework is to analyze the way in which the university is entrepreneurial about knowledge, which can have economic benefits in a less direct, more long-term manner. Knowledge Entrepreneurship will be the focus of this research paper, as I discuss the Geography Department and the Center for Integrated Watershed Studies' (CIWS) knowledge as a resource for the region. By utilizing the research capabilities of this one academic department, local officials can gain crucial information regarding natural disasters or any other geographical topic. In particular, I will be discussing how the June 2006 flood provided an opportunity for Professor Burrell Montz and several students to produce a seventy-nine-page case study. More generally, I will discuss the capabilities and knowledge of the Geography Department, which can provide useful data for local municipalities. To emphasize, the academic ventures discussed are studied by undergraduate and graduate Binghamton University students and take place within university classrooms. Furthermore, future collaborations need not be limited to Binghamton's Geography Department, as there are many other majors and professional schools that can provide critical research. In fact, experiential learning, or getting students involved in a real-world application of classroom theory, is an increasing development in providing a well-rounded education. Through experiential learning, such as the case of studying the June 2006 flood, it is possible to provide a better education to Binghamton students and increase the collaboration between university and community. Equally important, regional leaders can utilize the university as a resource to further their own goals through the acquisition of knowledge created from an academic setting.

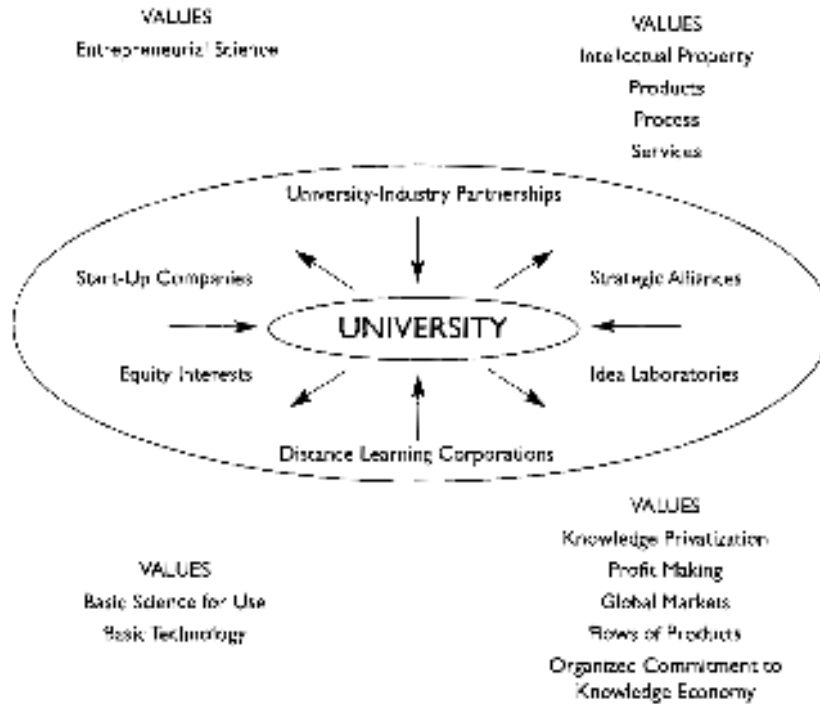
II. Further Defining Knowledge Entrepreneurship: The Key to Success

As already mentioned, thinking about the framework for the Partnership for Knowledge results in two different interpretations. The first interpretation is the ability to use knowledge in order to create a private venture. In the Knowledge Economy, this will be a crucial part of successful communities if they are going to remain viable and competitive, which makes fostering the entrepreneurial spirit a necessary first step. Another way of looking at Knowledge Entrepreneurship is to foster the construction of new and practical knowledge, which can then be utilized in a profitable way. This is an intangible benefit of having a research university within the region: the inherent possibility of using knowledge created from a classroom experience in a way that provides a beneficial resource to the community. The twenty-first

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century knowledge economy “calls for a fresh account of the relations between higher education institutions and society” (Slaughter and Rhoades, 2004). As the illustration below demonstrates, the university is central to the dissemination of different ‘values’ to many different entities.

Figure 3.2 Academic Capitalism Research Regime



Academic Capitalism and the New Economy. Slaughter and Rhoades, 2004

Considering the community is, essentially, an industry, this puts the community-university alliance at the upper-right value chain (Intellectual Property, Products, Process, and Services). Developing this relationship and maximizing the potential knowledge creation is what this paper is arguing. By doing so, the community can tap into the resources of Binghamton University and receive more benefits than just its dollars and cents. According to research done regarding the changing role of universities:

The theory of academic capitalism in the new economy sees groups of actors within colleges and universities – faculty, students, administrators, and managerial professionals – as using a variety of state resources to intersect the new economy....[T]heir organized activity is directed toward the opportunity structures created by the new economy, which channels their efforts in similar directions....They join organizations that intermediate among public, nonprofit, and for-profit public sectors. (Slaughter and Rhoades, 2004)

Moreover, “interstitial organizations...originate within colleges and universities and connect similar professionals at various colleges and universities” (Slaughter and Rhoades, 2004).

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To make this discussion less abstract and more practical, take the Center for Integrated Watershed Studies (CIWS) at Binghamton University as an example. CIWS' Future Vision, according to their website (<http://ciws.binghamton.edu>), is "to expand under a larger umbrella into an Institute for Environmental Systems Research at Binghamton University....[and] to expand our consulting activities, become more involved in downstream impacts on the Chesapeake Bay, and apply what we learn from our local and regional studies to solving problems both here and abroad." It is important to note that this is just one particular research focus within Binghamton University, and, for the purpose of simplicity, this paper will discuss the impact of this particular research center within the region. The creation of research centers and institutes "facilitate the movement of faculty and students between academic and business worlds" (Slaughter and Rhoades, 2004). In other words, while the community will benefit from collaborating with the university, the research centers and institutes will benefit as well. By increasing the opportunity of CIWS, and other institutes, to encourage knowledge creation through helping local communities, their future vision of 'solving problems both here and abroad' could mean an increase of patented technology and research funding. In other words, collaboration is a win-win situation for both the university and community. "Community-university partnerships are based on the principle that both individuals from community settings and researchers can work together toward a common goal resulting in mutual benefits for all those involved" (Suarez-Balcazar et al., 2005). Moreover, the possibility of experiential learning allows for a greater learning environment for the Binghamton student, which will be discussed in the following section

III. Making Collaboration a Win-Win-Win Situation

Binghamton University already has a strong academic profile and has been recognized as the thirty-seventh ranked public university according to U.S. News and World Report (Binghamton University, 2007). The 2008 issue marked the eleventh consecutive year that Binghamton has "ranked among the nation's top universities" (Binghamton University, 2007). While this is certainly something to be proud of, there is room for improving our standing, which is something that experiential learning could accomplish. In the previous section, I discussed the benefits to the university (i.e. the professors and departments within) as well as the community, but this is incomplete. Increasingly recognizing experiential learning as a "vital ingredient in the university....reflects the evolving mission of universities, where there are calls for a clearer commitment to developing generic student skills and a growing emphasis on vocation-oriented education" (Hawtrey, 2007). Developing these skills happens best outside of the classroom, which is what can happen if a community-university partnership is developed. Thus, community-university partnerships are not just a win-win situation; they are a win-win-win (community-university-student) situation. "The argument for involved learning is relatively simple: Students remember only a fraction of what they hear but a majority of what they actively do....The important thing is personal involvement" (Hawtrey, 2007). Moreover, by increasing the course offerings to students, especially with a hands-on emphasis, a possible increase in Binghamton's academic profile could attract better talent to the region, creating a positive cycle of growth, knowledge, and development. The chart on the next page describes some of the benefits of community-university partnerships:

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Approach	Engagement	Power
Participation	Individual- or small-group level engagement occurs around specific topics or issues. Terms of engagement are set by authorities (researchers, policy makers) for specific issues.	Personal empowerment (increased capacity to act) occurs through becoming a more informed participant, with some power to define problems. No higher-level decision-making authority is granted to participants.
Integration	Organizational level engagement occurs to set shared agendas and aims and to create supportive institutions for specific projects.	Problem definition is shared. Research becomes more powerful by formally engaging with influential decision makers but is less able to challenge their power.
Negotiation	Strong engagement occurs within coalitions and exists when there is political polarization (disengagement) on controversial issues, an ongoing process.	Researchers are powerful actors in their own right, adding the authority of science to particular political positions; autonomy from decision makers is often preferred.
Learning	Strong engagement occurs within groups that may emerge or be facilitated by researchers using specific methodologies, an ongoing process.	Researchers and practitioners both share learning experiences with equal power to implement them in their respective contexts.

Linking Knowledge and Action for Sustainable Development. Kerkhoff and Lebel, 2006.

According to research done on community-university partnerships, they “are based on the principle that both individuals from community settings and researchers can work together toward a common goal resulting in mutual benefits for all those involved” (Suarez-Balcazar et al., 2005). However, this begs the question of how to establish and fully utilize the possibility of a mutually beneficial partnership; the “building of trust is often facilitated when the community organization is the one approaching the university. Projects that begin in the community...are more likely to result in greater investment than projects that are initiated by researchers” (Suarez-Balcazar et al., 2005). According to Professor Montz, everyone benefits with community-university partnerships, but they are currently “under-utilized, and both sides are at fault” (Montz Interview). As mentioned nearly every week of the author’s experience in the Catalysts for Intellectual Capital Leadership Institute, a class administered by CIC2020, communication is a two way street, and both the community and university need to expand their efforts. Solving a problem may be as simple as having the university look at it through an academic lens:

Typically, faculty and students provide access to resources, knowledge of research literature, research methods, and access to technology. Community partners bring knowledge of the specific area or population of service, experiential knowledge of previous attempts at addressing the issues involved, as well as the cultural and contextual characteristics of the setting and community with which they work. (Suarez-Balcazar et al., 2005)

Having community leaders establish a positive relationship with the university, in the pursuit of a mutual benefit (i.e. the creation of knowledge) is a desirable goal for all those involved. Especially considering the high academic standing of Binghamton University and its national

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profile, the Greater Binghamton Region has the potential to reap many rewards from these academic partnerships, which will only further BU's standing as a Premier Public University.

IV. Best Practices: CIWS and the Geography Department

As previously mentioned, Geography professor Burrell Montz, with a cohort of undergraduate and graduate students, put together a seventy-nine page report entitled, "Vulnerability and Response to Flooding: A Case Study of Record Flooding in Broome County, New York" (Montz, 2007). By analyzing the antecedent conditions and putting the flood into historical perspective, the report demonstrates the 'perfect storm' that was the June 2006 flood; "June was a record setting month in terms of precipitation...Indeed, June, 2006 rainfall was 75% above normal in Broome County as was the case throughout the entire watershed" (Montz, 2007). Professor Montz and her class performed this research "using aerial photographs of the flood extent in a Geographic Information System (GIS) [that includes] parcel data for most of the County" (Montz, 2007). The report also discusses the "relationship between flooded areas and high percentages of non-whites," of which "there is little spatial relationship" (Montz, 2007). Similarly, the report discusses the percentages of renters and elderly in the flooded areas. This data is useful for the flooded regions because "those areas with highly vulnerable populations can be identified and appropriate provisions made in emergency operations and response" (Montz, 2007).

During times of overwhelming distress, knowing where to focus the municipalities' resources can help save lives through better resource allocation. This report also discusses the economic losses to the county, the rate of flood insurance protection, and mitigation recommendations. The latter providing key information regarding the current amount of flood prevention measures; "additional infrastructure, such as higher flood walls or levees, will result in increased flooding downstream....Further, there have been calls for dredging the river...[which] would likely be ineffective in providing sufficient storage capacity for the magnitude of [the June 2006] flood" (Montz, 2007). However, disseminating information more specifically, because flooding is particularly localized, and increasing "public awareness...to combat [floodplain] misperceptions" (Montz, 2007) could help those who live within the floodplain. This is especially true regarding flood insurance. According to Professor Montz's report, "Every effort needs to be made to promote the provisions of floodplain land use management in order to reduce losses....Communities should consider buyouts over the long term, as funds become available, to complement those resulting from the 2005 and 2006 floods. Such a program will reduce individual losses and will also serve to reduce government costs" (Montz, 2007). To reiterate, Binghamton undergraduate and graduate students enrolled in Professor Montz's class to perform this research and write the report. In the author's opinion, the report contains a lot of valuable and practical information that local officials could use. Best of all, this information is courtesy of university students' desire for experiential learning, which means that the community can benefit at no cost to taxpayers.

According to Mark Reisinger, Associate Professor of Geography & Director of Undergraduate Studies, "collaborative partnerships are a tremendous opportunity for the community, university, and students. Everybody gains from working together; we have the skills to teach the students and there is no better way to do so than a real world situation" (Reisinger Interview). The Greater Binghamton Region could further make use of the university's Geography Department in the increasingly important area of urban planning and

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research. "Action for sustainable development is stretched over the entire range of geographic scales, from global regimes and conventions to regional, national...and local, on-the-ground decision making" (Kerkhoff and Lebel, 2006). Professor Reisinger discussed many of the potential benefits of utilizing experiential learning when interviewed about his research performed outside of the classroom. A research example stemming from his guidance that best illustrates this point is Natalie Carmeli's "Developing a Green Map System for the City of Binghamton," which is her capstone project. Natalie was a member of the Catalysts for Intellectual Capital Leadership Institute in 2008 and has since continued to further CIC2020's goal of retaining 20% of Binghamton graduates by the year 2020. Natalie's major, Environmental Psychology, or the study of "human behavior and well-being in relation to the large-scale sociophysical environment" (Carmeli, 2008), is one that she created based on her own interests. As she states in her research:

The mission of the Green Map System is to promote sustainability and community participation in the local natural and built environment. Green Map System offers adaptable tools and a global iconography for making environmental and cultural maps, empowering local project leaders to give familiar places a fresh perspective....The Binghamton Green Map Project will chart the natural, cultural, and green living sites in our area. (Carmeli, 2008)

Information such as Natalie's Green Map provides critical analysis of the region to better understand the human impact on the environment. The implications of an interactive Green Map are many such as having the current state of Binghamton's infrastructure mapped out, encouraging sustainable development, and increasing the environmental awareness of city residents. As was the case with Professor Montz's research, this information is available because, as Natalie puts it, "I hope to both serve the community and further my own studies. I will have the unique opportunity to extend what I have learned in the classroom and apply it to the local community" (Carmeli, 2008).

V. Recommendations for Increasing Knowledge Entrepreneurship

As mentioned above, when the community reaches out the university, instead of the other way around, a respectful and trusting relationship is better realized. In addition, having community leaders establish the partnership allows them to target the issues most pertinent in developing a more vibrant region. However, respecting the boundaries of academia (especially the demands of university research professors) necessitates a careful balancing act. In the words of one professor, "be willing to ask the university for help in studying a problem. We have the knowledge and resources – plus, we want our students studying real-world situations – but also be sensitive to our demands as professors." In general, though, the professors that the author interviewed were more than welcome to assisting the Greater Binghamton Region by developing experiential learning opportunities for their students. To quote Professor Reisinger, "university-community partnerships can absolutely increase [from their current levels]. Identifying problems and issues within the community and having students solve them is a great opportunity" (Personal Interview). He even mentioned the possibility of having a designated person to be the link that connects the university and community together. While having a position created for this purpose may be a little much, especially with the current economic climate, simply reaching out and drawing upon the research capabilities at Binghamton University is a great first step in solving some community issues.

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Considering the changing economic model, from paternalistic industries providing many jobs to a more knowledge-based smaller business model, developing a sustainable community is crucial for a vibrant and successful future. This paper focused exclusively on Binghamton University's Geography Department because of its many offerings, especially relating to their GIS capabilities and their growing interest in urban planning. It is important to note that many other university departments are striving to provide the best education possible. Thus, when recognizing a problem area within the Greater Binghamton Region, community leaders should recognize and approach multiple departments within the university. By studying a problem from multiple angles, the community gets better information from the university, which allows for multidisciplinary study within the university, which also allows students of different backgrounds and expertise to collaborate with one another. Community-university partnerships are a win-win-win solution to addressing problems within the Greater Binghamton Region and, best of all, they come at an affordable price regardless of the economic climate.

VI. Acknowledgements

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