

DISSERTATION

DRIVING ECONOMIC DEVELOPMENT:
HOW COMMUNITY COLLEGES AND HIGH-TECH
BUSINESSES WORK TOGETHER

Submitted by

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In partial fulfillment of the requirements for

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ABSTRACT OF DISSERTATION

DRIVING ECONOMIC DEVELOPMENT: HOW COMMUNITY COLLEGES AND HIGH-TECH BUSINESSES WORK TOGETHER

This qualitative study examined three exemplary cases of community college and high-tech business partnerships. These cases were chosen through expert nomination. Key leaders from the colleges and their partner businesses were interviewed. The overall business environment of each location was surveyed.

Each case had unique situations and partnership variables. The stakeholders explained their work and helped pinpoint the critical success factors or core themes that emerged for each of the colleges and their partnerships.

The themes from each of the cases became integrated into three core themes or critical success factors. One, Eyeing the Prize was identified and revolved around vision and win-win. Two, People Power was explained and involved the concepts of leadership, teamwork, communication and integrity. Finally, Iron Will was discussed and incorporated aggressive attitude, resources, and good luck.

This study helps community college and business leaders understand what makes successful partnerships. It identifies critical success factors that can be considered and applied elsewhere. These partnerships provided positive results that drove these community colleges and high-tech businesses to success in the chaotic economy of the early 21st Century.

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CHAPTER ONE: INTRODUCTION

The famous racecar driver Mario Andretti once said: “If things seem under control, you’re just not going fast enough” (Peters, 1997, p. 493). Today, the American economy often seems to resemble an out-of-control racecar. The Internet and global competition have helped quicken the pace of business. Countless companies are altering their business plans to keep ahead of this worldwide *Gran Prix*. Attentive driving and constant steering are critical success factors in the 21st Century. Nothing goes slow.

One of the most important drivers in economic growth is the workforce. American companies struggle to recruit and retain the best employees in the world. The recent influx of skilled foreign workers from places such as India and China has marked this trend. Without knowledgeable and experienced employees, no company can sustain long-term success. When qualified human resources are in place, however, companies can best achieve their goals and mission. This process supports the entire business supply chain from suppliers to distributors. The cascading effects of one successful organization are enormous. It is the synergy of many business enterprises that builds a constructive macroeconomic climate. Without question, the vitality of California’s Silicon Valley in the late 1990s was rooted in an abundance of available and energized capital, including intellectual and human capital – the workforce.

Problem Statement

This study explored how community colleges have worked with high-tech businesses in creating partnerships. Specifically, this study identified the core themes in

the successful partnerships between community colleges and high-tech companies. This study emphasizes the positive and thus recommendatory ingredients or core themes in three exemplary partnerships between community colleges and high-tech businesses. A case study typology was used to elucidate these real-world situations (Creswell, 1994, 1998).

The salient question for this research was: where does the rubber meet the road in successful partnerships between community colleges and high-tech businesses? In other words, what is involved in the working relationships between community colleges and high-tech businesses? Some community colleges are more effectual than others in aligning with business and industry. Their partnership successes promote more favorable conditions for the students, the college, the companies, and even the community.

Although hundreds or thousands of variables mark every case, what information can be gathered about the critical success factors? What ingredients are involved in creating win-win partnerships between higher education and business? Clearly, there is a need for this information. With a recipe of essential ingredients, community colleges across the nation could initiate or improve their relationships with business and industry. In particular, how do community colleges work with new economy or high technology businesses?

Foundations of Community Colleges

The Greek philosopher Plato once said: “The direction in which education starts a man will determine his future life” (Forbes, 1989, p. 212). This recognition on the individual level is also applicable to the systemic maturation of a nation. Numerous studies and reports have shown how education helps determine economic vitality. The

success of the American Experience likely has some roots in its expansive public education system. Regarding this study, the growth of community colleges in America is noteworthy. Many of the present philosophies and ideologies regarding higher education flow into and through the community college as an institution. Furthermore, a historical and philosophical backdrop allows one to prognosticate with regard to the future of community colleges in the United States. This comprehension also builds the foundation for how community colleges are cooperating with businesses.

It is worthwhile to begin this brief history with some classic European models and theories. Although valued and idealized, the concept of education was not formalized or standardized for hundreds of years in the Western Hemisphere. In medieval Europe, much of the education related to religious training. The absence of widespread information precluded the general population from extensive learning. This reality was probably preferred by many in the upper socioeconomic classes, especially the nobility throughout Europe. This attitude formed the basis of the elitist education model. This model limited educational offerings to select students. These students were generally wealthy and had access to tutors, exclusive information, and knowledge about theology and the classics. The elitist model was framed by an emphasis on ascription (Cohen & Brawer, 1994). Genealogy and familial lineage were the most material factors in determining career choices and economic status. This paradigm allowed for the creation of leading European institutions of higher education such as the University of Paris (Sorbonne), Oxford, and the University of Salerno (Cohen & Brawer, 1994).

The Enlightenment of the 18th Century helped spark the beginning of higher education in the United States. Renowned European thinkers such as Bacon, Descartes,

Kant, Locke, Smith and Voltaire produced new and innovative political, economic, and social theories. They sparked a renewed interest in learning and personal growth. Access to knowledge spread as books and printed materials became more common.

The combined intellectual efforts and higher education models from Europe influenced early American leaders, including Benjamin Franklin and Thomas Jefferson. Jefferson, who founded the University of Virginia in the early 19th Century, once wrote: “If the condition of man is to be progressively ameliorated, as we fondly hope and believe, education is to be the chief instrument in effecting it” (Kaminski, 1994, p. 27). Indeed, the early American paradigm of higher education challenged the continental ideas of ascription and elitism. The American ideal focused on the equal worth of the individual without an emphasis on inherited wealth. This equality (with some obvious exceptions) allowed for an educational philosophy based on achievement and merit. The American model contained an acceptance that a college education would mean different things to different students (Gaff, Ratcliff & Associates, 1997, p. 55).

As the American experience endured, the social and political role of education evolved. The egalitarian proponents of education had an expanding faith in the power of education to increase economic opportunity, earnings, and the social position of the masses (Davies, 1996). Rhoads and Valadez (1996) wrote: “It is part of American ideology that students, regardless of race, gender, or social class, can study hard and rise as far as their ambitions will take them” (p. 15). Leaning back toward their European heritage, the more traditional colleges and universities in America did not fully embrace this vision. The philosophical stage was set for a new higher education institution.

In 1901, William Rainey Harper, the President of the University of Chicago, helped establish Joliet Junior College, the first public junior college in the United States. The Harper construct included the following objectives: “To support the local economy and to provide means to semiprofessional careers” (Gaff et al., p. 46). Not long after this beginning in Illinois, the junior college movement spread across the United States. The Great Depression of the 1930s strengthened the desire for new skills and applied knowledge. The end of World War II and the GI Bill tipped an unprecedented surge of demand for higher education throughout the United States. The financial and social realities of the War had blanketed the widespread desires for growth and opportunity. The early 1950s witnessed a flood of new developments in the American economy. From new cars to washing machines in suburban homes, the American Dream seemed to be closer than ever for many people (Carson, 1986, p. 190). Without question, a college education was a major component in the realization of this Dream.

The post-War Truman Commission Report was a considerable turning point in the progression of community colleges during this period. According to Judith Eaton, it emphasized the need for vocational and community-based education and reaffirmed the Harper construct (Baker, 1994, p. 29). The report also advanced the democratization of higher education. A number of federal and state support initiatives were passed as a result of this report. These efforts foreshadowed the growth of the community college in the coming decades.

The technical training and general education needs of the American public were addressed by community colleges during the post-World War II period. In addition to training, community colleges granted credits that transferred to four-year colleges and

universities. This increased mission, including training and general education, fanned the flames of higher education demands across the nation. From 1950 to the late 1960s, the number of American community colleges nearly doubled to 1,100. Furthermore, in the 1960s, on average, one new community college opened every week in the United States (Davies, 1996). Many of the customers for these new community colleges were first generation college students. The percentages of high school graduates deciding to enter college increased dramatically during this period.

The 1970s, in some ways, represented the hangover from the growth of the 1960s. The United States left Vietnam and reduced much of its military spending on “guns.” The upward vision of President John F. Kennedy and the ambitious social programs, or “butter,” of President Lyndon B. Johnson were forgotten by many. The rapid growth of American commerce and business also slowed. An energy crisis and new fiscal realities further hampered the nation’s progress. These changes directly affected higher education. The community college expansion of the previous decade had provided unrivaled access to classes and training. The shifting economics and demographics of the 1970s forced these community colleges to broaden their scope and diversify their roles according to James Ratcliff (Baker, 1994, p. 13). Community education functions such as General Education Diploma (GED) and English as a Second Language (ESL) were offered by community colleges. Specific company and workforce training programs were also formed and became survival mechanisms for the community colleges.

In the 1980s and 1990s, community colleges continued to struggle in an effort to serve their growing base of stakeholders with fewer resources. Still, the fundamental emphasis on the community and a dedication to progress pushed community colleges

forward into the 21st Century. The present course is somewhat new and demanding for many community colleges around the nation. The competitive global environment challenges the historical precedents of modern community colleges.

Foundations of Modern Business

Perhaps 100 or even 50 years ago, a company was largely valued on the worth of its fixed or physical assets. These included the value of its plant, surrounding real estate, and its complex and expensive machinery. Physical infrastructure defined industrial power. The image of an automobile or steel company comes to mind. A select group of wealthy owners or shareholders in the corporation managed the operations. The worth of the employees or workers was less consequential than the physical assets. The faceless employees simply kept the machines working and the assembly lines running. They completed routine and menial tasks such as bolting wheels on automobiles as they rolled by on the production line. It was this form of industrial capitalism that encouraged the radical theories of Karl Marx and others in the late 19th Century. Marx referred to this situation as the “alienation of labor” (Stewart, 1997, 105).

In the 21st Century, however, the entire economy has shifted gears. Former geographic centers of industrial wealth have sputtered. Places like Pittsburgh, Cleveland, and Pueblo have become less relevant in the modern economy. Foreign steel and imported automobiles changed the business landscape. The introduction of automation and computer technology further impacted the nature of business. The rusty steel mills and blackened smokestacks of yesterday have been replaced by the corporate business parks of today. These new commercial developments often contain nothing more than countless cubicles, meeting rooms, a cafeteria, and perhaps a fitness facility. The

obtrusively loud noises of industrial machinery have been replaced with the precise hum of elaborate electronic office equipment.

Today, one of the world's most heralded companies, Microsoft, is a perfect case study in the changing metrics of corporate valuation. The chief asset of Microsoft is software. By definition, software is a soft and intangible asset. A combination of billions of bytes and millions of codes is created by software engineers and programmers. Their collective work is then combined on a computer. After testing, a master file is created. This master is then copied millions of times onto compact discs (CDs) or digital video disks (DVDs) and sold to customers around the world. The true asset at Microsoft is the people who create and promote the software code. But, unlike a machine, the software engineers are not the property of Microsoft. They go home at night carrying the value of the world's largest software company in their heads.

It is not surprising then to see that Microsoft has awarded its employees an ownership stake in the company, through stock and stock options. According to the popular press, this produced over 1,000 millionaires in the metropolitan Seattle area during the 1990s. Microsoft is not alone. Many employees are now partial owners of the companies they work for. Their paramount asset, and consequently their company's, is their brainpower. To paraphrase what Steve Jobs, the legendary cofounder of Apple Computer, said at a conference in 1999, it doesn't matter what you wear. It doesn't matter how old you are. What matters is how smart you are. In a journal article on education and economic development, Young (1997) wrote: "Labor is the key resource in the United States on which future competitive advantage will be based -- not undifferentiated labor (brawn), but skilled labor (brains)" (p. 77).

Securing and growing the human capital within any organization is vital to success in the modern economy. It does not take a billion-dollar plant or football field-sized machinery to make an impact in this New World. As venture capitalists have discovered, one or two people, perhaps in a college dorm with a computer, can set the planet on fire. The utilization of this human capital has two primary outlets. One, the company can access more of the knowledge and intellectual capital that its employees already possess. This relates to getting better information out in the open. This is largely an internal communication and management challenge. Two, the company can help its employees to grow and amplify their knowledge. This is where education and learning merge into the modern economic freeway. The management expert Peter Drucker once wrote, “in the knowledge society the probable assumption for organizations - and certainly the assumption on which they have to conduct their affairs - is that they need knowledge workers far more than knowledge workers need them” (Stewart, 1997, p. 110).

Skilled and educated employees power the Information Age. Unfortunately, these people are frequently a scarce commodity. Justus (2000) wrote: “Employers in telecommunications, software applications, information systems, data communications and computer programming sectors search desperately on a global scale to recruit adequate number of qualified employees” (p. 1). So, how can society produce more skilled and knowledgeable workers? The probable answer includes community colleges. The community college can play a pivotal part in leading partnerships with business and industry to address this human resource and intellectual capital shortage. Larry Cline and Jim Kepner signaled: “The bell at the door of the two-year college is ringing and the

shadows crossing the threshold are those of industry voicing their needs; and, they are demanding action” (1998, p. 3).

A Brief Primer on Community College and Business Partnerships

In its magazine and television advertisements in the 1990s, Chase Bank in New York developed the advertising slogan, “The Right Relationship Is Everything.” Beyond the promotional appeal, this theme appears to be prevalent in modern business and leadership literature. In this world of over six billion people, it would seem that no leader or organization can be an island. The management philosopher, Margaret Wheatley (1999) opined: “Nothing exists independent of its relationships” (p. 69). Furthermore, business expert, Warren Bennis (1994) included relationships as one of his basic ingredients for success (p. xiv). In concluding his book, *On Becoming A Leader*, he emphasized ten factors for, “coping with change, forging a new future, and creating learning organizations” (p. 192). At least six of these ten leadership factors dealt with relationships, alliances and partnerships (p. 201).

In the ideal partnership, all of the stakeholders would be involved in a democratic system of governance. Everyone would share his or her opinions to help form the best possible solutions. This process would validate the vision of the partnership. This governing process would happen through shared values, vision and decision-making. Peter Block (1993) argued: “Discovering how to govern, to insure the well-being and survival of our organizations, is how we create meaning in what we do” (p. xxii). In this participatory model, individuals would not be restricted by their positions and roles. Everyone would work to improve the organization. Regarding community colleges in particular, Richard Alfred highlighted Cohen and March (1974) described a theory of

“organized anarchy,” in which goals are ambiguous and generous resources allow departments to go in different directions (Baker, 1994, p. 246). This freedom would extend from the administration to the faculty and beyond. Richard Alfred wrote: “Tomorrow’s faculty members will do more than teach. They will forecast market conditions, plan and evaluate curricula, conduct research on student outcomes, build marketing and recruitment plans, lobby private-sector markets for resources, and perform other management functions” (Baker, 1994, p. 248). Cohen and Brawer (1994) summarized: “To facilitate an orderly college, instructional administrators must work collegially” (p. 11).

Even the partial adoption of this collegial model would affect the entire community college or business in its partnerships. Margaret Wheatley professed: “So many of us hunger to discover who we might become together” (1999, p. 63). The collegial leadership concept is particularly relevant with community colleges and high-tech businesses. The community college can exemplify a positive leadership model and thereby strengthen itself and its stakeholders, including the community. Wheatley added: “our range of creative expression increases as we join with others” (p. 18).

Paraphrasing Jeff Bezos, the CEO and founder of Amazon.com, the only sure way to fail is to stop making bold innovations. The time has come for community colleges to make some bold innovations. The modern American economy is now based on precision-tuned productivity, rapid acceleration and intense rivalries. Community colleges must adjust to the realities of the global market (Baker, 1992, p. 12). How community colleges form partnerships with businesses could determine their fate. The question of whether community colleges can survive, or perhaps more importantly, thrive, is yet unanswered.

Regarding this competition and race-like atmosphere, Robert Zemsky and Gregory Wegner wrote: “As this commodity market takes shape and expands, traditional colleges and universities will have to demonstrate anew that they are best qualified to define the substance, standards, and processes of higher education” (Callan & Finney, 1997, p. 63). The community college, as an institution, needs to qualify for the race. Community colleges have a strong advantage in this race. The current mission of comprehensive community colleges in America fits the emphasis on democratic education and training opportunities. As this literature suggests, the education of the “whole student” and the entire community is a necessary component in economic growth.

Well-tuned community college and high-tech business partnerships would seem to benefit everyone, including four noteworthy stakeholder groups. One, the student gains access to new knowledge, skills and technologies. For example, a student might work on cutting-edge software or equipment that a partner company has loaned the college. This increases his or her expertise. This experience likely improves the employment opportunities for the student. The college’s connection with the partner company also supports the job outlook for the student. Two, the college receives assistance from the companies. This assistance may include everything from curriculum planning to loaned equipment to philanthropic contributions. The college also strengthens its job placement record through its partnerships with area companies. Three, the company develops the skills of future employees and builds lasting relationships with the college and the community. Four, the larger community or region advances from these collaborations. With highly skilled residents and new jobs, the economic vitality of the area is lifted.

This community development then leads to a more favorable climate for the college and all its stakeholders. It is a cyclical process.

The future of the American economy rests with current and upcoming generations of Americans and their organizations, including community colleges and high-tech businesses. The technological revolution that began in the late 20th Century has made the improvement of the American workforce more pressing than ever. The community college can help bridge the needs of commerce with the hopes and dreams of individual Americans and their families. This partnership process speaks its own importance.

Research Questions

As social scientists have shown, the broad concept of a partnership is sometimes difficult to explain. What does a successful partnership look like? What does it feel like? How do its benefits affect the stakeholders and the community at large? Fortunately, the case study approach provides for targeted research questions related to the specific examples that are explored in this study. This approach is emergent. The larger question of what core themes or critical success factors are involved in successful partnerships between community colleges and high-tech businesses helped steer the research throughout the study. The more specific trigger questions included the following:

1. How does the partnership process begin?
2. Who or what drives your partnership efforts?
3. What are the goals for your partnerships?

Definitions

For the purpose of this study, the following definitions apply. First, there is economic development. The broad concept of economic development is somewhat

difficult to adequately narrow. The definitions and parameters vary depending on the situation, the involved parties, and the purpose of the evaluation. The reviewed literature in this area provides a road map for how this concept is utilized in the context of this study. Second, the participant institutions (the community colleges and high-tech businesses) are also defined below. These definitions correspond to common understandings and the examples and in this study.

Economic development is defined as: “the process of creating wealth through the mobilization of human, financial, capital, physical, and natural resources to generate marketable goods and services” (Young, 1997, p. 77). Economic development is clearly related to human resources including workforce training and improvement. This component directly leads to the proposed purpose of this study because economic development is often a causal factor in the creation of community college and high-tech business partnerships. Economic development is also one of the results to an effective collaboration between community colleges and the high-tech businesses. As economists have shown, economic development is readily influenced by the presence of quality education, from kindergarten to graduate school (Rosenfeld, 1998).

Community colleges are defined as: public, post-secondary institutions, which offer training and classes leading to a certificate or two-year degree (as cited in Baker, 1994, p. 20). The community college is the highlighted institution of higher education in this study.

High-tech businesses are defined by this researcher as: private (non-government owned) organizations engaged in specific commercial activities with the intent of earning an economic profit for their shareholders. For this study, these specific commercial

activities include: electronics, information technology and services, telecommunications, and software.

Significance of the Study

In this contemporary and often chaotic economy it is easy to lose sight of the road and the gravity of the destination. Stephen Covey has written that Americans are sometimes caught in the “thick of thin things” (1989, p. 42). This study addresses a “thick” issue. Economic development and its associated employment opportunities are imperative for communities and their residents throughout the United States. Education and work help define the individual, the community and the nation as a whole. The combination of higher education and business is dynamic. Gianini (1997) wrote, “External education and economic forces are moving all educators toward productive and purposeful partnerships” (p. 14). The opportunity to study how these partnerships can successfully develop is worthwhile because the obtained information may help other colleges and businesses in their work.

Having the core themes or critical success factors for favorable and productive partnerships is valuable. It is a way to understand how change can impact the college, businesses and the community. The words of Edgar Schein, a professor of management at MIT, are notable. He wrote: “Although the nature of organizations will undoubtedly change in the future, the challenges of creating, building, maintaining and changing (evolving) organizations to new forms will remain the same” (as cited in Beckhard, Goldsmith & Hesselbein, 1996). For community colleges the challenges have arrived. The race to create, build and maintain their colleges and partnerships in a fast moving world is on.

Researcher's Perspective

I am interested in this subject area for many reasons. Like the partnerships themselves, my background is a combination of education and business. On a daily basis, I work with companies around the world as a new product development consultant. I have witnessed their struggles and triumphs with new products, factories, divisions, and organizations. I have come to realize how meaningful people are to every commercial enterprise. In addition to my professional activities, I have been a student most of my life and teacher for part of it. I greatly appreciate how learning, knowledge, and training help make a difference well beyond the classroom. Consequently, this research is about how these businesses and community colleges can work together. I believe that an enormous amount of positive change and opportunity is possible within this symbiotic or perhaps even synergistic combination. Perhaps my favorite management writer, Tom Peters, said it best in his address to the *Leadership 2000* Convention: "Community colleges are America's primary hope in the race to remain competitive in the global economy" (as cited in Young, 1997, p. 77).

It should also be mentioned that I entered this study with some philosophical biases and pragmatic preferences. I am a staunch supporter of innovation and entrepreneurship in the modern economy. I would contend that formal rules, regulations and policies often hamper the effectiveness of organizations in the private and public sectors. Furthermore, it seems to me that historical precedents and operating procedures can become limiting factors in the creativity and growth of organizations. I am a proponent of "thinking outside the box." Without standardized thinking, so much of the

world becomes available for experimentation and discovery. Perhaps this entrepreneurial ideology has ignited my interest in how community colleges and high-tech businesses can work together. This area is ready for new ideas and thoughtful study.

CHAPTER TWO: REVIEW OF LITERATURE

This study partially relies on the literature and research that exist in the published world. This broad array of data and information can be studied and then organized in diverse ways. For the purposes of this study, the following three sections have been defined: Economic Development and Workforce Training; Higher Education and Business Relationships; and. Partnership Paradigms. Each of the three sections includes a short description, synthesis and analysis of the relevant literature.

Economic Development and Workforce Training

In this section, the general concept of economic development and how it more specifically relates to workforce training is reviewed. A conceptual framework of economic development is helpful. The American Economic Development Council defined economic development as: “the process of creating wealth through the mobilization of human, financial, capital, physical, and natural resources to generate marketable goods and services” (Young, 1997, p. 77). Much of the discussion in this study centers on the growth and improvement of human resources and intellectual capital. These pieces form the workforce training concept.

Workforce training is an integral piece of economic development. In fact, some authors have defined it as the most important part of economic development. The majority of the publications discussed and referenced here relate to the human capital side of economic development. The improvement of this human capital naturally involves

education or training. The beneficial consequences of a skilled and knowledgeable workforce assist the larger community and region in its economic development and growth efforts. In this way, workforce training is tightly woven into the broader fabric of economic or community development. A related concept, community development has been defined as: “the process of increasing every citizen’s desire and ability to meet their own needs, the needs of the community and the needs of the larger environments” (Schwinn, 2000, p. 27). This immediate connection between workforce training, community development, and economic development underlines the salience of this study. All three concepts directly relate to how community colleges form partnerships with high-tech businesses. Many of the surveyed articles, detailed below, describe how economic development and workforce training are connected to higher education.

This section of the literature review includes three divisions. One, the general theories surrounding economic development and workforce training are surveyed. This includes some discussion on whether higher education is ready for its increasing presence in economic development and workforce training. Two, an international perspective is discussed regarding training and education. The economic development and workforce training ideas of Europe and Asia are briefly considered. Three, a number of specific economic development and workforce training cases across the nation are described. These examples help bring this section together and emphasize the practical issues and considerations involved in economic development and workforce training.

Economic Development and Workforce Training – General Theory

Moran and Ghoshal (1999) demonstrated how economic resources, including labor, can be allocated by the company or other organizations (p. 392). Increased productivity and labor participation creates, “economic progress” (p. 393). This process, the pursuit of resource value by the organization, sets the stage for economic development. The authors wrote, “new combinations (of resources), essentially create new services; in the process, they enhance the potential productivity of any given set of resources” (p. 392). The key element in this progress is the workforce and the allocation of labor.

Freeland, Marini, and Weighart (1998) continued in an explanation of how workforce resources, such as higher education, can encourage economic development. Return on investment was a prominent consideration in their analysis of relationships. The investments required for business-school relationships were significant. The authors wrote, “given that the cost of a higher education represents a significant investment, these customers of education understandably are pushing to determine what institution will give them an optimal return on this investment” (p. 19). For the students, the return on investment is usually a high paying job or career. On a large scale, the creation and maintenance of these jobs empowers economic development for the community or region.

Russell and Flynn (2000) praised the benefits of partnerships in higher education and workforce development. The relevant reasons for collaboration cited in the article included: institutional mission, response to external pressures, and the execution of helpful practices and programs (p. 196). The primary motivation behind many

partnership collaborations is the larger role and mission of the institution. The authors argued: “Being responsive to external pressures is a second reason to pursue collaboration” (p. 197). The identified success factors in a good collaboration included: sustainability, positive perceptions, positive outcomes, good communication, and achievement of purpose. The writers summarized their analysis by stating: “The act of building relationships, creating trust, and working together toward mutually held goals almost becomes an end in and of itself” (p. 203).

Vinten (2000) reviewed the history of workforce training and the collaboration of business and education. According to the author, the demands of employers regarding training and knowledge are so broad and far-reaching that it has become a challenge for higher education institutions to respond. Even qualifications, some previously deemed postgraduate, are becoming entry-level benchmarks for many companies. These corporations cannot provide for all of the training needs of their employees. The local college or university, however, can help fill this need. Vinten wrote: “Developmental partnerships with higher education can bridge the gap between the cost of external training and the narrow scope of internal training resources” (p. 189). This collaboration directly impacts workforce skills and helps support the larger economic region.

Ravid and Handler (2001) inspected many of the issues surrounding these partnerships and found that while schools are unique when compared to businesses, there are some undeniable similarities. One key commonality was money. There is the need for “anticipating and articulating relationship dynamics even after funding disappears” (p. 61). This can be a real challenge because the money can be a common and simple denominator in the relationship. The authors also discussed marriage. They wrote: “the

strategies for collaborating with colleagues often parallel the strategies necessary to maintain successful personal relationships” (p. 43).

Perreault (2000) continued the discussion of schools and their partnerships by examining school partnerships with business and industry. Perreault argued, “quality partnerships are the result of careful planning” (p. 31). This planning included the objectives, meetings, communication and long-term commitment of the parties. Much of the partnership work also related to maintenance. Perreault established that schools need to ensure that their business partner understands the ongoing status of the relationship. The author further asserted that schools often initiate the partnerships with local businesses so it is perhaps more incumbent upon them to guard the success of the partnership. The desired culmination of the school’s partnership was summarized as the combination of “strong commitment, mutual set of goals, detailed plans and a review of results” (p. 32).

Robinson and Daigle (1999) asked the question of whether higher education leadership is ready for the challenges of economic development. Casting some doubt, the authors surveyed the contrasting cultures of business and academia. The authors wrote: “The private sector emphasizes maximization of profits through economic efficiencies and the promotion of growth” (p. 5). On the contrary, the authors asserted: “The public sector has a wider range of responsibilities that cannot easily be measured in terms of economic efficiency or profit, such as social justice, equality of opportunity, public education, and income security” (p. 5). For example, the authors summarized a proposed telecommunications partnership in California. It failed in part because of the cultural differences between the public and private sectors. Although necessary to each other’s

success in economic development: “the public sector is subjected to more controls: accountability to taxpayers, protection of personnel, and procedures in public procurement” (p. 5). These accountability and security issues complicate the partnerships with private sector organizations. This becomes an issue that higher education leaders must consider when forming workforce training relationships.

Newman (2000) also discussed workforce training and development. The author wrote about how higher education’s soul is in potential danger with an emphasis on economic development and business partnerships. The author reviewed the traditional benefits of higher education including socialization, mental growth, and economic mobility (p. 17). The article posited that these benefits could be endangered by an overwhelming focus on business models in higher education. Furthermore, the author proposed that the larger needs of society must be considered as well as the needs of industry. Comparing the mission statements of Harvard University and the University of Phoenix, Newman found that Harvard University maintains a traditional four-year college mission with a liberal bent. The University of Phoenix is much more contemporary and pragmatic in its mission and its strategies for growth. Perhaps this stems from the fact that the University of Phoenix is a for-profit education company geared toward working adults across the nation, whereas Harvard is generally considered a classical university for traditional students. Newman wrote: “But today, as higher education becomes more closely linked to for-profit activities and market forces, its special status is endangered” (p. 17). This philosophical dilemma is one that college leaders must consider when forming partnerships and developing the workforce.

Economic development and workforce training are quite naturally linked to higher education. The labor factor is perhaps the fundamental resource in the modern economy. This necessitates interaction between the public and private sectors. How can the needs of the workforce be mated to the needs of the community at large? What concerns should be addressed? The following sections will provide some international perspective and specific cases.

Economic Development and Workforce Training – International Perspective

Swaffield (1999) revealed how workforce training is becoming more prominent in the global economy by identifying the \$60 Billion dollars worth of the training opportunities that exist in the United States alone (p. 89). The author wrote, “students everywhere are receiving a ‘more practical, less theoretical’ education that will allow them to meet the shifting demands of the highly technical workplace of the 21st Century” (p. 83). Swaffield discussed the Goodyear Company and quoted, Donald D. Harper, Vice President of Human Resources (HR): “We probably teach a lot of theory, but what about actual application and practice? We need more partnerships and more joint projects” (as cited in Swaffield, 1999, p. 84). These joint projects could spark additional opportunities and benefits for the companies and participating colleges. Finally, the author cited Dr. George Korey, president of the International Council for Innovation in Higher Education (ICIE) when he concluded: “The challenge the educators are facing now is to properly manage the future change that the 21st Century will bring, namely to make technology more responsive to our educational needs, so they will provide us also with solutions to our social problems” (p. 83).

The incorporation of training and workforce development is not new in parts of Europe. Jones (1997) summarized some European ideas about technological education for the workforce and the cooperation between schools and business. Although most universities in Europe spend less money and time on workforce training than their American counterparts, other institutions in these nations provide alternative training opportunities. The apprenticeship model has been a prominent part of this structure. The traditional European preference has emphasized a more liberal education at the university level. According to Jones, however, many in European higher education have begun to reconsider workforce training for students not choosing the established apprenticeship model for manual jobs. Jones also pointed out that some modern European organizations are now trying to increase specific technology training and education for their workers regardless of their educational background. They have realized the economic development consequences related to workforce training.

Stone (1991) showed how a nation's labor force, its demographics, and its educational system affect economic development. He described that for more than 100 years, U.S. economic prosperity hinged on its broad access to education. (p. 54). In the 1980s and 1990s, many emerging economies, especially in Asia, increased their education offerings and challenged more established economies. Although clearly distinct, the higher education and apprenticeship models of Germany and Japan evidenced skill levels and training opportunities that helped them retain large companies. In Germany, for example, approximately 60 percent of 16-18 year-olds have been involved in apprenticeship or vocational programs, which are sponsored by the government and private industry. Stone described that many secondary students spend

one day per week in school and the remainder of the week at the company. After completing their apprenticeship and schooling, these individuals often go to work for high quality German companies such as BMW and Siemens. According to Stone, the situation has not been all together different in Japan where testing and assessment has helped students find appropriate post-secondary school options. Stone cited Stephen Hamilton of Cornell University when he remarked: “At an age when large numbers of U.S. youths are floundering in low-skill, low-wage jobs that do nothing to increase their competence or self-confidence, their German and Japanese peers are embarking on responsible careers under the guidance of deeply committed adults” (p. 61).

Stone (1991) continued his examination of workforce development and international training. He wrote: “Today more than ever before, school is about working and work is about learning” (p. 47). Unfortunately in the U.S., the data suggest that many workers do not learn as well as many companies would prefer. Studies indicate that between 20 and 30 percent of U.S. workers lack the basic skills needed for their current job (p. 48). Many American employers will not hire people directly out of high school. The overall shortage of established corporate training outside of colleges in America has been problematic.

Johnstone (1994) also described the dismal state of knowledge among many Americans workers and highlighted some British higher education efforts in workforce training. According to the National Association of Manufacturers, American employers screen six job candidates to find one who is qualified (p. 171). The author suggested that innovative strategies, developed by colleges and businesses, could be helpful to workforce development. These relationships might promote new classes, programs and

collaborations. Across the Atlantic, British Open University was created to reach the majority of British students who were employed or seeking employment. Since its founding, over 150,000 students have been served with innovative distance education courses and programs. This newly minted university had over 100,000 graduates who worked for numerous companies throughout the United Kingdom (p. 179). Johnstone applauded these cases and wrote: "Higher education must become more productive" (p. 170). Further, he contended that the distinction between education and training is going away across the globe and "learning and earning will become virtually synonymous" (p. 168).

Shutte's case study (1999) demonstrated how the University of Twente in the Netherlands has succeeded. Through his research the author concluded that economic development centers on growing the knowledge and resources of the people who live and work in the community and region. Shutte elaborated: "The graduates of the university are the most important carriers of knowledge and technology from the university into society" (p. 62). He also stated that high-tech regions throughout the world often grow through related business efforts among graduates of their local institutions. Through its teaching and support, the university can effectively inculcate its own regional intellectual resources perhaps even providing for its future growth and economic development.

The improvement of the workforce is an international concern. Many companies are now demanding workers with higher skill levels. The European and Asian models historically included a more distinct division between traditional higher education and training. As colleges work more closely with business, the question shifts to: what is the goal of the student, the college and perhaps the nation? The economic development

outcome is perhaps more vital than pre-established models. The following section highlights some collaboration cases in the U.S.

Economic Development and Workforce Training – Partnership Paradigms

There was a great deal of information on partnerships and relationships in business. This information had a direct link to this study. Businesses have formed partnerships for centuries. These partnerships are generally formed by necessity. The question might be: how can the company get the contract or business that its leaders want? When the capabilities of this company are not sufficient, it will likely form a partnership to solve this problem. When executed these partnerships should benefit both parties. The types and varieties of partnerships in the global economy are as numerous as the number of businesses. The following survey discusses a few related articles.

Dent (2000) wrote: “efficient and healthy partnerships undergird the success of every business and organization in the world” (p. 23). The necessary attributes of partnering parties include: past/future orientation, comfort with change, win/win orientation, comfort with interdependence, ability to trust, and self-disclosure and feedback (p. 24). Finally, effective business partnerships were described as functioning systems with planning and intelligence and not just parts.

Macmillan, Money, and Downing (2000) also described how complex partnerships exist within a general business context. Understanding partnerships is complicated so the authors provided three divisions in their analysis of business relationships. These included the drivers of the relationships, the nature of the relationship, and the outcomes of the relationship (p. 70). These three divisions define the past, present, and future of the entire partnership. The authors wrote: “at the heart of

successful business relationships are to be found positive feelings of commitment to and trust of a business on the part of a stakeholder” (p. 71).

Kanter (1994) also developed some features attributable to successful business partnerships. Alliances and partnerships were discussed as key assets for companies around the world. Interestingly, she pointed out the American predilection for narrow relationships and an, “opportunistic view of partnerships” (Kanter, p. 99). In contrast, the Asian business culture has generally prescribed long-term relationships. In Japan, for example, some of these relationships have lasted generations and produced results for countless stakeholders. The European philosophy, according to Kanter, probably falls in between the American and Asian models. She wrote: “successful partnerships manage the relationship, not just the deal” (p. 97). Therefore, a good business partnership needs to have: benefits for the partners, collaboration (which produces new value), and freedom from control. This liberty and, at the same time, interconnectedness of the stakeholders makes the evolution of the partnership more interesting and potentially productive. A partnership involves two independent entities with a common goal(s).

In his discussion of leadership philosophy and its associated components, Block (1993) also underlined the prominence of partnerships in business. Five requirements for the creation of a “real partnership” were presented including: exchange of purpose, right to say no, joint accountability, absolute honesty, and no abdication (p. 30). The combination of these factors helps both organizations move forward toward their goals with less frustration. The emphasis for Block was on partner integrity and its positive repercussions.

On a more technical note, Hagedoorn (2002) discussed technology and market capabilities in his research-based explication of business partnerships. He defined a Strategic Technology Alliance as: “modes of inter-firm cooperation for which a combined innovative activity or an exchange of technology is at least part of an agreement” (p. 169). Hagedoorn showed that this cooperation is becoming more common due to international business pressures and competition. This partnership activity has been seen in the pharmaceutical and high-tech industries, for example. The technology or “innovative capability” was defined as: “the specific expertise and competence related to the development and introduction of new processes and products” (p. 170). Leading global companies are using alliances and partnerships, according to Hagedoorn, to maximize their capabilities in an efficient manner.

Elmuti and Kathawala (2001) expanded on the concept of strategic alliances when they pointed to the fact that Nike does not manufacture a single shoe and Gallo does not grow a single grape for its wine (p. 205). They simply outsource production to other suppliers in more cost effective locations. These examples proved how class-leading companies rely on partners for their critical production functions. The authors declared that alliances or partnerships were growing approximately 25 percent per year in the United States. The forms of these alliances were shaped by the reasons for partnering. These reasons included: growth, new markets, new technologies, better quality, lower cost and competitive advantage (p. 206). All of these general business goals can often be obtained more effectively through partnerships.

Commonly reported in the national and international business press, partnerships are also an essential piece of countless small businesses in America and elsewhere. The

legal partnership and its informal relative have been long present in small business circles. Jaffe (2002) wrote: “Building a solid business partnership, like creating a stable marriage, takes careful consideration and advance planning if it’s to succeed” (p. 2). This advanced planning, according to the author, should include a consideration of several steps. These steps included: looking before you leap, understanding who you are, creating a joint vision, formalizing agreements and communicating and resolving differences. Some of these considerations are particularly critical for new businesses according to the author. The book mentioned some of the horror stories of small businesses that have become entangled in bad partnerships. Nevertheless, partnerships have created enormous wealth, and according to the author are worth pursuing – even in small businesses.

Partnerships and businesses have existed together for centuries. Commercial activities and the associated profit potential have brought people together. Whether a strategic alliance of multi-national corporations or an agreement between two ship owners in a small town, partnerships dominate modern business. It is nearly impossible to imagine the economy without these various business partnerships.

Economic Development and Workforce Training – Cases & Applications

With a recognition of how important workforce training is to the entire economy, the question turns to solutions. The following cases from the literature present some ideas. *Educating the Workforce of the Future* (1994) questioned various business and education leaders about workforce training and its impact on economic development.

The experts pointed out the high costs of finding and training American workers. Motorola, for example, screens up to 15 applicants for every person it hires even though only seventh grade reading and ninth grade math skills are required (p. 50). Even after

this screening process, Motorola still spends \$250 per employee for additional quality training whereas its Japanese competitor needs to spend less than one dollar.

Furthermore, IBM spends approximately 17 percent of its total revenue on education and training (p. 50). Just for IBM, this workforce development budget amounts to billions of dollars every year. Regarding a potential solution for the obvious training needs of business and industry, Sandra Feldman, President of the New York Federation of Teachers proclaimed: "Education always requires complex answers" (p. 41). Although the face of American business is changing, the education and training needs remain significant.

Doebele (1999) showed how workforce training could be improved with proper skill and job task identification. The author wrote: "The language of business and the language of education do not always translate neatly" (p. 37). Can this communication gap can be overcome with testing and assessment? The author worked for the company that developed *Workkeys*, a program created to measure how employees complete job tasks and requirements. *Workkeys* was also designed to measure a student's skill levels and compared these data to the skills required by a specific job. When executed and administered properly, training can be customized and catered to the individual employee. Colleges can improve the quality of training and placement, effectively linking business and education.

Ryan and Lane (1998) also documented how companies are increasingly concerned with education and workforce training. Numerous companies have begun "corporate universities" to provide useful and appropriate information to their people. The examples of Xerox and Ernst and Young were provided. Whether inside or outside

the company's walls, workforce training and education is growing. The authors expressed: "Education is evolving into a business commodity with learners perceived increasingly as consumers; the result is an increasingly competitive business education market" (p. 126). The authors also showed how context-specific learning can be supported through search engines, indices and collections of "best in class" examples. New employees can have the experiential benefit of more seasoned people by accessing a database of company information and wisdom. Companies are using information technology to ramp up education and workforce training.

Doucette (1998) described some corporate cases showing how workforce training is moving forward. The author also showed that some businesses are taking it upon themselves to provide training and education to their employees. Companies such as Motorola and Disney have developed elaborate training systems for their people. It is estimated that up to of 75 percent of the existing workforce in America will require training in the next five years (p. 80). The delivery modalities for this huge training market also need to reflect the changing face of technology and working in America. An entrepreneurial type of training was described by Doucette as: "anytime, anyplace" education and training" (p. 80). Finally, the author emphasized the importance of specialized offerings and distance education by quoting Dean Noam from Columbia University: "In the past people came to information, which was stored at the university. In the future, the information will come to people, wherever they are" (p. 82).

Justus (2000) continued an analysis of workforce training and alternate delivery cases and options by citing that in 1999 only 20 percent of corporate training was delivered by technology, but beyond 2003, it was estimated that nearly 75 percent would

be (p. 5). Distance education technologies are also redrawing the previously impenetrable lines of global geography. Justus concluded: “information technologies have become more accessible to people everywhere in the world” (p. 1). The possibility of additional distance education and its associated technology could be a significant avenue in promoting student learning and workforce development. The author contended that faculty members and colleges can act more as consultants to the various companies that seek their expertise. By studying various relationships around the United States, the author discovered that: “Working and learning are now blending together into one seamless activity, fulfilling the ‘lifelong learning’ predictions made by educators since the early 90’s” (p. 7). Corporate universities in the U.S. now number over 1,600 (p. 6). This statistic underscores the emphasis that businesses are now placing on workforce training and development.

Pauley (2001) summarized the technological accomplishments of Central Community College’s (CCC, Nebraska) workforce training program. The college scored an impressive goal by “identifying common training needs and collaborating to form business and industry, community, government, and educational partnerships” (p. 16). The centerpiece of the program was a 24-hour multimedia center with interactive technologies. These technologically advanced programs were created to test and improve assorted employee skills. Over 800 interactive training CD-ROMs in fields such as industrial technology, human relations, IT and basic skills were available for student use. In 1998, there were 3,700 students who attended the college and studied with the interactive technologies. CCC generated nearly \$1.4 million in growth for its training

programs (p. 16). These technology-driven offerings and collaborations occurred, not in California or Massachusetts, but rural Nebraska.

Dunne and Rawlins (2000) also addressed workforce training and economic development in the context of specific cases or examples. The authors highlighted workforce training by examining British companies including British Petroleum (BP). BP began a training program that taught teamwork and interaction skills to the university participants. The work of Piaget and other psychologists was mentioned as a way to promote learning through interaction and collaboration (p. 363). The summary demonstrated that new ways of learning and working are essential to future economic success. Even in 1989, The Confederation of British Industry issued the following declaration: “Personal transferable skills – problem-solving, communication, teamwork – rather than technical skills defined with narrow occupational ranges will come to form the stabilizing characteristic of work” (Dunne & Rawlins, 2000, p. 362). Finally, the authors showed that effective leadership at the top of the organization is necessary for these “softer” skills to be developed. Alas, the ideas of full executive participation and organizational enthusiasm for workforce training has been somewhat pushed aside by many leaders in business and higher education according to the authors (p. 369).

Matczynski, Lasley, and Williams (1997) demonstrated the power of school partnerships by reviewing the Dayton Science Project. This project was a successful collaboration among K-12, the university, and numerous businesses in Ohio. The lessons learned from this case included how the partners all needed each other and how they shared understanding and decision-making power (p. 11). Although collaboration in general can be marked by conflict, the results were described as generally preferable to

autocratic or individual efforts. The authors wrote: “The synergistic relationship changes the roles, relationships and power dynamics from self-involvement and bureaucracy to collective empowerment and entrepreneurship” (p. 10).

Fincher (2002) discussed how private universities and community colleges can create meaningful partnerships. The author contended: “strategic alliances based on cooperation between individual institutions of higher education can allow these institutions to be more successful in a highly profitable market in which neither institution could compete separately” (p. 350). This cooperation centered on the needs of non-traditional students. According to the author, these students have different demands from their college than their 18-year-old counterparts. Traditional public colleges and universities have been too rigid and formalized in their interactions with their non-traditional students. Private colleges can offer the desired customization and attention but the problem is cost. The article discussed the possibility of community colleges teaming up with private colleges to provide new and creative educational programs. The community college participation would help guarantee lower costs and increased access for a wider range of students.

Schaier-Peleg and Donovan (1998) wrote about school partnerships and described how the Urban Partnership Program (UPP) was formed in New York. The UPP was a collaborative effort between K-12 and the community colleges. The noted goals included bridging the gaps in higher education and improving the economic climate of the area. The authors deduced that: “The 1990s – with their focus on fuller, broader partnerships – ushered in the decade of collaboration, which as the century turns, shows no signs of abating” (p. 57). Nevertheless, the authors showed that this collaboration was difficult.

The authors wrote: “systemic change is slow and remains an imposing challenge” (p. 63).

Zwerling (1998) wrote about his experiences managing collaborative programs for the Ford Foundation. The goal of the Ford Foundation was to help disadvantaged youth through vertical K-16 integration and horizontal collaboration among various educational institutions. The community college has filled a consequential void in this collaboration according to the author. It provided the workforce training that the secondary schools were unable to provide and the training that the universities were unwilling to provide. With true collaboration, the results for the community and workforce are positive. The author warned that organizations need to make sure that they are not collaborating simply for the sake of collaborating (p. 65).

Russell (2001) discussed how Michigan has led its workforce training program with an innovative community college-based initiative. The state recognized the necessity of workforce development in recruiting and keeping high-tech businesses. As a result, the state created M-TEC at Bay de Noc Community College. The mission of the organization was to provide workforce development, “anytime, anywhere” (p. 704). Since opening a new center in 2000, the amount of completed training has grown exponentially with a comparable rise in company-donated equipment in support of this program. These donations have lowered the financial demands on the center while at the same time providing “real world” training opportunities on this equipment for the students. The center’s offerings have been helpful for the students and economically productive for the companies according to the author. In addition, limited revenue has been generated through small production runs at the center with a five-year goal of self-sufficiency.

Wattenbarger (1992), Quinley (1996), and Luria (1997) described some interesting trends in workforce development. Wattenbarger (1992) reviewed numerous documents and conducted interviews to determine the capacity of technical education and training in Texas. This report summarized the growing need for high-skill and technology training to assist the workforce. Quinley (1996) outlined the findings of the National Workforce Training Study. The study showed that many businesses require or would prefer additional workforce training. The community college can be the logical solution to fulfill this wish according to the author. In a research summary, Luria (1997) combed through workforce development data on 2,700 American manufacturing plants with fewer than 500 employees. The data suggested that low technology businesses often receive more attention from community colleges. These organizations received more training than their high-tech or new economy counterparts.

Economic Development and Workforce Training – Summary

Synthesizing the surveyed literature in this area on economic development and workforce training, it would seem that the ultimate success of a community and its residents relates to how the community grows and adapts to the changing circumstances in its area and region. The modern economy has placed unbelievable demands on every organization. Companies and even colleges are expected to innovate and change at unprecedented rates. All of this change necessitates new skills and learning for the workers. Companies around the world are seeking qualified and skill-ready employees. Even after they are hired, the significance of continuous training cannot be underestimated. The European and Asian apprentice and training models emphasize specific skills and on-the-job training. The combination of working and learning is also

apparent in the US. Companies have recognized how the training needs of their employees relate to their larger goals and position within the market. The role of technology is primary in this training. New technologies allow for creative approaches to training with distance and physical facilities becoming less relevant. Community colleges can offer assistance to companies in providing for the training and education needs of society. This is particularly the case with high technology training. The expertise of individual workers immediately impacts the entire community. Effective collaboration among the stakeholders, including community colleges and businesses, can make a huge difference in meeting the needs of the future economy. Economic development initiatives, including higher education links, help show the way for community leaders. The following section on Higher Education and Business Relationships discusses this.

Higher Education and Business Relationships

The existing literature involving higher education and business relationships was divided in a variety of ways. One noted separation related to the nature of the higher education institution. Some of the reviewed research related more specifically to four-year colleges and universities. Although the exact purpose of this study was to evaluate how community colleges have created successful partnerships with high-tech businesses, some of the existing research on other colleges and universities was noteworthy. Significant knowledge and experience existed outside of community colleges. Understanding this backdrop is helpful for the reader. For this reason, this section on higher education and business relationships includes two parts, universities and community colleges.

Higher Education and Business Relationships – Universities

The first series of higher education and business relationships discussed in the literature involved four-year colleges and universities. Four-year colleges and universities have generally not been active participants in forming partnerships with business and industry. The mission and coursework of these institutions has been less related to training and specific job requirements. The traditional or “elitist” model has also been applicable in many cases. The question might be: why does the university need to partner with businesses? Although this attitude still persists among many, four-year colleges and universities are changing how they view business and industry and how partnerships can be rewarding.

Campbell (1999) looked at how faculty and administrators at four-year colleges and universities view their relationships with business and industry. Although the faculty and administrative perceptions on business have recently improved, there is still some degree of distrust in the mix according to the author. Campbell explained: “Although initially met with resistance, academic affiliation with high technology commercial markets are increasingly becoming a source of academic resources and prestige” (p. 312). This is perhaps related to the growth of companies with advanced technology products deemed worthy of the university’s association. Furthermore, the article showed that the corporations could develop additional power and profit by tapping into the intellectual property assets (including academic knowledge and laboratory research) of major universities. A college’s relationship with a high-tech company can be mutually productive.

Ryan and Heim (1997) also addressed the specific relationship issues with high-tech businesses and universities. The transformation of raw intellect, including primary research data, into commercially viable developments and products has been a valuable process for the university according to the authors. With expanded corporate appreciation for their applied research, additional opportunities are possible. Institutionally directed partnerships push the technology and knowledge of the college or university to external constituencies. The authors showed that universities need financial support for students, opportunities for faculty, and institutional advancement. Well-crafted partnerships can provide for these university needs. The corporate needs revolve around quality, flexibility, responsiveness, and cost-effective training (p. 49). Industry-directed partnerships are demand/pull driven by external businesses that wish to receive training or other assets, including student workers (p. 47). An adaptive university can support these business needs while ensuring its own long-term health. Other forces in the community, including local governments and economic development organizations, can also start the collaborative discussions. The authors pointed out that great partnerships are “formed around mutual needs, market demands, and the potential of value added as a result of teaming” (p. 43).

Pappas (1998) called for increased relationships between businesses and universities. The author demonstrated how this interaction has been fruitful. As before, activities such as technology transfer and continuing education were presented to be worthwhile efforts. Coopers and Lybrand, an accounting and management consulting firm cited by Pappas, showed that when companies and universities work together there is a 59 percent increase in productivity versus unaffiliated industry counterparts, and 21

percent increase in revenue (p. 3). This productivity and income boost can then multiply and resonate throughout a larger economy. Case in point, the economic growth and prosperity in Massachusetts in the 1970s was called the “Massachusetts Miracle” by many. This economic “miracle,” according to Pappas, has been attributed to the intellectual power provided by both Harvard and MIT. The author showed that many companies choose to locate in technology parks where other high-tech companies are operating. The existence of a research university also has been a highly desirable factor. Motorola, for example, has located its new facilities in university towns (cities) such as Phoenix (Tempe) and Austin. The universities in these places provided a ready workforce in engineering, science, and business fields. When making corporate relocation decisions, executives also considered the desirable quality of life that universities bring for themselves and their employees. Pappas quoted Myles Brand, then President of Indiana University, when he said: “The message that we [universities] must convey is that we are not merely cases of studied intellectual reflection; we are also a vital force contributing to change, growth, and innovation in the community” (p. 13).

Walshok (1999) continued the description of collaborative benefits and elucidated how creativity and talent can come together from “webs of talent” in university expansion projects (p. 77). The author described the case of the University of California, San Diego (UCSD) and its collaboration with economic development organizations and area businesses. A university research-inspired agenda was created to promote new economic expansion. The UCSD Program in Technology and Entrepreneurship (CONNECT), described as a business incubator without walls, was instrumental in the creation of over 60,000 new jobs with 650 company members in the greater San Diego

area (p. 81). Many of these jobs developed in electronics and biotech fields that were supported by the university's resources. The university-industry incubator for new businesses was an effective place for these symbiotic relationships to take shape. The author wrote: "The strategy of consulting, convening, synthesizing around common goals, and building around diverse competencies exemplifies how dialogue and collaboration can give rise to creativity and innovation" (p. 83). The key factors of a good collaboration in this article included, identifying learning needs, building a web of talent, believing in dialogue, expecting synergies, and testing the market.

Across the country, Gregoire and Redmond (1997) described how Millersville University (PA) partnered with the school district and local companies to encourage enrollment and positive social trends. After a short time, the university realized that enrollment and graduation rates for African-American and Latino students were greatly enhanced by the collaboration (p. 19). According to the authors, collaborations and partnerships similar to this one have provided employment opportunities for disadvantaged and under-represented students across the nation.

The reviewed literature in the area of university and business relationships helped identify some common elements. Universities are beginning to see the benefits of working together with business and industry. These benefits are apparent to the universities and businesses and generally include economic development and a higher quality of life. The examples of Massachusetts in the 1970s and the Silicon Valley in the 1990s are notable. For centuries, universities and businesses often operated separately. Much of the literature in this section showed that four-year colleges and universities have not yet adequately addressed the practical issues of business. The universities have

frequently desired autonomy and a more theoretical basis for their study and research. Today, however, the needs of business and industry have become increasingly scientific and even academic, particularly in electronics and medicine. Primary scientific research such as the Human Genome Project has quickly sparked commercial activities in drug development and health care. These opportunities have provided companies with additional capital and improved prospects for economic success. The universities have also improved their stature and financial stability by working with businesses. With a good partnership, the literature shows that both organizations can reap rewards, particularly in applied research and technology applications.

Higher Education and Business Relationships – Community Colleges

This section is most perfectly matched to this study regarding the partnerships between community colleges and high-tech businesses. The reviewed literature in this section begins with some general theory about community college relationships. The Cline and Kepner (1998) study, for example, lists some of the general ideas about community colleges, businesses, and partnerships for economic growth. In addition to the concepts, many of the articles focus on specific collaborations. In fact, three of the reviewed references are dissertations discussing partnerships in Texas, California, and South Carolina. These studies helped pinpoint the summarized success factors in these specific relationships.

In addition to describing economic development in more general terms, Young (1997) also highlighted the special role of the community college in American higher education. Unlike research universities with a regional, national, or global reach and audience, the community college has remained a local, community-based institution.

Young wrote: “In fact, at various times different writers have referred to community colleges as, ‘democracy’s colleges,’ primarily because of their open access” (p. 74). This open access and local orientation has made employer-based training, contract education, and all other workforce training easier. Moreover, each community presents different assets, needs, and wishes for their college. Consequently, the author warned community college policy makers that successful relationships cannot simply be cloned for use in other communities. The critical elements in relationships between a community college and a business might not be readily transportable unless the environment of the new college is remarkably similar to the original, studied college. The local factors are paramount.

Schwinn and Schwinn (2000) also discussed the central importance of the local community in the community colleges’ mission and role. They showed that the community college could effectively reach out and help take a leadership role in the development of its service area. The stakeholders of the community college include not only the business employees and college students, but also the entire population of the community. The authors concluded: “We all know that community must be at the center of our life because it is only in community that we can be citizens. It is only in community that we can find care. It is only in community that we can hear people singing” (p. 30). According to the authors, the community college is well suited to lead the chorus of economic development initiatives and business partnerships because it is local and familiar with its constituencies. These constituencies are shared by the businesses in the area.

Moussouris (1998) continued a discussion of the community college relationships by further delineating the role of the community college. The author showed that historically the bonds between people in the community were greater than they are today. People relied on their neighbors for information and assistance. The emergence of technology has allowed people to live separate and somewhat isolated lives from their neighbors. Consequently, school-and-work integration and partnerships between higher education and business have helped to replace the lost social network that provided employment opportunities in previous generations. (p. 107). Unlike many four-year institutions, the community college can serve many aspects of the student population. For example, the article illustrated the community college's relationship with employers also makes it unique, or according to the author, a "different breed of animal within the higher education community" (p. 102). Moussouris described the community college as the "linchpin" for a more egalitarian model of higher education and asserted that the economic development could be accommodated and capitalized better through the utilization of community colleges.

In a 1994 review on economic development, Katsinas (1994) reported on a number of articles surrounding community colleges and described some of the operational challenges for study in this area. Perhaps first and foremost was the fact that most of the literature on economic development has been done by economists, political scientists, and others (p. 68). With respect to spurring economic development, Katsinas quoted Robert B. Reich, a former advisor to President Clinton, who marked four sizeable barriers to economic development including: "lack of access to transportation, communications, technology extension, and worker training and retraining" (p. 71).

Relationships between the community college and the community can provide training and education not just to new companies and their employees but also to existing companies and area residents. Katsinas showed that today, about 96 percent of community colleges are providing workforce training programs (p. 72). Interestingly, large community colleges have created more partnerships than smaller colleges. The reviewed articles showed that the effective community college leader must become informed about economic development beyond his or her own institution and become involved in policy formation at local and state levels. Pueblo Community College (Colorado) and its small business incubation program were mentioned as a success story in this movement toward political connectedness. Its former president, Tony Zeiss, promoted positive relations with various outside stakeholders including the state legislature. In addition to new relationships with business, this interaction led to improved funding and recognition for his college (Katsinas, 1994, p. 77).

Just mentioned as an influential community college leader by Katsinas, Zeiss (1999) wrote that the community college must adapt to its evolving economic environment. This adaptation means serving the students much like customers. According to Zeiss, students are looking for relevant occupational skills more than degrees (p. 48). The industry-demanded occupational skills are seen as a direct way for the students to obtain jobs in their area. The challenge of producing these skills in students and pleasing business and industry is ultimately rewarding for the community college. According to Zeiss, the chief economic threat to many communities is a lack of skilled workers. Zeiss wrote: "Businesses and communities understand that knowledge has become a key strategic resource and learning has become a key strategic activity" (p. 48). This article

showed that community colleges could be the provider of this knowledge if they move with the business trends and improve their relationships.

Katsinas and Lacey (1989) also described occupational skills and traditional versus nontraditional economic development initiatives with community colleges. Traditional initiatives relate to vocational and occupational curriculums designed to produce technicians for the manufacturing industry. Nontraditional initiatives on the other hand relate more to the modern economy. They include small business incubation, technology training and transfer, customized training and research, and businessperson training (p. 69). The authors discussed that most of existing data and writings regarding community college relationships and economic development dealt with traditional initiatives.

Carnevale (2000) also explored the shifting functions of the community college in the new economy. The article showed that increased competition in training would require better efficiency, customization, and quality. The community colleges of America will need to adapt so that they can provide training while ensuring their larger role within in the community. This is a complicated task that mandates consideration and planning among the leaders of community colleges.

Wharton (1997) commented on how the leadership of American community colleges will shape the future. The author argued that: "Effective community colleges are those that satisfy, preferably delight, the key stakeholders they serve, which include students, faculty, staff, and the community" (p. 15). One group of critical stakeholders is the local business community. The author proposed that the community college leadership, including the president, needs to demonstrate success to area business leaders.

Wharton wrote: “Energy, commitment, and performance will determine whether community colleges face their challenges successfully, whether they limp along, or whether they fail outright” (p. 27). If the community college can engender a reputation of successful leadership and execution, business leaders in the community can be drawn closer to the community college.

Dougherty and Bakia (2000) also described the importance of outside perceptions of the community college. Contract or customized training was defined as: “training under contract to employers for the purposes of improving the job and academic skills of current or prospective employees” (p. 198). The article showed that community colleges often receive enhanced political recognition through their training efforts. State governments are often pleased with these collaborative training plans due to the existing pressures on funding and budgets. The contract training is also helpful for the companies. The authors concluded that ultimately, it is less expensive for businesses to contract out their training to community colleges (p. 211). Even if the contract with a business loses money for the college, the increased visibility in the community might be enough justification for the college according to the authors.

Warford and Flynn (2000) provided some specialized recommendations regarding the initiation and development of these business training partnerships. The authors observed that community colleges are usually the initiators of the relationship. As a result, interested community colleges should analyze their local workforce, identify targeted segments, and match those segments with the most appropriate unit of the college to meet these needs and expectations (p. 31). The authors described the types of employees that the community college can assist with its workforce training including:

the emerging worker, who might be entering the workforce; the incumbent worker, who is already employed; the transitional worker, who might be changing fields or industries, and the entrepreneur. After this analysis the curriculum or course work should be created, approved, and implemented on a fast-track basis so that it can serve the local workforce as quickly as possible. The authors pointed out that slow decision making, turf battles, and a confused college leadership can paralyze the institution with respect to workforce training projects – making the college less responsive to outside constituencies. The authors suggested: “How is a college to respond quickly and effectively, given our predilection for shared governance and consensus-driven decision making” (p. 31). The article concluded that the urgency of business does not allow for the extended administrative processes often found in community colleges.

Warren (2000) also described the importance of customized training and coursework. The author cited the research of Rouche, Taber, and Rouche (1995) in concluding that stronger ties between community colleges and their communities are: “worthy of extraordinary effort because such a goal leads to an informed and productive citizenry – the foundation of our social, economic, and educational systems” (p. 668). Warren trumpeted the legacy of workforce development. He proposed: “Community colleges have a long history of providing vocational, technical, and career training in fields that reflect the needs of their local economies – often providing some of the most sophisticated training available anywhere in new and emerging technologies” (p. 669). Furthermore, Warren argued: “Continuing education is one way to stay up to date when the change rate is fast, the competition keen, and the risks high” (p. 667).

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Higher Education and Business Relationships – Community Colleges: Cases

The following pieces of literature focus on the specific cases of community college and business relationships. These cases take the previously described theory and concepts to a new level. They illustrate some real world issues that impact these relationships and how the colleges and businesses conducted the daily work.

Sturgeon (2000) illustrated the situations of two community colleges, including one in Virginia and one in Utah. Both colleges, with significant private sector support, recently constructed new buildings to house training and development activities. The involved companies received many benefits from the partnerships including reduced taxes, available space for training sessions, and attentive service from the college. The collaboration also supported opportunities for the employees/students. This article brought together some of the prevailing practices in these two geographically diverse projects.

York's (1995) qualitative case study assessed the perceived effectiveness of the Dallas Community College District's contract training. The emphasis of the study was on leader initiatives, organizational structures, operational strategies, and programmatic attributes. These factors were shown to influence the results of contract training by area businesses.

Alexander (1997) examined the Greenville Technical College and its partners in business and industry in South Carolina. A qualitative case study, this research focused on the application of Rosabeth Moss Kanter's (Harvard University) partnership requirements. The researcher's conclusions showed that many of the required partnership factors existed in the relationships. Curiously, however, some of them did not appear.

The questions surrounding the use of these criteria were briefly surveyed and additional research opportunities were also listed.

McGregor (1998) questioned the factors and conditions that affected the development and maintenance of long-term workforce training partnerships between community colleges and businesses. Another qualitative case study, the McGregor research, focused on the Los Rios Community College District in California. The practical study provided several emergent recommendations including an emphasis on open communication, flexibility in scheduling, quality products and services, quality people, and an acknowledgement of strengths and weaknesses in the relationship. This study also mentioned the risks and rewards involved in higher education and business partnerships.

In another research report regarding California Community Colleges (1999), the economic development impact of the colleges was addressed. Most of the community colleges in California provided training and technical assistance to employers in their target areas. The level of involvement ranged from specific training to the creation of broad programs tailored to augment the economic vitality of the community. In total, the report indicates that the 60 community colleges and their economic development initiatives created a total of over 8,000 jobs and nearly \$200 million in wage and salary income for the state of California (1999). This impact was presented as a contributory factor in the state's development.

In North Carolina (1998) and Colorado (1998), the economic development aspect of community colleges in rural areas was demonstrated. In North Carolina, this effort was formed in conjunction with the Rural Community College Initiative (RCCI). Sponsored

in part by the Ford Foundation, the RCCI was formed with the intent of helping promote community college education in less economically developed regions. Approximately 24 colleges in North Carolina were targeted for assistance in regional development. In particular, colleges were encouraged to increase opportunities for minorities and disadvantaged students. Although not as extensive as the RCCI, in Colorado, the Center for Community College Policy has also targeted rural and economically distressed areas. Regional and statewide cooperation has improved educational access and economic development avenues for the people in these communities according to the report.

Cox (1991), Cantor (1998), and Salter (1999) also described various community college partnerships with business and industry. In a 1991 report, Cox summarized the partnership efforts of the Association for Higher Education of North Texas. Twenty colleges and universities formed an alliance with 21 high-tech businesses and organizations in the greater Dallas area. The final results of this partnership have not yet been fully reported but the indications were positive. In the high-tech corridor of Northern Virginia, Cantor (1998) summarized how a community college consortium created specialized training and education for the growing semiconductor industry. The companies participated in reviewing the curriculum. This input and collaboration increased satisfaction and ownership. In a brief report, Salter (1999) illustrated how West Valley Mission Community College District (California) has adapted to its Silicon Valley home. The workforce development role of the community college was particularly critical in high-tech areas, according to the author.

Rosenfeld (1998) described four community colleges in California, Mississippi, Ireland, and Denmark. Although uniquely oriented in location, these institutions had

common economic development roles. All of the institutions specialized in providing the skills and training required by local business and industry. In each of these locations, all of the stakeholders appeared to benefit from the coordination. The geographic differences were not especially relevant to the partnership processes and results.

Overall, the literature in this area showed that community colleges play a different role in their partnerships and economic development activities than their four-year relatives. Instead of research and development initiatives and technology transfer, the community college is better equipped to train and teach many of the employees of business and industry. The explicit workforce training needs of the high-tech companies can be accomplished through cooperation with community colleges. In the past, many of the community college and business partnerships have revolved around relatively low-technology applications such as welding, auto assembly and mechanical repair. Today, the demands of high-tech companies, especially those not directly involved in manufacturing, are different. Numerous nontraditional initiatives such as specific technology training and even “soft skills” standards are in high demand.

Higher Education and Business Relationships – Summary

The reviewed literature in this section on higher education and business relationships provided some worthwhile information. Synthesizing this section, there is a distinction between relationships involving four-year colleges and universities and community colleges. Four-year institutions have focused more on research and intellectual capital. Their long-established history has insulated them from the economic winds of change. Although clearly a part of the broader economic development, universities and four-year colleges have less direct interaction with businesses and the

immediate needs within their communities. Nonetheless, a broader view shows how increased collaborations among universities and businesses may provide benefits for everyone. Community colleges, on the other hand, are more closely connected to the people and organizations within their communities. Consequently, serving these constituencies requires a better understanding of business needs and workforce development priorities. Through partnerships, community colleges can develop education and training that responds to these needs and thus ideally satisfies all of its stakeholders, including the students, the businesses, and the larger community. This process also promotes the growth and success of the community college.

Conclusion - Final Thoughts on the Literature

It is clear to see that there is no shortage of writing and research on the topics of economic development and workforce training and higher education and business relationships. While by no means exhaustive, this literature review covers some of the relevant knowledge and research in the field. It should be noted that other research studies and articles exist within the confines of economic development and workforce training and higher education and business relationships. Although related to the overall topic, there is not a combination of these topics as envisioned in this study. Furthermore, additional research in this area, if discovered outside this literature review, may still be relevant.

Nonetheless, there is an apparent gap in the literature. The dynamics of the modern, information technology economy have not yet been fully addressed. How a community college can successfully partner with a high-tech business is important. How are these partnerships different than traditional collaborations involving “hard skills” or

vocational training? What are the unique factors that relate to technology and its utilization in these partnerships? Perhaps most salient, how can partnerships between community colleges and high-tech businesses foster the economic development and growth that everyone seems to want? Countless colleges, businesses, cities, and economic development organizations would like to have additional information in this area. This new knowledge is valuable.

CHAPTER THREE: METHODS

This study revolved around understanding the core themes or critical factors in successful community college and high-tech business partnerships using a qualitative multiple case study design to illuminate these critical success factors. This chapter outlines the research design and rationale, the site and participants selected, the data collection procedures, the data analysis techniques, and the trustworthiness of the study. These sections define and support how this qualitative multiple case study was conducted.

Research Design and Methods

The decision to use qualitative methods for this study was based on the nature of the research questions. Qualitative research methodology provides detailed information about a research subject, producing a deep and rich understanding of the elaborate scenarios. This level of comprehension was important as the core themes in the studied partnerships were distilled. It is also necessary to remember that forming and maintaining partnerships is a process. According to some research experts, an inductive and natural approach is often appropriate for process-based studies such as this research (Patton, 1990; Merriam, 2002). Qualitative methodology as described by Patton (1990) and Miles and Huberman (1994) was used in this study to collect a wealth of data.

A key approach in qualitative research design is the case study. The case study has been explained by Merriam (1998, 2002) and Stake (1995). The qualitative case

study approach selected for this study has major strengths. First, qualitative methods have the advantages of exploration – working without a preconceived hypothesis. The general focus of qualitative research is to discover what is important along the way. An emerging hypothesis develops only after some time has been spent observing the phenomenon of interest, interviewing key people and analyzing relevant documents (Strauss & Corbin, 1998). Even then, the researcher is open to new insights and conclusions that could be surprising to everyone, including the participants.

Second, qualitative case studies are well suited for a study of people, relationships and complex organizations because they are conducted in natural settings. In the actual environment, rich and vivid detail can be gathered. The analysis benefits from the utilization of all five human senses. The sights, sounds, smells, tastes and feel of a place combine to make it real.

Third, qualitative case studies allow for an understanding of a phenomenon such as a partnership. Considering the depth and breadth of partnerships in America, I chose qualitative case study design. Creswell (1994) defined a case study as research: “in which the researcher explores a single entity or phenomenon (‘the case’) bounded by time and activity...and collects detailed information by using a variety of data collection procedures” (p. 12). The phenomena in this research were the very partnerships between the community colleges and the high-tech businesses.

In summary, a qualitative multiple case study methodology was used because the goals of this study were to create a depth of awareness about the partnerships and what made them successful. The core themes in this study exemplified the actual experience of participating in partnerships. When dealing with human activity, it could be argued that

the most sophisticated instrumentation is still the careful human observer. He or she can watch, listen, question, probe and analyze his or her direct experience while being in the middle of the research. The partnerships were studied by examining participant perceptions, understandings and documentation. Only through close contact and direct interaction with the participants in the partnerships was I able to discover these elements (Patton, 1990).

Site Description and Participants

In a case study approach, the selection of the particular cases and participants is crucial to the production of the results. In this research, the stated objective was to examine three successful partnerships between community colleges and high-tech businesses. Consequently, a nominated sample method was chosen for the selection of the successful community college and high-tech business partnerships.

I began this selection process by contacting the American Association of Community Colleges (AACC). The following background information was provided by AACC and was also available on their website. The AACC is a national non-profit association representing 1,151 two-year colleges in the United States. These member colleges serve over 10 million students in all 50 states. AACC was founded in 1920. Today, AACC serves as a national voice and advocate for community colleges. A large part of the association's mission is to promote access to information about community colleges. Furthermore, AACC seeks a "connectedness" with governmental agencies, private companies, and other organizations. A key part of these relationships is the grant programs for community colleges that AACC supervises. These competitive grants help ensure favorable programs across the nation. According to the AACC, in the area of

workforce development and high technology, the two most prominent competitive grant programs were the Advanced Technological Education (ATE) Grant and the Working Connections (WC) Grant.

The Advanced Technological Education (ATE) Grant was a congressionally mandated program, administered by the National Science Foundation. In 2002, the program provided grants to secondary and undergraduate schools across the United States to: “improve and expand educational programs that prepare skilled technicians to work in the high-tech fields that drive the U.S. economy” (AACC Online). The ATE program focused on community colleges and their leadership role in fostering technical education. Nearly all of the ATE projects also involved high-tech businesses and industry. Encouraging the formation of partnerships between community colleges and high-tech businesses was a specific goal of this grant program.

The Working Connections (WC) Grant was a private collaboration between the American Association of Community Colleges (AACC) and the Microsoft Corporation. A \$10 million grant initiative was created to: “help community colleges develop and enhance information technology (IT) training programs that respond to 21st Century needs” (AACC Online). In 2002, the emphasis of this program was business and industry partnerships with community colleges that support workforce development. The grants have also encouraged the creation and maintenance of specific IT programs, curriculum formation, as well as faculty and staff development.

Upon discussing this research project and goals with key personnel, including the coordinators of these grant programs at AACC, the following participant nomination plan was developed. Over the past decade, hundreds of applications have been made by

community colleges for these two grant programs. Each year a small group of winners is selected for each grant. The selection process of the previously described ATE and WC Grants required that the institutions document and express their commitment to workforce development and high-tech programs. In this way, these grants served as effective selection mechanisms for successful community college partnership initiatives with high-tech programs in America. AACC conducted a brief analysis of both grant programs and the winning institutions. From this work, AACC provided a short list of colleges that applied for and were awarded grants from both ATE and WC. Since these grants were funded by alternative sources, the Federal Government through the National Science Foundation for the ATE, and Microsoft through the WC, the respective grant criteria were significantly different but equally rigorous.

With a short list of winners from both grant programs, the community colleges were briefly evaluated. I then asked a group of experts at AACC to further narrow this list to four candidate sites. AACC provided this list along with their advice regarding how the colleges should be contacted. They also supplied a letter of recommendation to be forwarded to each of the nominated institutions. The four nominated colleges were then contacted. Of the four colleges, three accepted the request for further study and are described in Chapter Four as Resourceful Community College (RCC), Location Community College (LCC), and System Community College (SCC), which are all pseudonyms protecting their confidentiality. RCC was a dynamic suburban college located in the northwestern quadrant of the U.S. LCC was a large urban college situated in the northeastern portion of the U.S. Finally, SCC was a college within a state system. It was located in the mid-southern region of the U.S.

Data Collection Procedure

After the cases and sites were nominated and selected, the next step involved gathering the data. The case study approach provided for a number of options regarding data collection. I worked with the AACC-supplied contact person or key informant at each institution. These contact people were directly involved in leading their college's AACC grant applications. After discussing this research project with these people, a list of key stakeholders was developed for each location. All of these people were then contacted through e-mail and telephone communication. Some general information about the study and specific research questions were forwarded to them. The interviews and meetings were then scheduled with these people in each of the three locations.

After contacting the sources of data for the partnerships, the on-site interviews were conducted. The specific people for each site are described in Chapter Four. A series of semi-structured questions were asked of the participants at the beginning of the interviews. The participants were then given an opportunity to express themselves in greater detail. By design, the participants led the discussions. This related to the emergent study philosophy or strategy discussed earlier. The interviewed people explained the partnerships and the most trenchant factors, as they perceived them. This elaboration helped uncover seemingly less apparent issues that may have been significant in the partnership.

Information came from three primary sources in this research. These sources included the community colleges, the partner companies, and key community and state leaders. These sources provided data. These data came from my interviews, observation, and document analysis. The community colleges were the first and most significant

source of information regarding their partnerships. I conducted many interviews with college personnel and students involved in the partnerships. Some data were emergent. Stated a little differently, participants recommended other college personnel to be interviewed. In this way, some “snowball” sampling occurred. This additional interviewing buttressed and enhanced the data from the people selected by the key informants. The majority of the data in this study came from the college personnel. The colleges also provided printed materials, policies, and research describing their partnerships. These materials bolstered my interview and observation data.

The second data source was the participating companies. I conducted interviews with key personnel at the companies. The colleges were instrumental in providing the names of their business counterparts in the partnerships. These individuals included the president, vice presidents, human resource managers and other stakeholders within these organizations. The companies also had printed materials and information regarding their organizations and relationships. It should be noted that the partner businesses in this study did not provide nearly as much data as the colleges.

Finally, key people in the community and state were the third valuable source of data and insight. The economic environment of all three case sites was discussed with people in the community and region. These conversations and observations ranged from informal questions with hotel managers to attending state economic development meetings. In one case, I even witnessed a parade with the Mayor of a large city and Governor of the state during a key interview. The perspective of the community leaders included a larger focus and an additional emphasis directly related to the broader concept of economic development explored earlier in this study.

In addition to the scheduled meetings, I also spent approximately three days at each stakeholder location. These opportunities provided a chance for quality observation. Many photographs and notes were taken at each site. These notations helped provide a sense of each location and its dynamics. Factors such as building architecture, campus signage and parking lot design were telling. My records, including notes and journal entries, also helped bring the interview transcripts to life with effervescent images, ideas, and observations. Each location had its own peculiarities that helped frame the context of the case. These specific details are described in Chapter Four. Patton described five dimensions relating to the observation interactions (1990). I followed the first dimension that is the range of observer to full participant. The chance to interact on various steps of this continuum was worthwhile. It should be mentioned that making sense of the complicated and dynamic observational data was not easy. After making note of various occurrences at each location, I spent time documenting them in journal entries. These notes were then carefully reviewed and considered within the larger context of the case. These observations also helped frame some questions with the participants. Finally, these observations were discussed with committee members during the reporting of this study.

Patton (1990) and Merriam (1998) considered documents to be a good source of information about a program. Because these documents are produced for a reason other than research, they are not subject to some of the limitations of interviews and observations. The documents also exist without the bias or prejudice of the researcher. In this study, partnership documents included contractual outlines, business plans, grant applications, meeting schedules, agendas, presentations, speeches, and photographic

materials. The marketing and public relations materials of the colleges and businesses were also studied.

After obtaining all data, but before beginning the analysis process, I implemented various mechanisms to protect the confidentiality of the research participants and their organizations. To begin, each college was given a pseudonym. Resourceful Community College, Location Community College, and System Community College are fictitious names. These names were purposively chosen, however, as a way to express the defining characteristics or essence of these institutions. The words, “resourceful, location, and system” all have meaning which is representative of the studied colleges. The names of the companies and other organizations were also protected. I identified them by their general industry or purpose. Finally, all of the interviewed participants were assigned a number and a general category to explain their organizational role. These categories included: executive administrator, academic manager, instructor, student, business leader, community leader, and state leader. The specific participant numbers and organizational roles are defined within Chapter Four and presented in tables within each of the cases. In summary, these rigorous confidentiality mechanisms were created to protect all of the stakeholders. These confidentiality standards were disclosed to the participants before beginning any of the formal interviews.

Data Analysis

All of my interviews, observations, and documents were organized for each of the cases. The interview transcripts created over 600 pages of transcribed text. This text was also indexed using key words and a summary of each interview was produced. The printed materials of the colleges and businesses contained thousands of pages. The

possibility of data overload was a serious consideration (Miles & Huberman, 1994).

These effective partnerships in three unique geographic locations shared many common factors or elements. On the contrary, a number of varying elements also existed. These factors are described in Chapters Four and Five.

After the organization and transcription of the data, I began the qualitative coding process. The coding process was inductively developed. According to Strauss and Corbin (1998), “coding is a dynamic and fluid process” (p. 32). To begin, some of interview data were first organized with “in vivo” codes. In other words, the exact thought or quotation from the participant was used to summarize a small section of the interviews. Additional summary words and conceptual codes were also used. This generated numerous pages of codes from all of the interviews. Printed data also were coded in this inductive fashion. Themes and patterns, developed from the actual words, were condensed into codes or “meaning segments” (Miles & Huberman, 1994). My literature review also provided some deductive codes. This allowed for some comparison among the inductive and deductive codes. This process underscored the “abductive relationship” among all existing data (Miles & Huberman, 1994).

The extensive lists of preliminary codes from the transcribed interviews were then narrowed into open codes. Although many of the participants used different expressions, much of the meaning was ready for additional synthesis and classification. This step began the conceptualizing or the labeling of phenomenon. (Strauss & Corbin, 1998). It is helpful to note that I maintained the participant and location divisions in the coding in a separate electronic file. In this way, the actual words and rich text were readily available for incorporation and thus developed my audit trail.

Second level or axial codes were then created from the initial codes and their comparison. These codes resembled early categories. The number of codes was reduced significantly from the open level coding. A constant review and scanning process helped ensure that nothing was lost in the coding or “translation.” It was necessary to classify the data and text without oversimplifying, however. My professional expertise and actual experiences were key in this process. Having recently conducted the research, it was easier to grasp the meanings and concepts that emerged from the complex coding process. Indeed, some preliminary conclusions were drawn from the types and array of codes collected.

With four lists of axial codes (including one for each site and a combined version), I then picked the final selective codes. This process was a continuation of the previous stage. A small number of “umbrella” themes was developed from the axial codes at each site. Care was taken to ensure that each selective code adequately expressed the meaning from the axial codes. This process was difficult and required time away from the data and codes. At the end of this process, two core themes were developed for each of the three cases. Separate coding lists for all three cases were also constructed. For the conclusions of this study, a master list of three selective codes or themes was created. The process centered on successfully integrating the concepts (Strauss & Corbin, 1998). These three selective codes formed the basis of this research. In fact, they defined the core themes in successful partnerships between community colleges and high-tech businesses. This was the intended object of the research. Although this process was incredibly time consuming and often difficult, the final codes seem to flow naturally from all collected data.

A cross-case display and analysis was also developed to aid in the comparison of the collected data and codes. Miles and Huberman (1994) argued that this type of display deepens “understanding and explanation” (p. 173). This display and analysis helped highlight relatively obscure patterns that existed. In other words, the combinations were sometimes as important as the individual themes. The following chapters describe these issues.

Trustworthiness

The previously described research methods, including the nominated sites, enhanced the trustworthiness of the cases. It provided more trustworthiness than if I had selected the cases without the expertise of AACC. In addition to AACC’s knowledge and advice, outside criteria for the grant programs were the primary selection mechanism. With rigid application guidelines and objective reviewers, these grants provided a perfect vantage into this research area. The very process of applying for these grants indicated substantial interest and activity in high-tech programs and workforce development partnerships.

The existing literature did not directly impact the selection of the cases. This helped ensure that the most celebrated colleges were not studied simply because of their perception and stature. Katsinas (1994) decried the over-analysis of famous cases in the literature and underlined the lack of third-party research into economic development and community colleges. Consequently, my role in the selection of these cases was limited to my interview and dialogue with the AACC personnel who provided the nominations of the four community colleges. This study utilized nominated and independently recognized samples. The data were inherently less biased and not self-reported. This

process helped provide a quality group of community college and business partnerships for study in this project.

The trustworthiness of this study was framed by the strategies suggested by Merriam (2002). These included triangulation; member checks; researcher's position or reflexivity; adequate engagement in data collection; audit trail; and rich, thick descriptions. The first strategy employed in this study was triangulation. I used three sources of data, including the community colleges, the high-tech businesses and the community or state leaders. The data were also obtained from interviews, observations, and document analysis. These data helped confirm the findings as they emerged in this study.

The member checks strategy was also used (Merriam 2002). In other words, can the observed effects be a result of the observed causes (Gliner & Morgan, 2000). The research data obtained in this study were offered to and verified by the study participants. Many of the questions were designed to allow for extensive expression by the participant regarding cause and effect. The notes and coding processes also considered the relationships of the factors. Furthermore, the cases were described in detail and compared with one another to promote credibility.

The researcher's position or reflexivity was also considered (Merriam 2002). As the researcher, I fulfill many roles in qualitative research. In addition to conceptualizing the research design, I am the primary instrument of data collection and analysis (Guba & Lincoln, 1981). In order to reach the goals of this study, personal experiences, skills, and creativity were used in collecting and analyzing the data. I was familiar with both community colleges and numerous high-tech companies around the world. Moreover, this

familiarity led to an interest in investigating and uncovering the successful pieces in the relationships between them. The core themes in this study relate not only to higher education or business but also to many fields and academic disciplines. This comprehension and interest in the research subject were fundamental to the mastery of this study. Objectivity was also raised by Miles and Huberman (1994). This can be defined as “relative neutrality and reasonable freedom from unacknowledged researcher biases” (p. 278). This study’s methods and descriptions were described explicitly and included the sequence of data collection, processing, and display.

The adequate engagement in the data collection strategy of Merriam was also incorporated into this research (2002). The research questions in this study were clearly defined and explicated before the commencement of data gathering. All of the research was conducted in short period of time. This helped ensure consistent processes and experiences with all of the research sites. Comparable consideration was also given to relevant outside factors such as the state of national economy.

Another strategy was the audit trail (Merriam 2002). Instrumentation for this study followed established processes in the collection of data. This research was a multi-case study, designed for limited cross-case comparison, so that the findings could be compared and contrasted. Data recording forms and matrices were developed. The interviews were administered using a consistent form and protocol. Individual interviews and some observation sessions were audio taped and professionally transcribed. This process augmented the fidelity of these data. The transcripts were also supported by my handwritten notes taken during the interview sessions. These notes highlighted expressive moments that the audiotapes did not provide. These issues included the office

environment and body language during the session. Once again, in effective qualitative research these factors are relevant. They help provide a depth and richness that quantitative instruments cannot produce. Finally, the coding and conclusions were prepared in a congruent fashion. The methods, procedures, decision points throughout this study were recorded and remain available for audit.

The final strategy for trustworthiness involved rich, thick descriptions (Merriam 2002). In the process of studying the collected data, I gathered a great deal of non-coded qualitative information. The case study approach is one defined by stories and examples. All three of the studied cases provided elucidating vignettes and experiences that were utilized in the analysis of the data. The communication of stories and examples helps the consumer of the research to understand how the situations unfolded. Additionally, some of this rich information directly appears in Chapters Four and Five. This relates to the generalizability of the study (Gliner & Morgan, 2000). What is the larger effect or the transferability of the findings? In this research, the cases and partnerships were described in enough detail to allow for many comparisons. The selection of samples, through the use of national grant competitions and expert nomination, also endowed the study with some inherent external validity. The study also suggests where additional research and work could be done, assisting in transferability.

Conclusion

This was a qualitative case study of three community colleges and their partnerships with high-tech companies. This study sought to discover the core themes in their successful partnerships. Data collection was primarily conducted through interviews, observation, and written records. Data analysis consisted of data reduction

using coding and data displays to draw conclusions among the cases. Results from the data collection and analysis were used to create the findings and conclusions, as described in Chapter Four and Five of this study.

CHAPTER FOUR: ANALYSIS

An ancient Chinese proverb states that a journey of a thousand miles begins with a single step. This was certainly true with this research. The three nominated sites for successful community college and high-tech business partnerships literally stretched across the nation. In late Spring 2002, I traveled over 10,000 miles to visit the three colleges and their high-tech business partners. All three visits were completed in the course of five weeks.

In addition to the time spent at the colleges and with all of the participants, I also observed the cities where the participants lived and worked. Numerous people, even those outside of the anticipated research, were briefly questioned. They included everyone from flight attendants to waitresses to business executives. Useful insights and knowledge appeared around every corner.

This chapter contains the data and findings from each case. It has been organized chronologically. Resourceful Community College (RCC) was first, followed by Location Community College (LCC) and finally, System Community College (SCC). All formally interviewed participants at the three colleges and their respective businesses and other organizations were guaranteed confidentiality. Consequently, these names are pseudonyms. At Resourceful Community College, I found much of their work and emphasis revolved around maximizing their resources and finding opportunities. Location Community College's location was so distinct that it influenced the case in

meaningful ways. Finally there was System Community College. This college operated within a state system and was also special in this way from the other colleges in this study.

In all three cases, the data were addressed in the following fashion. First, background information about the location and college was presented. Second, the interviewed participants were identified and listed by their role in the partnerships. Third, with a brief understanding of place and people, the actual themes were developed. Each core theme was unique to its case and emerged from the qualitative data. All core themes contained sub themes that provide additional explanation. Many sub themes also had smaller components that assisted the section organization and the findings.

Resourceful Community College (RCC)

The first case was Resourceful Community College (RCC). I visited RCC in May 2002 and spent three days on campus and in the neighborhood conducting research. RCC is located in the northwestern United States. In addition to the scheduled interviews and meetings on campus and in the city, the traffic patterns, business developments, and other metropolitan factors were observed. Local business and real estate publications were also examined for a cursory understanding of market trends in the region.

Resourceful Community College was situated in an affluent suburb within a large metropolitan area. The RCC campus was somewhat isolated, however, from other residential and commercial development. There were no homes or businesses within a 0.25-mile radius of the campus. A series of minor roads snaked through the wooded campus with a major street located nearby. This street led to other arterial boulevards and the freeway. The surrounding suburb contained many office park developments and

mixed commercial businesses. Any number of restaurants and shops were observed within a 10-minute drive from the campus. The campus had several parking lots with hundreds of cars filling almost every space. Based on observation and informal discussions, the vast majority of students drove their own cars to class. The cars were mostly new foreign models with a dominance of Toyota's and Honda's. Although buses served the campus, they did not appear to be an overly popular transportation choice during this visit.

The campus architecture and landscaping were attractive. There was a vast variety of foliage on the campus. The bright green grass was complemented by a sea of bushes and trees in various shades of color that dotted the campus. Small bunches of brightly colored flowers adorned the pathways and building entrances. Most of the buildings were constructed from large pieces of concrete with tinted glass windows. Some brick and decorative detail finishes helped break these unyielding lines. The campus signage seemed confusing and difficult to understand. The buildings were assigned letter and number combinations such as "A1" or "C4."

The campus was founded in the late 1960s (RCC Catalog). In 2002, over 20,000 students attended the college. The catalog and college brochures showed that about two-thirds of the students were women. Furthermore, the ethnicity was skewed with nearly 80 percent of the student population being Caucasian. A large portion of the remaining 20 percent was Asian American. There were very few African American and Hispanic students on campus during this visit. The college reported that the average age of its students was approximately 28. Most observed students seemed busy and accessed the campus in a business or professional manner. They walked rather quickly from building

to building and did not loiter or waste any time. Without residence halls, the campus appeared somewhat devoid of traditional college culture. There were no students playing music or sports on campus. The kiosks seemed to contain business-like announcements and sales rather than enticements for motley organizations or events. The campus was very fashion conscious, however. The types of clothes, book bags, and even cell phones were 21st Century vintage. The campus appeared friendly and positive with a high energy level for most people.

The executive administration of RCC was interviewed to determine one high-tech business partnership that they would identify as their prized model. This partnership could then be studied for its core themes and success factors. Apparently, this was not RCC's culture, for the participants never singled out one partnership as being the "best" or "most prized." They argued that creating an effective partnership with one company almost immediately leads to other partnerships. Furthermore, they believed that the factors that make for a strong relationship are scaleable across many different sized organizations. For example, communication and listening were mentioned. If this communication worked for one company, why would it not work for the next company? As a result, this summary of RCC exemplified their thoughts and actions in their partnerships with numerous companies. These organizations included small software companies with four employees all the way to international manufacturing companies with over 100,000 people (2). According to the people at RCC, these organizations have also reaped the benefits from the partnerships described in this case study.

Resourceful Community College (RCC) Participants

In Table 1 all of the formal participants interviewed in this case are identified with a number, general title, and a more specific description where appropriate. To make the reading of this case easier, only the number of the participant will follow the attributable statement within the text.

Table 1

Resourceful Community College (RCC) Participants

Number	General Title	Specific Description
1	Executive Administrator	
2	Instructor	
3	Academic Manager	Department Director
3B	Academic Manager	Business/Student Services
3C	Academic Manager	Business/Student Services
4	Academic Manager	Dean
4B	Academic Manager	Department Director
5	Community Leader	Regional Organization
6	Executive Administrator	
7	Student	
7B	Student	
8	Business Leader	Large, International Manufacturing
8B	Business Leader	Small, IT Services

The data collection helped form a picture of how RCC created and maintained its partnerships with high-tech businesses. This picture came to life after analyzing the words and stories relayed by the participants. These representatives included the president and a selected director of the college. For classification and confidentiality purposes, they have been defined as the executive administrators (participant numbers 1

and 6). The deans and department chairs from the college were also interviewed and have been labeled as academic managers (participant numbers 3, 3B, 3C, 4 and 4B). Also from the college, an instructor (participant number 2) and students (participant numbers 7 and 7B) were included in this research and classified as such. Finally, the business leaders (participant numbers 8 and 8B) and a community leader (participant number 5) were brought to the table for their understanding of the complicated partnerships and economic development in general.

When all of the data were organized and analyzed, the themes that this study aimed to discover became clear. The research data resulted in two core themes – getting out in front and building a ladder. These two core themes flowed naturally from the data, including the interviews, observations, and documents. With all of the data integrated into two core themes, there was a need for additional organization. In this case, each core theme contained smaller conceptual pieces called sub themes that helped form and explain the core themes. Many sub themes were also quite complex and therefore components were developed to further support and explain them. Together, the two core themes, sub themes, and components came together to explain how RCC formed successful partnerships with high-tech businesses.

Getting Out In Front

RCC's first core theme was getting out in front. The RCC leadership immediately revealed a desire to set the pace and direct the course for their high-tech business partnerships. The interviewed people at RCC collaborated closely with area businesses. This interaction gave the college a first-hand comprehension of what business leaders believed the future to hold. This knowledge allowed the college to anticipate the

changing market information and more effectively prepare. An academic manager said, “maintaining the perception of RCC as being ahead of the curve and on the cutting edge of things is necessary” (3C). If prepared, the college had a clear advantage over other community colleges and training institutions. It was a proactive strategy to get out in front of everyone, including businesses – at least from the skills and education angle or perspective. A business leader described the achievement of the college. He affirmed what I found stated in their marketing materials: “RCC started training webmasters before industry even knew they needed them” (RCC Marketing Materials).

The getting out in front theme involved the sub themes of understanding the environment and creating strategies. The understanding the environment sub theme included the components of competition, listening and mapping. The creating strategies sub theme included the components of building awareness, skill standards, the Training Institute, entrepreneurial creativity, and fundraising. When taken together, these two sub themes and components helped form the getting out in front theme. This theme was a fundamental part of how RCC created and maintained successful partnerships with high-tech businesses.

Getting Out In Front – Understanding the environment. The first sub theme was understanding the environment. RCC’s executive administration continuously expressed their commitment to the larger economic environment in which they operated and seemed fully aware of the area businesses. RCC people frequently mentioned area companies and discussed their current situations. These references included detailed employment and financial information. For example, an executive administrator explained the multi-million dollar acquisition costs and overages of a telecommunications company. It was

apparent that this information was deeper and more detailed than the local newspaper might have reported. It was first-hand knowledge received from personal conversations with company representatives. The observed college personnel had a keen interest in keeping up with current events in their region, especially as it related to the companies in their proximal environment.

In addition to their overall knowledge of the environment, RCC personnel seemed to share a positive and constructive understanding of business and industry. When speaking about companies in their area, the words “partnerships, friendships, customers, and stakeholders” were often used. There was also a concern about the economic climate. Some people at the college, including an executive administrator and an academic manager were worried about the financial health and future prospects of area businesses (6, 4B). Many of these businesses had relationships or partnerships with RCC. These relationships varied in their scope and intricacy. Whether it was a million-dollar supporter of the college or a small company with an intern from the college, someone was interested. This emphasis on partnerships was recognized as material in helping the college, particularly in difficult economic times.

RCC’s leadership believed strongly in its role in this environment and the interconnectedness of the college. Businesses and the community in general were part of this worldview. An executive administrator summarized: “our ability to persist even with the ups and downs in economy, resides in having deep and abiding partnerships and advocacy of the major components in a community that include business, government and other educational institutions” (1). These primary partnerships with the other institutions and organizations in the community were a key part of RCC’s mission and

environmental awareness. A business leader confirmed: “the community college (RCC) is very interested in what we do and how they can support the community because it’s part of their name” (8).

The college was particularly involved with high-tech programs and companies in its environment. Indeed, according to the RCC catalog and marketing materials, many of the college’s most popular programs related to information technology (IT). Furthermore, technology companies helped the college produce new programs and classes in IT for its students. The technology companies received the benefit of well-trained students or employees from this collaboration. These classes also supported the human resource efforts of non high-tech companies. In fact, the college developed strong relationships with numerous companies from outside the high-tech industry. Although these companies were not in the “high-tech” industry, they also required employees with relevant IT skills and backgrounds. The administration indicated that everyone at the college was encouraged to take an interest in all types of business in the area because they could all be potential partners (1).

Getting Out In Front – Understanding the environment: Competition.

Competition was a component in RCC’s overall knowledge and understanding of the environment. Many people commented on competition and other external factors in higher education. After all, how could the college get out in front without a recognition of the other people or organizations in the “race” or competitive surroundings? An executive administrator concluded: “Community colleges and the public sector in general are not responsive” (6). The college leadership targeted this historic non-responsiveness. They took more notice of the competition and decried how isolated and

non-responsive many higher education establishments were. An executive administrator pointed to many four-year universities and said: “You know the ivory tower is a big silo now” (1). The people of RCC were concerned with the competition. What was the competition doing better? What could be learned from them? An instructor claimed: “I went to all the other community colleges and I checked all their programs to see what they were doing” (2).

For RCC, getting out in front necessitated an understanding of the competition’s pricing and the new technologies that were available elsewhere. An academic manager remarked: “Every day we look at the private industry, we try to get inside information on their pricing structure, which we’ve been lucky we have” (4B). This financial information has helped the college to provide better prices and competitive services for businesses, particularly through its Training Institute. How much their customers paid and what feedback they received from them were key considerations. If the college continued teaching old or outdated skills, it would be ineffective in winning. These changes in technology presented a challenge as the college tried to get out in front. This awareness of competition has sparked an increased desire to gain business through partnerships. In summary, an executive administrator commented: “you’re partnering but you still have to be competitive” (6).

Getting Out In Front – Understanding the environment: Listening. The second component of understanding the environment was listening. With knowledge of the competition, the college personnel worked to hear what their potential partners and stakeholders were saying. An executive administrator said: “you have to really listen to what your partners are saying and you have to marry that with your needs -- the needs of

your students” (1). This listening has facilitated RCC’s friendly relationships with business and industry. It has also given the college personnel a chance to hear about their strengths and weaknesses. A community leader suggested: “you’ve got to talk to people who do the work, but you also got to go out and talk to these thought leaders who are thinking” (5).

The RCC leadership has learned many lessons about its environment through the use of listening and focus groups with area thought leaders. At the college, the focus group process first involved finding the thought leaders in a particular industry. This occurred through faculty research and the networking of college personnel. The focus group practices then included having the people “gather, communicate and then analyze and communicate the requirements” (2). These focus group sessions have helped the college understand the larger business issues that affect the community, or as an academic manager said, “the pulse of what’s happening out there” (3). The listening aspect of focus groups also related to the employer contact as this person continued, “position yourself so that there are both formal and informal contacts frequently with most of the employers” (3).

Nonverbal listening and informal observations were also quintessential in RCC’s environmental understanding. College personnel indicated that they often observed business trends before making final decisions on college strategies. This process usually occurred with managers from business and industry. An instructor at the college summarized: “follow someone around. See what they’re doing. Take really good notes and then see whether we are covering those topics” (2). This practice of close observation, sometimes referred to as shadowing, was a very effective listening technique

for RCC. With this type of listening, the college has formed curriculum and instituted coursework before other colleges. An executive administrator summarized: “we need to be skilled in hearing what they (businesses) have to say to us and translating that into programs that make sense for people that want economic participation” (1).

Another part of the listening component was the business people involved in RCC’s employer panels. More than 300 businesses and industry representatives served on 20 advisory boards for the college (RCC Economic Impact Report). In fact, every high-tech program at RCC had a business advisory board. These boards formalized the connections among all of the involved parties. An executive administrator remarked: “We’ve done a nice job at picking people to serve on advisory boards that give us entrees for calling groups together, telling our story, of garnering support” (1). The people on the business advisory boards have strengthened the college by bringing additional resources. For example, the possibilities of internships and jobs for students have increased with the integration of advisory boards and personal relationships. An academic manager summarized, “at every level people are making sure they’re out there participating in the discussion” (3). Listening, through the use of employer or advisory boards helped the college understand its environment.

Getting Out In Front – Understanding the environment: Mapping. With an overall knowledge of the environment obtained through assessing the competition and listening, it was necessary for RCC’s leadership to map a course for business and industry in the area. Mapping was the third and final component of the understanding the environment at RCC. According to business leaders in the area, in recent years the pace of the overall economy has quickened making it difficult to issue a prognosis for the

economic climate in three months, let alone three years. A community leader summarized: “one of the frustrations that industry has had is why can’t schools have a mechanism where they can look out and forecast either independently or with us” (5). How could the college get out in front? The college leadership responded to this challenge with its mapping process.

In order to prepare the workforce of tomorrow, the people of RCC appreciated the need to understand the present and future course of business in the region. In discussing this process of mapping, an executive administrator said that it was about, “getting ahead of business a little bit” (1). She continued by asking: “What are the job titles that exist now? What are the ones that are being perceived for the future?” (1). The mapping process involved understanding business and what would make sense in terms of education and training cooperation. This flowed from the observation and listening described earlier. It included thorough research to adequately perceive the trends and to make safe bets on future relationships (6). Some of this research and data collection occurred naturally through the college’s advisory boards. Even with experts, the intricacy of high-tech industry needs and assumptions made this task somewhat daunting. This mapping process required a real commitment to the businesses in the area, because creating a map for their needs was a speculative event. Still, an executive administrator explained: “I also found, since I was a non-competitor, a great willingness to talk about their company and their industry and where both were going” (1).

Even during this research, college personnel questioned the true definition of high-tech as they mapped their course. An academic manager argued: “high-tech is called an industry, but really it’s not an industry” (3B). This person then explained how many

businesses were utilizing high-tech products and services. The example of Costco was given. Keeping track of sales and inventory at this mass-market retailer has required high-tech solutions. Although the retail customer simply places items in his or her cart, innumerable steps occur behind the scenes. Complex software, for example, was required to organize and display sales and buying trends, ensuring the timely order and delivery of products. This high-tech logistical process involved many of Costco's employees. Even the entry-level workers at the distribution centers needed appropriate technological hardware and software expertise to keep the entire company and its supply chain moving. RCC's mapping process involved extensive consultation with business leaders throughout the area who pinpointed examples such as Costco (3B). Most notably, this interaction included key thought leaders from businesses and the IT field.

The RCC mapping process also considered the range of companies employing community college students and graduates. According to an executive administrator, 80% of the high-tech businesses in the RCC area had 50 or fewer employees (6). These small companies were more numerous but less recognizable than their larger brethren. Still, according to this administrator, a vast pool of innovation and growth existed within these organizations. Another executive administrator at the college added that the next IBM or Microsoft might be among them (1). Developing partnerships with these organizations also helped the college to get out in front.

Helping business and industry understand their future needs has been one key part of RCC's success in mapping the environment. Nonetheless, even with a preliminary map, the ever-changing market has created unexpected conditions. Once a relationship or partnership with a company was formed, an academic manager said, "You have no clue

as to where it can possibly go. Sometimes it goes into very interesting directions” (3B). This was especially true with regard to RCC’s relationships with small high-tech companies. In one case, an eight-hour training workshop led to countless classes and philanthropic contributions for the college. A business leader remarked: “We’re here. We’re going to be here in the future. We are growing” (8). RCC’s leadership understood that this business growth necessitated ample training and education. These services have helped ensure the long-term viability of area companies within a competitive environment. In conversations with academic managers, I found that high-tech and new economy companies are popular with students and community members because of their dynamic status. RCC has tried to understand these businesses through its mapping process. As an academic manager remarked: “it’s going to be a different kind of new economy, I guess” (3C).

Although small companies provided excitement, job counselors at the college did not neglect the largest companies for student opportunities either. An academic manager summarized that the management of human resources at large companies was never ending (3C). The new employees at these organizations have precipitated non-stop demand for training and retraining. A business leader said: “we want to have the educational opportunities available to our existing workforce to continue to improve themselves” (8). These educational opportunities helped map a connection between the business and the college. The college-business training improved the company and its human assets. In sum, a business leader declared: “we don’t just hire somebody off the street and say, ‘here start drilling holes in an airplane’” (8). The need for training and a map of its potential was key.

Through this mapping process, the leadership of RCC has defined what skill sets were necessary in the area. Even outside of this case, business and industry leaders often decry the fact that they cannot find people with the right skills and the reviewed literature confirmed this as a national occurrence. The question is, exactly what skills do businesses want? Furthermore, how did the college identify and fill these skills gaps or needs? The college has answered both of these questions with strategies explained in the next section. According to an executive administrator, when creating skill standards for new technology programs, RCC had “over 9,000 people in the industry that looked over what we had to validate it” (1). This statistic indicated the breadth of RCC’s connections within its environment. Again, the solution was an effective example of mapping and understanding the environment.

Understanding the environment through competition, listening and mapping gave RCC an advantage in its high-tech business partnerships. With all of the preparation and work, the college personnel demonstrated how much they understood and how much they cared about the needs of business and industry. Understanding the environment made the college’s goal of getting out in front with its high-tech partners more attainable.

Getting Out In Front – Creating strategies. With an understanding of the environment, RCC leaders worked to form additional partnerships. Even with extensive knowledge, some of these partnerships required thorough planning and consideration. The college created strategies to make these partnerships happen and to get out in front. Creating strategies was the second sub theme in getting out in front. These key strategies included the components of building awareness, skill standards, Training Institute, entrepreneurial creativity, and fundraising.

Getting Out In Front – Creating strategies: Building awareness. The people of RCC developed many strategies for implementing their ideas and moving ahead. The first strategy was building awareness. The college was highly visible in the community and developed relationships with various stakeholders. This desire for visibility and awareness was favorable for its partnerships. The RCC mission statement included the call to: “meet the changing educational needs of our diverse community; and be a leader and partner in the culture, technology, and business of our community” (RCC Catalog). When dealing with business leaders, the people of RCC valued awareness and their reputation. According to an academic manager, the public often misunderstood community colleges. This misunderstanding was especially great with those who have had the least exposure to community colleges. In RCC’s case, many of these people were the leaders of area businesses. An executive administrator said: “a lot of these people had gone to the best universities in the country, and we were not on their radar screen” (1). This created an awareness problem for the college. Before forming any partnerships, the administration worked to build awareness and understanding for the college.

So, how did this college spread its message to the community and ultimately the world? The college has established some awareness-building tactics. The CEO visits were a germane example. Every year the president of RCC visited with leading chief executives in the region. In the first two years of her administration, the number of CEO visits totaled over 185 (1). These meetings emphasized listening but also included some explaining about the college and its capabilities. According to one academic manager, these meetings accentuated the college’s desire to get out in front. These executive visits put RCC on the radar of these companies.

In addition to the president, many other RCC representatives promoted the college and visited with area companies. Some of these presentations occurred with laptops, online tools, and other high-tech resources. These IT resources helped verify the technical viability of the college (4B). In addition to its awareness promotions with businesses, the college also communicated with other stakeholders including area residents and civic organizations (6). What did they know about the college? What did they want? An academic manager pinpointed the awareness tactic; he said it was about being, “out on the street, just like critical sales people” (4B).

Similar to sales efforts in business, building awareness for the college involved getting a targeted message out to a particular audience. An instructor summarized their promotional considerations when she said: “So we’re saying how can we sell it? How can we market this?” (2). These questions helped clarify the awareness building plan with respect to the various stakeholders. The administration also used its connections to distribute letters and marketing materials. In fact, in a letter to students an executive administrator wrote: “if you are looking to make a career change – fast – this is an ideal time to consider the short-term educational opportunities at RCC” (RCC Marketing Materials).

The consensus at RCC was that the college generally initiates partnerships after building awareness. Area businesses were so busy managing their operations that forming partnerships with higher education institutions was less than a top priority and frequently unimagined according to college personnel. An executive administrator summarized that its strategy for building awareness involved, “nurturing business, and saying ‘we’re here to help you, is there something we can do’” (6). RCC’s awareness strategy included the

concept of value. What was gained through the creation of this relationship? According to a community leader, the benefits needed to be real and immediately recognizable to the company and its leaders (5). The college worked to fashion this type of awareness in the community. This strategy also helped give the college a perception of leadership or being out in front.

Getting Out In Front – Creating strategies: Skill standards. The second strategy for RCC related to skill standards. The traditional distinction between education (understanding) and training (skills) was mentioned earlier in this study. In this case, a community leader, who helped lead a skill standards organization, used the analogy of a piano player. He explained: “well, you can teach anyone how to play happy birthday on the piano, but that’s all they can be is a birthday party player. They can’t do weddings; they can’t do bar mitzvahs; they can’t do funerals unless they go back for what?” (5). The answer was retraining. In contrast, this community leader contended: “teach them how to read the notes, so if they need to play happy birthday today, they can teach it to themselves, and if they need to play funeral dirge tomorrow, they can teach that to themselves” (5). This allegory helped underscore RCC’s preference for education versus training and how it has created specific learning strategies to get out in front on skill standards.

According to an instructor at RCC, “education is about understanding the concepts and being able to adapt to fluid situations and environments” (2). A noted challenge in refining this strategy of education was supply and demand within this fluid environment. According to interviewed business and community leaders, the employment scene in the 1990s and beyond has changed immensely. The factory worker of previous

decades has been replaced by the “technician, technologist, and paraprofessional kind of person” (5). This community leader continued: “the ideal IT worker is the person with a four-year liberal arts degree who has done their post-graduate work at a community college” (5).

These worker demographics, backgrounds and skill sets were considered in the college’s mapping and strategy formation processes. The larger question was whether more in-depth education would actually provide greater benefits, especially in the long-term. A business leader summarized when he declared, “education in general is doing good for everybody” (8). This was in stark contrast to his explanation of specific company training where only one business reaped the reward. An executive administrator at the college concluded: “workforce development equals economic development” (6). What type of skill training and education did RCC partners request?

The first skill type was defined as “hard.” An instructor explained that “hard skills” center on particular technical knowledge and expertise. For example, a retail business might want an employee who knows how to run Oracle database systems. If the student begins the job with this skill set, he or she can be immediately productive to his or her employer. This type of specific skill base has been controversial for this college, however. The college participants maintained that a community college education is about more than just immediate skill development. This related to the piano player example. RCC has tried to focus on lifelong education-based principles rather than these immediately relevant skills. Nonetheless, the hard skills were a resource that business and industry demanded regardless of the higher education institution that taught them. Consequently, the college personnel also appreciated the need to teach some very

pragmatic skills that allow their students to get jobs immediately. A business leader summarized: “it really helps to make that educational environment real and to have examples from a company” (8).

RCC has developed a detailed set of skill standards for industry. These standards were obtained by talking with business and industry and were generally not, “industry specific” (2). For example, the standards might define what knowledge a database technician should possess and what tasks he or she might need to accomplish. The standards did not apply only to database technicians with financial services companies for example. Additionally, they did not apply to only one brand of product. By knowing what kind of skills companies were looking for, the college has been successful in forming the curriculum and class work around these frameworks. As previously discussed, this curriculum development also occurred with the help of business and industry. An academic manager said, “we notify the employers that we are doing the survey, and we would like to know what they think about the skill level of the students” (3). RCC’s environmental research discussed earlier, including observation, listening and focus and business advisory group interaction, formed the basis of these skill standards. According to an area business leader, RCC’s standards have become, “a de facto standard, at least in the educational environment” from coast to coast (8B).

For RCC, one challenge with developing skill standards was the dynamic business needs and short-term trends. Even with the most effective mapping and strategy creation, some events in the business world cannot be predicted or anticipated. This complicated the formation of skill standards. As an executive administrator said: “a trained workforce is a key, but there are a lot of things out of our control” (6). One of these factors was new

technologies and concepts. Some of these changes alter the way companies use human resources. A community leader described: “there’s a certain need for fads, you always have businesses who’ll say, ‘I need 50 Java developers, how come I can’t get Java people out of your school fast enough’? Six months from now they’ll need something else” (5). This phenomenon makes the development of skill standards at the college difficult. This community leader continued: “the hard skills part changes terrifically fast and schools have to be more able to teach the frameworks” (5). This reality ties back to the piano player or perhaps even the Biblical lesson of teaching a man to fish versus giving him a fish to eat. The people at RCC preferred standards and frameworks that adapted to a changing environment.

This case showed that area companies were also looking for students and employees who could think “outside of the box” for them. An executive administrator recalled: “all the employers said, ‘we don’t want somebody that just knows today’s technology. We want somebody that can adapt to change, that knows how to learn and continue to learn and is adept at picking up new things’” (1). What song will be needed today or tomorrow? Many of RCC’s partnerships have assisted companies in developing and educating creative employees. An executive administrator summarized: “I think companies look at us in some cases to bring new ideas and things that are happening and we look to cooperate with companies” (4B).

Consequently, the second type of skills at RCC was defined as “soft.” These skills related more to the students’ personalities and individual characteristics. Academic managers at the college further described that most companies preferred well-rounded employees. In addition to the technical skills, they wanted the advantages of quality

people. It was recounted as: “we want them with communications skills, team playing skills, that sort of emotional IQ that everyone talks about, that they can sense what’s happening and adjust and be flexible” (3).

The college personnel have recognized that these skills are often more difficult to quantify and develop. For RCC, part of the solution to industry demands regarding employee skills was “just in time learning,” which addressed both the hard and soft skills (2). Instructors believed that growth in “soft skills,” including communication and team building, was best learned in context with the technical skills. For example, students might learn certain features of a computer graphics program within a team or small group. This ensures that the students are learning about the technical subjects (that they accurately perceive as valuable in the job market) while simultaneously they are developing the work skills and habits (such as quality peer-to-peer interaction) that companies prefer. A business leader said: “one of the things that we try to impress on colleges is to have interdisciplinary projects” (8). RCC has merged the skill demands of the companies with the realities of its students and its resource capabilities. An executive administrator wrote: “whether you want to sharpen your existing skills or learn new ones, comprehensive, hands-on learning opportunities abound” (RCC Marketing Materials).

Getting Out In Front – Creating strategies: Training institute. Another aspect of RCC’s getting out in front theme was its strategy for its Training Institute. In addition to the education needs and skill standards defined earlier, serving the immediate needs of business and industry was also a prime consideration for the college. What hard skills were in immediate demand? The college managed these short-term needs through its Training Institute. The Institute focused on business people and short-term contract or

customized training. For example it described that its team members were “all from the business world ... and understand your needs” (RCC Marketing Materials). According to an instructor in Information Technology, new companies in the area were considered “business opportunities” (2). Even new business was solicited and managed in creative ways. An academic manager recalled the components of the Institute’s new and atypical approaches. He summarized: “I think the responsiveness, the customer focus and not making business wait for more than a day before we get back to them” (4B). This dedication to having its training operate more like a private high-tech business has proved successful. The Training Institute’s mission was captured by its slogan “we mean business” (RCC Marketing Materials).

RCC’s modern offices for its Training Institute were located in a high-tech business park, several miles from the main campus. The classes were held in spacious meeting rooms with large tinted glass windows overlooking other office building and the wooded hills nearby. Name cards and white boards replaced roll calls and chalkboards in the conference rooms. Even the name of the Training Institute was carefully considered. An academic manager did not want area businesses to think of it as a traditional community college offering training but rather a high-tech place to get acquainted with the latest skills.

The college leadership was dedicated to building corporate training relationships. In 2000, the Training Institute led customized skill training for 33 companies with more than 150 classes (RCC Marketing Materials). In 2002, for example, a large manufacturing company in the region announced that it intended to outsource much of its training to area community colleges (8). Probably a cost saving measure for the company,

this type of action was a wonderful opportunity for RCC. This large company also decided to pursue various research and development activities to the tune of \$60 million per year (8). The people of RCC were confident that they could get a sizeable piece of this business for their Training Institute because of their reputation and work in the community.

The Training Institute reinforced the college's goals and conversations with business and industry. The Training Institute mission was highlighted by its statement "we're here to serve business in the same dependable and innovative way RCC has responded to the larger community for decades" (RCC Marketing Materials). The college has formed relationships that help "grow the strength of the region" by educating and training the local workforce (3). It was about helping their business partners by providing fast, high quality training. It was part of a strategy to push the college out in front.

Getting Out In Front – Creating strategies: Entrepreneurial creativity. After witnessing the competitive desire of RCC's people, it was no surprise that entrepreneurial creativity was a valued strategy in this environment. An academic manager from the college stated: "the mission of a community college is to address the needs of all the community and there are many different ways to do that" (4). An executive administrator at RCC discussed what a business leader told her during a visit. He said: "What matters is how smart you run the organization" (1). The college leadership has believed in this. Another executive administrator said, "we run like a business and we're expected to produce, but you have the freedom, the flexibility, the encouragement and the rewards that go along with it. It's just a very highly productive environment" (6). This statement represented the college and its creative, entrepreneurial focus.

Certainly one part of entrepreneurial creativity was the people who led RCC. An academic manager said: “I guess that’s why entrepreneurial folks are so valued here because that’s the college culture. It attracts people. I was attracted to this college because of the entrepreneurial and the high-tech kind of thing” (3B). This entrepreneurial atmosphere also produced a tinge of rebellion and arrogance in some employees. An academic manager recalled how he lobbied the administration to create a new course on behalf of an interested company. Although pinched for time and tight on resources, the college moved quickly to obtain this company’s business. An academic manager said: “so they’ll tell you, no that can’t be done. It certainly can be done, it’s just they don’t know how” (4).

The entrepreneurial creativity and attainment of RCC’s strategies has been achieved in the face of considerable risk. For the college administration, risk has been a part of the daily activities. As an executive administrator said: “we constantly deal with crises, especially with our budget and state funding” (1). A community leader discussed other colleges and remarked: “educators are not risk takers per se” (5). So, what was the tolerance for risk within this institution? The question was “how much entrepreneurship and risk was good?” At RCC the answer included a great deal of risk. A community leader explained, “you’ve got to take risks and you have to honor success and learn from things that weren’t as successful and not punish people for taking chances” (5).

For RCC, the risk revolved around trying creative solutions and being courageous in approaching companies. The people went on to discuss the constant extension that its entrepreneurial culture embraced. An academic manager said: “we’re opportunists, you see” (3). This creative and entrepreneurial flair has empowered the college and its

partners. The risk of new projects and partnerships has required the college personnel to move quickly and decisively. The college demonstrated that when beginning the partnership process, some internal and external inertia needs to be overcome. This was described by an executive administrator as: “two problems; how to convince them (businesses) that we could assist them and how to convince the people at this college that this was a wise move for us to be making” (1). This entrepreneurial culture has been a challenge for some new employees at the college. It was described as much different than other community colleges. In a humorous reference, another academic manager described the pace and said: “It can drive you crazy sometimes, there are days” (3C).

The RCC case exemplified entrepreneurial creativity and this strategy helped the college to get out in front. The campus stretched beyond its academic framework and physical location. According to a local business leader, this environment then produced “new talent - new people with knowledge, curiosity and great attitude who want to come in and do great things” (8B). A college brochure professed: “we are committed to fueling the fires of creativity, innovation and discovery – we make Information Technology crackle in the classroom.” Taken together, RCC managed to think outside the campus and that helped it get out in front.

Getting Out In Front – Creating strategies: Fundraising. Another way that RCC has worked to get out in front was through its fundraising strategies. The college has been very effective in raising private contributions. An executive administrator referred to this as “enlightened philanthropy” (1). This stemmed from the fact that many of the donor companies have received additional benefits from their contributions. It was not pure altruism as a community leader discussed particularly with software and in-kind

donations. A leader with a large software company told an executive administrator at RCC, “you guys are so different from us, you have all the time in the world and no money” (1). This statement sounded an alarm with the college’s leadership. They have since realized the necessity of spending their time to secure these private donations. The effort continued to pay off; in 2002 the college foundation had net cash assets of nearly \$2.5 million and commitments for much larger sums (RCC Economic Impact Report).

A considerable source of money for RCC has been grants. These grants have come from various sources including private, government, and quasi-governmental organizations. RCC has leveraged its business relationships to garner additional support with grant organizations. For example, an executive administrator requested letters of recommendation from several high-profile companies with whom the college worked. This demonstration of business and community support, in addition to the receipt of national grants, has allowed the college to press area businesses for supplementary support. Like a pendulum or the swinging steel balls in a physics lab, the momentum from each financial “bump” causes another organization to swing forward. The partnerships have helped keep this momentum going. An executive administrator said: “we’re resourceful; we know how to get the funds” (6). This resourcefulness, especially in the area of money, has been very positive for the college.

One example from the fundraising strategy section was especially noteworthy. Several years ago, RCC needed some new classroom and office space on campus. With a desire to stay out in front, the administration designed a building for a new business and technology development center. This center was considered a key way for the college to expand its influence with businesses in the area. The problem was funding a multi-

million-dollar construction project. The solution came from well-developed relationships with people throughout the state. The administration of the college heard that the state government was looking for a place to house some of its official archives. In the middle of a booming economy, however, the land in this area was too expensive for the state to purchase or at least to justify to the legislature and governor. RCC offered a small piece of its campus to the state in exchange for the construction of the new building. Since the archives were light sensitive and not frequently used by the public, the state agreed to use the basement of the new building. The upper level of the building (with several thousand square feet) was given to the college. RCC has used this new building for its business and technology purposes calling it “an innovative high-tech facility” (1). It was an elegant and creative solution for finding the money. These opportunities flowed from effective fundraising strategies and a desire to get out in front.

Getting Out In Front – Summary. The combination of understanding the environment and creating strategies for action has helped RCC get out in front. The college personnel valued their role within the community. The interviewed participants in this case shared a positive and constructive view of area businesses. Through listening and observation, the college personnel realized the interconnectedness of the college, area businesses, and the community. The college’s environment also included competition. RCC’s leadership focus was on the future. How could the college get ahead or get out in front? This college worked to create a map of its environment. This map illustrated where it was positioned and where it could go in the future.

With an understanding of the environment and a map showing what options were possible, the people of RCC designed strategies to get where they wanted to go – out in

front. The first strategy was building awareness in the community. The CEO visits and college events allowed everyone in the community to learn about the college. Through its interaction with the businesses and community, the college formed skill standards, which helped constitute leading-edge coursework. In addition to traditional classes, the college emphasized custom training for businesses through its Training Institute. With an entrepreneurial flair and a creative emphasis, the people of RCC reached out and involved new players in their activities. With these relationships, the college worked to bring in donations and grants with large fundraising appeals. Taken together, the people of RCC had a strong desire to be leaders in higher education and even business trends. This forward position enabled the college to be involved in exemplary partnerships with high-tech businesses. RCC got out in front.

Building A Ladder

The second core theme that emerged from the RCC research was building a ladder. With an intense desire to get and remain out in front, the people of RCC vigorously formed business partnerships. The administration and faculty worked on their partnerships everyday. A community leader who led a skills standard organization explained the analogy of a partnership ladder during his interview (5). Imagine that one vertical rail of the ladder is the community college and other vertical rail is business and industry. The rungs or steps bridging these rails are the people. The actual joints or connections between the rungs and the rails represent the partnerships. Obviously more rungs, or people connected through partnerships, ensure a stronger and more useful ladder. As a community leader said: “the real key to success is to get the most effective people working most effectively” (5). A stronger ladder can then reach higher and be

more advantageous in allowing the college and the business to achieve their goals. Indeed, the rails point forward and upward to results and higher accomplishments.

For RCC, the theme of building a ladder was quintessential to its partnerships with high-tech businesses. The sub themes of the building a ladder theme included forming connections, and adding rungs and benefits. The forming connections sub theme included the component of trust. The adding rungs and benefits sub theme included the components of the college, the students, and the businesses. When taken together these two sub themes and components helped form the building a ladder theme. This theme was the second fundamental part of how RCC created and maintained successful partnerships with high-tech businesses.

Building A Ladder – Forming connections. Forming connections was the first sub theme of building a ladder. Building relationships and forming connections with people was a familiar process. RCC’s people built personal connections with high-tech businesses and helped guarantee the existence of a partnership ladder. For the college leadership, building a ladder included having an understanding of the relationships and connectedness of the community college to the area businesses and people. There were multiple connections with countless people from the college and the business community. The executives and leaders formed the lower rungs and aligned the institutions for complex participation and involvement. This included the faculty, students, and employees. An academic manager remarked: “Each and every one of us take a very strong interest in different organizations” (4B).

Building A Ladder – Forming connections: Trust. Trust was the main component of the forming connections sub theme. Trust is also related to the ladder

metaphor. For some people, climbing a ladder is frightening. The ladder's structure and the increasing heights make many people nervous. With a strong ladder, however, some of this apprehension is reduced. With trust in the rails, steps, and connections a person can climb to the top and enjoy the new heights.

This analogy directly related to the partnership perspective at RCC. Maintaining trust with companies, students, and the public was a constant effort. The college had a unique trust with the public. An academic manager said: "We are for the community. We're a community resource" (4B). This community focus caused the college to carefully consider its partnerships and their public perception. An executive administrator declared: "scrupulous integrity is important" (1). An instructor also circled trust in their partnerships when she said: "You positively have to do what you say you're going to do" (2).

The RCC people generally seemed concerned about their college and community. An academic manager said: "there has to be a level of caring" (3C). This was stated with regard to helping students gain the skills and knowledge necessary to get their dream job or get promoted. These student goals had an effect on the instructors and managers. A community leader summarized: "the relationships are based partly on feeling and partly on need" (5). In forming the partnerships with businesses, an executive administrator editorialized: "I think there has to be give and take from both or how ever many partners you have" (6). RCC's everyday part of the partnerships incorporated an emphasis on trust. Indeed, after the ribbon cutting and press releases, there was work to be done. On some occasions, college personnel even wrote job announcements for regional companies (3C). In the end, this trust building led to better results for both parties. This trust level

has surprised some businesses according to the college academic managers. Although not yet geared for this type of interaction, the businesses were impressed with the commitment from the college before and after educating their employees (3). Finally, an academic manager at RCC compared its concern for its partners and stakeholders to a marriage saying: “you’ve got the trust and the respect and you have that warmth there in that you’re happy to see one another” (4).

Resourceful Community College established connections in all its relationships. RCC formed numerous partnerships with area people and organizations. The people made constant efforts in communications and trust building. College leadership encouraged its people to build connections with high-tech businesses. These connections supported the numerous rungs of their partnership ladder. These people or rungs are described next.

Building A Ladder – Adding rungs and benefits. RCC’s people and its partners formed the ladder rungs bridging the rails of their institutions; thus adding rungs and benefits was the second sub theme. A partnership ladder, much like a physical ladder, is a tool. Its benefits are derived from where it can be used and how high or far it can reach. Undoubtedly, a two-rung stepladder would not help a firefighter trying to rescue someone from a high-rise apartment fire. Unfortunately, the victim would not benefit from this inappropriate ladder either. The RCC partnership ladder, with numerous connections and thousands of rungs, has produced tangible benefits. The interviewed participants were excited about the past, present, and future benefits from their partnerships with high-tech businesses. Perhaps the clearest way to understand the benefits portion of the building a ladder theme is by examining the three major stakeholders in the partnerships. RCC’s

stakeholders included the college personnel, the students, and the business leaders. An executive administrator said: “a great partnership provides value added that neither partner on their own could produce or they couldn’t produce as effectively” (1). The mutually beneficial ramifications of this partnership definition became clear when the stakeholders or ladder rungs were considered.

Building A Ladder – Adding rungs and benefits: The college personnel. The RCC personnel formed dozens of rungs and accomplished much of the everyday work necessary in forming the connections described earlier. Along with the college leadership, the faculty helped align the rails of the college and businesses to allow for the speedy addition of new rungs. With every new rung or faculty member the ladder grew stronger and could reach higher.

As the initiator of nearly all of the partnerships, Resourceful Community College was the first component or beneficiary in this sub theme. When aligned with business and industry, its partnerships led to numerous privileges for the college. An academic manager commented: “we know each other’s philosophy and we feel comfortable, we’re making ongoing use of that partnership” (3). This use of the partnership, to continue the ladder metaphor, gave the college or the businesses the ability to increase their span with partner support. The leadership acknowledged these different connections and has tried to make sure as many business people as possible are represented on its partnership ladder. The RCC Economic Impact Report asserted: “RCC derives significant strength through cooperation and teamwork with businesses and the community it serves.” In fact, with close coordination, the college received three essential benefits.

First, the college gained access to the latest information and skills that area businesses were seeking. As determined earlier, this knowledge was helpful for the college in creating skill standards along with the courses and programs that they engendered. For example, a business leader discussed his company's need for network security professionals (8). The college administration helped his company define this need and expanded the relevance to other campuses and even industries. This initial conversation eventually led to a series of network security courses. This cycle has continued and RCC has demonstrated that successful interaction with area companies is cumulative. Gaining access to company research and knowledge increased the college's stature with other business ventures. This visibility also increased corporate training relationships. An executive administrator explained: "the reason we want the college to have the stature is so that we can draw the students and get them what they need to support us" (3B). This statement leads to the second benefit.

The second essential benefit was increased enrollment and customized training opportunities. With the latest information on business demands and skills standards, additional students enrolled to receive the education and training that companies were demanding. This resulted in increased tuition revenue and higher state funding for the college. As an executive administrator said, "nothing breeds success like success" (6). Moreover, the customized training available through RCC's Training Institute has addressed the immediate and specific needs of businesses and students bringing in additional revenue for the college. An executive administrator recalled the growth of its customized training from less than one million to over \$8 million in revenue per year in a five-year period (4). This customized training growth and even the traditional college

classes have been supported through “word of mouth.” Former students and graduates have told their family and friends about their experiences. A student remarked, “it works good. My family and friends are coming here now” (7). This has swiftly led to increased enrollment and expansion.

The third essential benefit was philanthropic donations. The administration discovered that working relationships lead to charitable donations. Although different from revenue growth through increased enrollment and teaching, the charitable piece of its partnerships has been constructive for the college. Indeed, fundraising was one strategy that got them out in front. A community leader argued: “Altruism is kind of a one time thing. You know when Dave Hewlett makes his fortune and then he decides to give a new hospital wing to Stanford University; it has nothing to do with technology. That’s clearly altruism” (5). Although this type of altruism has worked, college leadership has sought the support of companies that have a stake in the college’s future: an “enlightened philanthropy.” Many of its partner companies have donated money and helped provide services and scholarships to students. Furthermore, with assets like software, the corporate giving model was completely new. Because the costs of developing a software program were almost entirely fixed, it was relatively inexpensive for software companies to donate millions of dollars (retail value) of software to the college. RCC used philanthropic benefits, such as software donations, to support its efforts in various ways. The upcoming students benefits section continues this explanation.

Building A Ladder – Adding rungs and benefits: The students. The second group of rungs was the students. The students were the largest and perhaps the most

prominent group in RCC's partnership ladder. As an academic manager concluded, "one of the connections between the college and area businesses has been students and their successes" (3). As described earlier, the college administration considered how it could help provide its students with the skills and understanding that they needed to succeed.

For RCC students, forming industry connections was the first benefit. An academic manager described that "we bring in employers and we get students to come in and the employers say, 'this is exactly what I'm looking for'" (3). Connections between the students and companies have been formed at these events. Even with the rapid economic change, their teaching model claimed: "a strong track record of great job placement rates in professional/technical programs" (RCC Marketing Materials). The students and alumni became employees; thus they formed numerous connections between the college and its business partners. An executive administrator summarized: "the philosophy is that if people come in and help you develop the curriculum, you have a natural entrée for your students to go out and get employed. And we have lots of success; you know we have the highest salaries of any of the community colleges in the state" (1). The combination of saleable skills and ready-made employer relationships has made the college's programs an easy "sell to the students" (2).

The second student benefit has been the combination of relevant course offerings. Case in point without a partnership and the donation of expensive software, a student might have been trained on old software. A community leader remarked: "technology skills are perishable because technology moves very fast" (5). When applying for a job, this old technology would be a liability with the potential employer. The company would be forced to retrain the new employee. The college has tailored its course offerings and

curriculum based on employer-led discussions with current and former students. The regular credit classes and programs have served students seeking the completion of specific programs. This involved a traditional approach to higher education. On the other hand, if it was a short course on Microsoft PowerPoint that the students sought, the college administration might have approved it as professional training through its Training Institute. The continuing education department argued: “the college needs us because we touch the people that the regular credit programs don’t” (4).

In 2002 RCC called every graduate six months after graduation to get his or her feedback and offer assistance (3C). This information assisted the college in better preparing future students for job opportunities. These new students also gained insight into valid information on employers and their expectations. The college leadership sought to maximize the possibility of its students succeeding with area companies. An executive administrator said it is: “thinking about the best way to position these folks in the job market” (3). An instructor concluded: “what I like most about teaching at RCC is the quality of students, and the impact we have on helping them meet their educational needs” (2).

Building A Ladder – Adding rungs and benefits: The businesses leaders. The third group of rungs was the business leaders. Like the college personnel and the students, the business leaders formed a bridge between the partnering institutions. For RCC, developing relationships with community business leaders was a primary consideration. An executive administrator at the college stated: “we have leaders from key companies meeting on a regular basis to help define the vision and where the college needs to go for workforce development” (6). These business people interacted with the

college in multiple ways. In addition to occasional meetings and conferences, college people involved influential business people on a day-to-day basis. For example, Starbuck's retired Chief Information Officer (CIO) has taught an introductory class. An instructor described it as a mutually enjoyable situation for him to be involved with the college and the students.

Perhaps the first benefit for the partner businesses was the recruitment of qualified employees. As shown, RCC created new programs and tailored other classes to the specific demands of many area businesses. Upon completing these classes, the students were hired by the partner companies. From their first day on the job, these students were familiar with the company's specialized technologies and requirements. For RCC's partners, this has meant less training time and employee handholding. This saved these companies thousands of dollars per employee in normal training costs (8B). It was a "tangible benefit" for the businesses (5). The businesses also benefited from the soft skills that the students learned. Although difficult to measure, this advantage was real according to an academic manager (4). A business leader summarized: "we want employees who work well with others; a college education helps form the desired personality" (8B). Another business leader described: "it's definitely a win-win, as the employee becomes better educated they're a more valuable employee and they're more valuable to our company" (8).

Second, the businesses had an immediate and familiar training resource. If their current and future employees needed additional training, these businesses could simply outsource this function to RCC's Training Institute. The college was already providing millions of dollars in training for area companies. Regarding the companies, an executive

administrator said: “they just don’t want to hear that there’s any problem. They want it fast. They want it simple” (4B). If provided in this manner, the businesses saved money while getting quality results. RCC has also used state and local economic development funds to subsidize the cost of training for its business partners (6). According to an executive administrator, this encouraged area companies to use the services of the local community college. From RCC’s perspective it was about, “trying to measure how good a job we’re doing in meeting the needs of our business community” (3C). The college has shown that professional training was a great benefit for area companies as well as those considering relocating to the area.

Third, perhaps the greatest benefit for businesses in the region was having a window into the future business and revenue from the partner companies. An executive administrator summarized her advice to area corporations: “people tend to use products that they’ve been educated on. If you want to have the biggest bang for your buck, you ought to look at community colleges” (1). The college has shown its partners that its students can enter the workforce with vendor-specific software experience. This can create an immediate demand for purchased software at various companies and organizations. An academic manager commented, “education is one of the greatest marketing arms that a software company could ever have” (4). This type of future business benefit was also seen with various machines, equipment and other products. In this regard, a business leader said: “we definitely get benefit out of it and other companies get benefit out of it and we view that as a very good thing” (8).

Building A Ladder – Summary. The combination of forming connections, adding rungs and receiving benefits formed the basis of RCC’s partnership ladder. Forming

connections between the vertical rails (the college and the businesses) involved trust. The college and the businesses needed to communicate and trust each other in order to become more closely joined. The partnership ladder had countless rungs. These rungs included the college personnel. Since the college initiated most of the partnerships, these rungs were fundamental to the process and highlighted the vision of the administration and the daily work of the faculty. The students formed thousands of rungs between the college and area businesses. Whether interning or working, these students were indispensable to the college and area businesses. They were the primary resource that interested both parties. The business leaders also worked as rungs in the partnership ladder and joined their organizations on a parallel track with the college. Combined, it was almost impossible to see where the benefits ended. According to the participants in this case, whether it was the college, students or businesses, the benefits existed and overflowed into neighboring participants in the relationship. A college instructor said: “there’s a win-win kind of thing going where each person clearly sees the win” (2). The stakeholders at RCC have enjoyed the fruits of their partnerships as their ladder has allowed them to reach new heights each and every day.

RCC Conclusion. Resourceful Community College was a dynamic place and provided many insights into community college and high-tech business partnerships. Chief among these were the two core themes. One, the people of RCC worked incessantly to get out in front. Whether it was mapping new network security skills or having lunch with a *Fortune 500* executive, the leadership of the college pushed forward in the community and sought the benefits of this visionary strategy. With a view from the front, the leadership recognized that its success hinged on its relationships and

partnerships. Two, the college personnel worked to build a partnership ladder that utilized the college administration, faculty, students, and business leaders as the rungs. These rungs tied the college and high-tech businesses together on a common course. With multiple rungs and partnerships, the college, the students and the businesses have reaped the rewards. Furthermore, the community at large also had the chance to benefit and attain new heights from this partnership ladder. For Resourceful Community College, creating and maintaining successful partnerships with high-tech businesses involved getting out in front and building a ladder.

Location Community College (LCC)

The second case was Location Community College (LCC). I visited LCC in May 2002 and spent three days on campus and in the neighborhood conducting research. LCC was located in the northeastern United States. In addition to the scheduled interviews and meetings at LCC and in the city, the traffic patterns, business developments, and other metropolitan factors were observed. As in the previous case, local business and real estate publications were also examined for a cursory understanding of regional market trends.

LCC was remarkable when compared to the other two cases. Situated in the middle of a bustling metropolis, the college took on the vitality of the streets. There was no perceived distinction between the city and the college. A college instructor declared: “location is key and this is the center of the world” (9). Buses and homeless people mixed with limousines and businesspeople. More than a dozen people, perhaps LCC students, played basketball in the courtyard just off the street. The sounds of people cheering the game mixed with honking horns and police sirens. Street-side vendors sold lemonade, hotdogs, and ice cream bars to the people walking in the neighborhood. The shadows of

tall office buildings darkened the stairs leading to the main entrance of the college. Its urban location seemed convenient for the students as they simply walked in off the city's streets. Students and other people were observed in the open concrete spaces talking about the weather, politics, and popular music. A community leader, who worked with other colleges across the nation, commented on the environment: "with restaurants opening and closing, banks being bought or merged or scandals happening every two days, it's just incredibly different than it is in heartland" (10).

The campus itself was actually one large building on a busy street corner. The building housed hundreds of rooms and accommodated thousands of students. The building was a modern brick, concrete and glass structure. The city's concrete and asphalt seemed to swallow up the campus and the adjoining park. There were a few trees, bushes and flowers planted as decoration around the building. Across the street some flowering window boxes on high-rise apartments mimicked the college colors. The observed classrooms were simple and utilitarian. LCC computer labs dotted the building with a fashionable Apple computer café appropriately located near the campus cafeteria.

Founded in 1963, LCC moved to its present location in 1983 (LCC Catalog). Being in the middle of a major metropolitan area, the college was notably diverse in its ethnic mix and socioeconomic spectrum. This diversity was augmented by the open enrollment policy of the college (LCC Catalog). The average student was approximately 25 years old. Although many of its students probably entered the college after secondary schooling, the age range was broad. According to college personnel, many students, including immigrants, have returned to school after 10 or 20-year absences. Approximately 40 percent of the enrolled students were African American. Another 25

percent of students were of Hispanic descent. The Caucasian student percentage totaled about 30 percent. The documented and observed mixture of gender seemed to favor females.

Although friendly when approached, the average person on campus appeared somewhat less sociable than his or her peers at the other colleges. The urban students seemed accustomed to the common cosmopolitan wisdom of “looking down or through” other people. It was ironic that the close proximity of so many people made interaction more difficult. Indeed, it was challenging to identify the students from other people in the neighborhood. The life and fashion of the city also affected how people looked at the college. Denim, Spandex, and leather were popular materials in the observed local wardrobes. Cell phones and pagers swung from the belts, purses, and ears of nearly everyone. The downtown campus buzzed with nonstop activity and excitement.

As in the previous case, the leadership of LCC did not select one particular partnership for evaluation. Although two or three partnerships were mentioned frequently, others at the college preferred to discuss their favorite relationship. For the president, the favorite partnership may have been punctuated by a large donation from his prized company. Alternatively, for the LCC student it might have been which company provided “cool” software and a college job fair.

Location Community College (LCC) Participants

In Table 2 all of the formal participants in this case are identified with a number, a general title, and a more detailed description where appropriate. To make the reading of this case easier, only the number of the participant will follow the attributable statement within the text.

Table 2

Location Community College (LCC) Participants

Number	General Title	Detailed Description
9	Instructor	
10	Executive Administrator	
10B	Community Leader	Organization Director
11	Executive Administrator	
12	Academic Manager	Dean
13	Academic Manager	Department Director
14	Academic Manager	Department Chair
15	Student	
16	Business Leader	Large, Multinational Company

The data collection helped form a picture of how LCC created and maintained its partnerships. This picture came to life after analyzing the words and stories relayed by the participants. These representatives included the president and a selected vice president of the college. For classification and confidentiality purposes, they have been defined as the executive administrators (participant numbers 10 and 11). The deans and department chairs from the college were also interviewed and have been labeled as academic managers (participant numbers 12, 13 and 14). Also from the college, an instructor (participant number 9) and a student (participant number 15) were represented. Finally, a business leader (participant number 16) and a community leader (participant number 10B) were brought to the table for their understanding of the complicated partnerships and economic development in general.

When all data were organized and analyzed, two core themes became clear: taking it to the streets and skin in the game. These two themes flowed naturally from the

data, including the interviews, observations, and documents. With all data integrated into just two core themes, there was a need for additional organization. In this case, each core theme contained smaller sub themes. These sub themes helped form and explain the core themes. Since many of the sub themes were also quite complex, components were developed to further support and explain them. Together, the two core themes, sub themes, and components came together to explain how LCC formed successful partnerships with high-tech businesses.

Taking It To The Streets

LCC's first theme was taking it to the streets. Perhaps it stemmed from its urban location or maybe it was simply the culture, but the people of LCC lived on the streets. The college leaders utilized their location to get their message out and accomplish their goals. They were especially energized by awareness and relationship building as a way to increase the influence of the college in the city. In fact the college's mission emphasized "offering quality education in a pluralistic urban environment" (LCC Catalog). Taking it to the streets involved the sub themes of building awareness and relationships. The building awareness sub theme included the component of feedback and maintenance. The second sub theme of taking it to the streets was relationships. This sub theme included the component of executive leadership. Together these sub themes and components helped form the taking it to the streets theme. This theme was essential in how LCC created and maintained successful partnerships with high-tech businesses.

Taking It To The Streets – Building awareness. The first sub theme was building awareness and the LCC leadership had an unmistakable passion for building awareness. The emphasis on promotion was so prominent that an outsider might imagine that the

college was located among the large advertising agencies on Madison Avenue in New York City. An executive administrator summarized the situation and remarked: “how are you going to stand out, you have to have a plan” (11). LCC’s plan centered on building awareness.

An executive administrator explained that building awareness for a college is probably taken for granted in most small towns across America. For example, if a community has 15,000 residents, it is probably safe to say that most of the people know about the existence of their community college. The challenge, according to LCC administrators, is getting that level of awareness in a city with millions of residents and hundreds of colleges both public and private (10). An academic manager summarized: “if they don’t know about you, then they can’t contact you” (12). The reality of this vast competitive market was compounded by the hardship of being a community college and not a leading research university in a high-wealth and high-education area. An academic manager explained: “It’s very hard for a community college to overcome the stigma of being a community college, particularly in this market” (13).

The college leadership has worked to bolster peer-to-peer awareness with area business and community leaders. College personnel have taken their message to the streets as much as possible. An instructor continued and commented on his role, “the college, or the department, or the program, have to put themselves out there to raise everybody’s awareness that they exist” (9). After learning more about the college, the early “resume effect” of the college tends to be minimized (10B). In other words, the fact that LCC was a community college and not a top tier university was accepted. An academic manager said: “if they recognize you then others who recognize them say, ‘wait

a minute – this is not just a community college” (12). This initial awareness was just the first part, however. According to an instructor, after the public is aware that the college exists, they need to know about what the college can offer (9). This involved feedback and follow up.

Taking It To The Streets – Building awareness: Feedback and maintenance. An integral component to building awareness was feedback and maintenance with external constituencies. An academic manager remarked: “What happens often in any college setting is that if you don’t have follow through, nothing ever gets done, so we did follow through” (13). For example, the college has invited community and business representatives to meet with college personnel and request help where it might be needed. An academic manager said: “feedback from the community - in terms of business - is very important because that’s where students take what we taught them in the classroom and turn it into a job and that’s what we’re preparing them for” (14). A community leader discussed his role in facilitating communication with the college and suggested: “we were trying to promote a conversation between those who employ and those who train” (10B). This awareness building process has increased the college’s understanding of business and student needs.

How were the relationships nourished and what were the best ways to keep all of the stakeholders happy? Having not worked together before, the college leadership has found new companies to be leery of the collaborative process. This apprehension has led administrators from the college to spend more time with prospective partners during the building of their relationships. Maintenance has helped LCC to lower this level of apprehension with its partners. An academic manager said: “I think that you have to

spend a lot of time at the beginning building relationships, because it's really a person to person relationship that you have to build and then an institution to institution relationship" (12).

For LCC, this feedback and maintenance involved listening to their partners and developing an understanding of their situation. For example, LCC developed advisory committees for improving their classes and course offerings. In particular, perhaps ten or twelve people from an industry form advisory committees for the college. An academic manager described their role as: "tell us where the skill gaps are, what are the workforce development problems" (12). An instructor continued: "we said, you tell us what you're looking for and we'll try to accommodate you" (9). This simple feedback process has augmented college awareness. An academic manager described it as, "consultative salesmanship, and that means that you go in and you talk to them about what their needs are and you design a training program for them" (12).

The feedback and maintenance process took many forms at LCC. For example, after developing curriculum and programs based on business wishes, the college has returned for more feedback. An academic manager summarized the typical feedback process as, "well what about this, and what about that, and what do you think we should teach here, and what do you think we should teach there" (13). This depth of interaction and feedback with business leaders has helped LCC by generating friendly and candid feedback. This friendly dialogue has led to situations described by an instructor as, "when we needed them we called them. When they needed us they called us" (9). This open and convenient feedback and follow up supported the entire partnership process. At least two interviewed college participants opened their real or "virtual" Rolodex and immediately

found full contact information for their friends in the college's partnerships. One academic manager even knew the telephone numbers and email addresses of a local business manager from memory. They believed that keeping in touch with these people was part of the partnership maintenance process. An academic manager described: "you have to keep the name of the company and the relationship going constantly, you can't forget them, because then they'll forget you very quickly, believe me" (12).

With company input and help, the college created a brand new degree program for multimedia. This program helped bridge the existing assets of companies in the city with new technologies and presentation skills. The bottom line regarding the feedback and follow up was best expressed by one of the academic managers when she said: "You don't have a relationship unless there's follow-up" (13).

For LCC's people part of the maintenance process has involved an ongoing recognition of their partners abilities and efforts. An instructor described the status of a software company by stating: "the relationship was already there; they knew that we were good" (9). The process of keeping its relationships this way has been a continuous process for the college. The people of LCC have made a concerted effort to maintain respectful relationships. An academic manager described: "you constantly have to be proving yourself to them because you're only as good as the last thing that you did for them" (12). The interaction between LCC and the area companies was instructive. An executive administrator lamented: "I just don't think that the companies spend enough time training to their own culture and maybe raising their culture and expectations. They want everybody to commit to \$18,000 a year with a Ph.D. in critical thinking" (10). These comments highlighted the need for close communication regarding skills as the

requested resource. An executive administrator said the institution's relationships were all about companies, "hiring our students, recognizing the value of the institution and investing in it" (10). Effective interactions between LCC and its partners helped change unrealistic expectations.

This building awareness sub theme of taking it to the streets involved a two-step process of promotion and feedback and maintenance. Without a general knowledge that the college existed, partnerships could not be formed. Even with a general knowledge or awareness the focus shifted to "what's in it for me or my organization?" The people of LCC instituted conversations with businesses and emphasized feedback and maintenance. The college personnel took the advice of these companies and applied it to its courses and overall planning. When taken together, area businesses seemed ready to form relationships – the second sub theme of taking it to the streets.

Taking It To The Streets – Relationships. The second sub theme of taking it to the streets at LCC was relationships. With awareness and constructive feedback, LCC's people and their partners developed an understanding of each other. LCC leadership was committed to extending this comprehension into more substantial relationships. Being in the middle of a massive metropolitan area, forming relationships was probably a natural choice for the people at the college. Unlike remote rural campuses, innumerable people and organizations surrounded the college. Even simple activities on campus have required cooperation. A security officer described that having furniture delivered to the campus is a perplexing exercise with the coordination of neighbors, street traffic, and other people. The college has evolved in this crowded environment. An instructor summarized: "the conditions, you have to use it to your advantage" (9). When asked

about what makes a great partnership, an academic manager concluded: “relationships, from the beginning to the end – soup to nuts” (12). At LCC, the relationships sub theme involved the component of executive leadership.

Taking It To The Streets – Relationships: Executive leadership. The first component of building relationships was executive leadership. LCC’s leadership has capitalized on its relationship-rich environment. According to an executive administrator, being in a large city filled with corporate leaders almost necessitated strong executive-to-executive interaction. This person argued that there was a common language among those chosen to lead large organizations, whether private or public (10). This made the college president’s role very critical. Another executive administrator succinctly said: “the president symbolizes the institution” (11). LCC’s president appeared to be very well connected in the community and committed to the formation of partnerships. In the college’s marketing materials and in conversations with business leaders, the college president was regarded as a peer.

This executive involvement related to having the LCC president on boards and committees of non-profit organizations and agencies. For example, there was an alliance for the downtown with a mission to help area companies, particularly those in technology. The college president served on the board of this alliance. The college’s executive administration was dedicated to this organization, even providing office space for new high-tech companies that were counseled by the alliance. An academic manager remarked: “the president really values the local industry” (14). These moves were appreciated by many influential business leaders involved in the alliance. This organization has helped the college obtain improved access to necessary resources

including financial contributions. An academic manager continued and commented on the president's role in forming relationships: "one of our strongest points is we have a president, who, from the beginning, really made it part of our mission to connect to the business community in a very real and effective way" (14).

In addition to knowing the college president as a peer, the LCC president was marked as a key person in building outside trust in the college's partnerships. An executive administrator advised: "You have to be careful. They have to buy into you, then they buy into the college" (11). These executive relationships of trust occurred through close interaction over months and years. This process also assisted the college in its awareness building. An executive administrator said: "in today's age college -- the president has got to have a better grasp of the economy and the business terminology" (11). With a long gestation, these knowledgeable and trusting relationships have produced results for the college.

Case in point, in 2002 the college's executive leadership hosted a formal gala event. The event honored some high profile businesspeople who – not surprisingly according to an instructor at the college – were also supporters of the college (9). The event was held at a Ritz-Carlton Hotel in the central business district. The Ritz had a very elegant atmosphere and the event was adorned with expensive food and decoration. Many college personnel attended the event and formed relationships with business and community leaders. At the end of the night, tens of thousands of dollars in donations for the college were raised, not to mention the increased awareness and relationships. An executive administrator summarized: "when it comes to financial support, they will give to the person that they trust" (11). For LCC, this trust has emerged from a foundation of

mutual respect between the college's executive leadership and the local business leaders. Although engaged in different "businesses," the similarities of running large organizations have tied these company and college leaders together.

Another example of the college's commitment to its relationships was the travel of the executive administration. Executive administrators and academic managers have traveled throughout the country to attend conferences, exhibitions, and events that focused on business topics. Even though many of these events did not directly involve community colleges, LCC maintained a presence. Curiously, some targeted companies had their headquarters within walking distance of the LCC campus. Nonetheless, the interviewed people felt that being considered a peer and building executive-level relationships meant being seen at important meetings by their corporate neighbors. An academic manager remarked: "I say they're all going to be there, so I'm going to be there too" (12). So, in addition to, "the streets," the executive leadership of the college has also taken its relationship-building message to, "the air" – via airplane travel – and perhaps even "the floor" of these conferences and conventions.

These examples underscored LCC being out on the streets and in the community. The college leadership emphasized meeting people and having relationships with the key stakeholders. This concentration on community and collaboration flowed from the executive administration's plan. A community leader remarked: "if you have a well considered plan of action, the fundamentals remain the same" (10B). For the college, the fundamental issue was building relationships through executive interaction.

Taking It To The Streets – Summary. The people of LCC have proved themselves and enjoyed the rewards of taking it to the streets. An academic manager

concluded that forming partnerships is challenging and related: “it’s very competitive, and what does Frank Sinatra say, if you can make it here, you can make it anywhere” (12). This work has included building awareness. Building awareness involved extensive communication and feedback and maintenance. As a result, an executive administrator commented: “there’s been a tremendous amount of public awareness about who we are” (10). The second sub theme of taking it to the streets was building relationships. These relationships often began with the college’s executive leadership. The college has constantly refined this relationship process. An academic manager suggested, “everything is about relationships and relationship building” (12). At the core, however, the people of this college have simply never stopped taking it to the streets.

Skin In The Game

The second core theme that emerged was skin in the game. What does skin in the game mean? Clearly a sports analogy, skin in the game has become a popular expression in venture capital and new business circles. It often refers to having one’s personal capital, including money and/or reputation (skin), at risk. For example, a venture capital investor might invest \$500,000 of his money in a small company. At that point, he has skin in the game along with the company’s entrepreneur or executive. They both want the company to be prosperous so they can reap returns on their investments. They will also lose if the venture is unsuccessful so they both have a vested interest.

In the previous section, the theme of taking it to the streets was discussed. This awareness and relationship-focused theme set the stage for skin in the game. After all one cannot participate in the “game” without knowing the rules and the other players. Taking

it to the streets laid the groundwork for further involvement and participation or skin in the game.

The skin in the game theme flowed from the collected data. At least two people from the college used the skin in the game expression regarding their desire to participate in the local economy. In addition to everyday collaboration, the college's executive leadership formed personal ties with business leaders. These connections led the college to invest in and support various high-tech businesses in an unconventional way. All of the college's stakeholders had skin in the game. The skin in the game theme involved the sub themes of risk and results. The results in this case centered on the stakeholders or components of the college, the businesses, the students and the community.

Skin in the Game: Risk. How did the college display its propensity toward risk? An instructor discussed that most people assume that college leaders are contemplative and somewhat reserved in their demands. LCC personnel felt this opinion has become outdated and less relevant in the 2002 economic environment. The economy demanded a different type of leader, a leader who made courageous decisions and pushed forward, even in the face of fear. Certainly a part of this risk has included asking difficult questions. An executive administrator remarked: "you can get more return if you ask for more. I think too often we're afraid to ask" (11). LCC people proved that they were not afraid to ask. Whether it was inviting world leaders to speak at college events or asking companies to hire their interns, the people of LCC have taken a courageous lead. An academic manager remarked: "we can all get jobs as telemarketers in this department because we do cold calls" (14). These "cold calls" involved describing and promoting the

college to outside parties who did not have any relationship with LCC. A business leader concurred and declared: “this college is always ready for a new challenge” (16).

The aggressive attitude toward risk also applied to the college on the inside. The college mission was challenged occasionally by faculty and others, particularly when the college provided professional or contract training for area companies. An executive administrator said: “we’ve been pushing the institution toward accepting its mission as a comprehensive community college” (10). An executive administrator wrote that the college was “committed to providing the education you (students) will need to succeed in the high-tech work environment” (LCC Catalog). The internal opposition from the various departments and even regulatory parties (such as the state government) affected the administration and occasionally slowed its progress on developing a course or curriculum for example. Nevertheless, an academic manager remarked: “I know how to package things so that they get through the curriculum committee and so that they get through the board” (13). The college leadership was not afraid of internal challenge or external administrative hurdles.

The leadership of the college has also taken additional risk to protect its future interests – or its skin in the game. For example, as a part of an incubator program, LCC took an ownership interest in some very small companies. This directly related to the venture capital definition of the skin in the game theme described earlier. The college has exchanged office space in its buildings (including the one that was donated to the college by a wealthy family) and some general administrative support for stock ownership in these companies. An executive administrator explained: “we felt that if the companies did well then the college would also do well. So we were in essence investing in the future”

(11). Unfortunately, in the high-tech crash of 2000 and 2001, some of these companies failed. The shortage of new venture capital to keep these small businesses running was a problem. Still, the administration continued to follow the companies to see if the college's interests or "skin" could be salvaged. On a positive note, some of the assisted companies have found substantial revenue and profits from their work and the fulfillment of their business plans. Consequently, the public or private value of these companies has grown. The college foundation has enjoyed the results of their success through the increased value of its shares in these companies. An executive administrator summarized this unusual effort and commented, "we created a separate economic development corporation that I would then funnel the money through -- without the impact by the city or state" (11). LCC has maximized its resources or "skin" to enjoy the benefits of its partnerships – even unconventional ones that involve stock ownership.

LCC's people have been aggressive in requesting help from multiple companies. It is important to note that these requests were in the context of broader relationships that had been created and maintained between the college and area businesses. An instructor stated: "you have to be somewhat aggressive in seeking partnerships" (9). For example, in 2001 a large software company and LCC formed an unprecedented bond. Having finished a grant project with the company, the college was not officially eligible for additional support. Nevertheless, an intrepid instructor from the college approached a senior person from the company at a business development conference. After some explanation, the instructor spontaneously requested a donation from the company. The company executive agreed on the spot and the college received well over \$500,000 of merchandise within two months. The instructor recounted the story and recalled his

words, “ ‘I know that our grant ended, but can you give us software?’ And they said yes” (9).

One final story helped illuminate the role of courage in LCC’s relationships. More than a decade ago, the college leadership approached a wealthy family for financial support. The initial goal was ambitious and included a request for almost \$5 million. As an instructor described: “if you don’t ask, you don’t know if you will get it or not. Most of the time people are willing, as long as you give them a good reason or rationale of what you’re doing and why you’re doing it” (9). An executive administrator recounted that although cordial and receptive, the family contributed money in the thousands, not the anticipated millions. The president, however, did not give up his hopes or strategy regarding this family. After a couple of years of interaction, two of the family members were invited to join the LCC Foundation Board. One of these individuals was a widowed woman who enjoyed having the responsibility and social prestige of being on the board. After years of relationship building, one day the family donated an office building worth more than \$30 million to the college. In appreciation for this sizable gift, the college agreed to name the building after the family. LCC’s executive leadership summarized that with a little risk and persistence, the college received more than six times what it had originally requested from the family (11).

Skin In The Game – Results. LCC’s partnership work was geared toward achieving results and benefiting from its skin in the game, thus results were the second sub theme. Coming back to the sports analogy, how many athletes would participate in the Olympics without the prospect of medals and money? In other words, if the Olympics were simply a noncompetitive showcase what would happen? Would it be a

huge global spectacle? It would seem that the results or benefits help ensure that everyone remains interested in the process. A community leader said: “you have to do more than just talk to them, you have to deliver” (10B). The results, or the delivery, are frequently judged by the participants and their personal frameworks. In other words, there is not one set of universal standards for results. In this study, each participant, whether the college, the business or the student had individual criteria for their successes much like their counterparts in various sporting events. An instructor concluded: “everybody has a different agenda and different interests” (9).

Skin In The Game – Results: The college. The first stakeholder or interested party in LCC’s partnerships was the college itself. The college was the first component of the results sub theme. An executive administrator said, “it’s all about how well we can provide a service and in turn be recognized and rewarded for that service. And actually the reward comes in a form of financial support and assistance” (11). This self-interest was paramount in obtaining results. College leadership had to secure the institution’s survival. Its partnerships have guaranteed additional students and provided incredibly large charitable gifts. An executive administrator summarized: “my approach is twofold – it’s obviously to provide services to the local industry but also to have them support us financially” (11).

Not surprisingly, then, money was the first prominent piece of “skin” for the college. This emphasis on money might have related to the fact that the tuition from its students provided the college with a minority portion of its funding. A more substantial percentage of its budget came from state and local governments. Due to budget problems and constraints in recent years, this funding source has become less secure than many at

the college would prefer (12). Enrollment growth in traditional classes and in contract training was recognized by the leadership as a key way to increase LCC's financial standing.

To improve its enrollment, the college has also increased its marketing efforts. The college leadership deduced that convenience was one key element in class development. An academic manager commented: "Convenience is the name of the game at this point. If you can provide a product anytime that person needs it, whether it be at their desk at lunch hour, or at home in their pajamas at two o'clock in the morning" (12). In the middle of a city that some said never sleeps, the college has been a convenient resource for classes and training. Perhaps this commitment could be labeled as, "just in time education." According to an executive administrator, LCC's enrollment was the highest it has ever been (11). This reality has precipitated increased interest in partnerships and how additional money could be generated outside the traditional public sector means.

LCC's partnership efforts have provided additional funding and support in the form of grants and additional corporate support. The college leadership has been very creative in finding additional funding. The first source of funding was grants and charitable contributions. The college has received several extensive grants for the incorporation of high technology assets into its business partnerships. These grants have focused on information technology hardware and software and have allowed the college to provide more valuable relationships to the businesses by maximizing its capabilities especially with new technology assets. An executive administrator remarked: "I think that there's a fertile ground here for relationships" (10).

The executive administration has also made fundraising a priority. These fundraising plans have been combined with college efforts to create new business relationships. For example, LCC's relationship with a large software company has led to millions of dollars in donations. As an instructor pointed out, however, these in-kind gifts of computer software and training do not cost the company "hard cash," but they do provide tremendous benefit (9). An executive administrator stated, "it's more of a quid pro quo philanthropy program. I think it will grow and nourish. And nourish only if they're getting something back from the community college. And what they're getting back is the trained workforce" (10).

These grant relationships also enhanced the college's reputation with area business and other organizations. The leadership has leveraged this success and requested additional support to maintain momentum. With high profile partners in the community, other potential partners perceived LCC as more successful. This increased financial support and involvement. Many early partner companies even provided letters of support for LCC's efforts. An academic manager explained their recent assessment and evaluation by an outside grant organization. She stated: "it was all about collaboration. Beginning with collaboration between the three departments and extending to the business community" (13).

Skin In The Game – Results: The businesses. The partnering businesses were the second party with skin in the game and formed the second component of the results sub theme. According to LCC administrators, the high-tech economic cycle of the 1990s surprised many people in this part of the nation (10). The amazing growth in telecommunications and the Internet changed the rules of business. A community leader

said: “the very nature of the contract between employees and employers has changed radically” (10B). Interviewed participants said that companies were “no longer interested in training employees to the extent that they used to” (10B). An academic manager said that existing businesses in the urban northeast recognized that their business models needed to account for disruptive technologies and “virtual” competitors (12). She continued: “you can have all the best relationships in the world but if you can’t produce what they want, then they’ll never use you again” (12).

Area companies experienced a number of productive results from their partnerships. First, they received an influential role in developing curriculum based on their needs and business models (10). LCC has worked closely with their partners and has surveyed the trends to become prepared for new opportunities. Communication sessions between the college and businesses also highlighted the, “state of the industry and where the skill gaps are” (12). The college has created “exclusive niches” for training and other education products such as certification and testing in the city (12). These courses and programs have also been offered in remote locations outside of its main campus. In one case, exclusive financial testing was offered across the street from the central business district as a way to increase participation and convenience at the same time.

Second, the companies had the chance to hire the best graduates from the college (12). These graduates demonstrated the specific training and knowledge that the companies requested in the formation of the partnerships. Case in point involved a student who was creating complex electronic programs for a local technology company and was interviewed in this study. With his knowledge and experience obtained through

LCC this student needed very little on-the-job training and recounted his successful job experience (15).

In addition to the curriculum development and hiring benefits, the companies have also received favorable public relations for their partnerships and donations to the college. According to business leaders, having a favorable relationship with the college bolsters the company's stature in the community. Through their partnerships with the college, these companies have realized that results, derived from having their skin in the game can be measured in more than one way. An instructor explained: "so there are a lot of things that are painless that the businesses can do that can benefit the whole community as well as the schools and the students" (9). The company's interests were primarily in their results from the partnerships. As a business, the company's "skin" was always in the game.

Skin In The Game – Results: The students. The students were also very interested participants in LCC's partnerships and their "skin" was also in the game. The students benefited in many ways from these partnerships. One, they gained access to new, industry-approved technologies and skills (14). For example, students in the college's multimedia program worked with the latest hardware and software used to produce interactive websites. These skills were one-to-one with the expectations of hiring companies. The skills that students received centered on the "hard" and "soft" varieties.

The first part of the skill resource for students was the "hard skills." LCC faculty and academic managers indicated that "hard skills" were the technical or job proficiency skills that employers demanded. According to an academic manager, the prospective employee must have "hard skills" in basic personal computer operation (12). These hard

skills included a working knowledge of various Microsoft Office applications. In other high-tech occupations, additional knowledge of subjects such as programming, networking and multimedia was required. An academic manager relayed that companies would prefer to hire people with these skills in place. In fact, she said: “they (the companies) pretty much assume that the students have the technical skills” (14). This expectation has dictated additional research for the college to understand, “skills gaps and what skills are in demand, and what skills are not available in the labor pool” (10B).

The second part of the skill resource for students and employees was the “soft skills.” These were identified as inter and intra personal skills such as communication. An instructor described: “being able to write well, being able to think critically, those kinds of things that are above and beyond the clicking of the mouse” (9). A key college goal guaranteed “general education which fosters personal development, intellectual curiosity, and critical thinking to enhance informal and effective participant in society” (LCC Catalog). According to an academic manager, these factors sometimes related more to the background of the student and his or her corresponding cultural norms. Whereas teaching the hard skills revolved more around specific instruction and tasks, the soft skills integrated the culture and previous education of the student – factors that had more variance and were not easily isolated or treated. An academic manager commented: “the number one reason why people are fired from their jobs in the United States ... it’s their lack of interpersonal skills. It’s attitude” (14). LCC instructors worked to identify their students’ personal skills and strengths. These largely informal soft skill assessments helped them to advise their students about job preparation. The instructors also made recommendations to the students regarding which company might be the best match for

them. This type of interaction with students was more time consuming than testing their technical skills (12).

In addition to their skill development, students had the opportunity to intern with various companies (10). For example, a student in the multimedia program worked for a large television studio, performing intern-level tasks but also getting some chances to incorporate class work into real life news production for a national audience. College instructors also arranged internships with area companies to expand the skill levels of students. The students have benefited from these internships, which “make them much more competitive” (14). An executive administrator wrote: “our mission is to do more than prepare you to make a living ... it is also to help prepare you for life” (11). This pre-employment training and skill development was necessary for these students as they sought employment in a rapidly shifting marketplace. A student recounted, “If you’re willing to learn, if you’re interested in learning, they (the faculty) help” (15).

A student’s story illustrated how his success in life impacted LCC and the entire community. It also demonstrated how everyone had skin in the game. This student was completing his associate’s degree in multimedia. Between classes he was also working for a local publication, where he practiced his computer graphics design skills. The son of Mexican immigrants, this student was preparing a new web site for his mom’s flower shop in a neighboring part of the city. Regarding his education and experience at the college he said: “I want to learn more, you know, to make a more attractive web site. I just don’t want to put up a web site advertising her, but also gain some sort of service to the customer” (15). This student used his college education and training to help support his family. The interests of a small flower shop on a street corner in a large city were

positively affected by the quality of LCC's programs, partnerships and students. In summary, an executive administrator said that, like a good flower shop, "I think we have a reputation of delivering" (10).

Skin In The Game – Results: The community. As the flower shop story illustrated, when LCC's partnerships were executed well, the community had its interests represented and obtained at least three positive results. One, with partnerships and community training more people were employed in emerging technologies and growth areas. This improved the quality of the workforce and increased public and private economic returns. An academic manager summarized, "Our students get out there into the industry and they become very good ambassadors for our -- for the rest of our classes, for the rest of our students" (13). Two, the public and private coordination between the college and its partners reduced the need for state government support thereby lessening the public's financial burden. The software company donation described earlier marked this benefit (11). With these grants and gifts, the college improved its campus and its services without asking for additional public tax support. Three, the community has enjoyed the results from a higher standard of living and quality of life due to the presence of more educated students and their employers who support other area organizations, governments and businesses. Recalling a particular example, an instructor added: "Everybody won. Probably some people won more than others but everybody won" (9).

Skin In The Game – Summary. LCC's people demonstrated significant risk and obtained valuable results for the college and all of the stakeholders in its partnerships. All of these stakeholders, by nature of their partnerships with the college, had skin in the game. It was an involved process because each of the partners had different fundamental

interests in the relationship. An executive administrator said: “You know the value comes in what they can do for you eventually” (11). Through a collaborative process, a balance between self-interest and outside interests was achieved. The college mission summarized: “LCC is committed to providing collaborative programs and services responsive to the educational, cultural, and recreational needs of the community” (LCC Catalog). The results at LCC indicated that having skin in the game almost naturally empowers hard work and results for everyone.

Location Community College – Conclusion. Location Community College was a dynamic place that provided many insights into community college and high-tech business partnerships. Two core themes summarized their partnerships with high-tech business. One, LCC took it to the streets. With its emphasis on awareness building and relationships, the college gained recognition and earned respect and trust. This occurred with careful communication, including feedback and maintenance. The second step was having skin in the game. The leadership of the college recognized the involved players and attempted to learn about their expected outcomes and interests. It involved considerable risk and courage. Throughout the process, the college formed partnerships that produced the desired results for the college, the businesses, the students, and the community. For LCC, creating and maintaining successful partnerships with high-tech businesses involved taking it to the streets and having skin in the game.

System Community College (SCC)

The final case was System Community College (SCC). I visited SCC in June 2002 and spent three days on campus and in the region. This case effectively completed the unintended but approximate geographic triangle of this study. The first two cases

existed on both the northwest and northeast quadrants of America. This final case was in middle of the upper south. This case and the area were unique in many ways.

In addition to the scheduled interviews and meetings at SCC, the traffic patterns, business developments, and other metropolitan factors were observed. Local business and real estate publications were also examined to gain a cursory understanding of market trends. Many people throughout the area were informally questioned about the region's economy and current quality of life. Their informal comments were helpful in understanding the case setting.

I attended a statewide committee meeting on technology infrastructure. More than a dozen influential business and higher education leaders were tapped by the governor to serve on this committee. The committee commissioned experts to research and analyze the state of the state regarding technology. Various reports and interactions were presented. The business leaders on the committee expressed concerns over the state's level of technology infrastructure. Moreover, these concerns also related to the region's overall economic health. Without question, two key discussion items were a skilled and qualified workforce and how to support the growth of technology in the state.

This case was also notable because it involved more than one location. The state's public policy prescribed a system wide approach to community colleges. This endowed the state administration with more authoritative control over all the colleges. According to the interviewed administrators, the primary advantages to this structure included: systemic planning, statewide budgeting, program and class coordination among the member colleges, economic development options, as well as social and political relations (20, 21). While interesting in their own right, these issues were not central to the case and

this study. Therefore, they will not be covered in detail. The cited drawbacks included the lack of individual and community control, as well as less creative initiatives from the member colleges (20, 21). I spent the majority of my time at the largest community college in this system, called System Community College (SCC). The state office for the community college system was also visited and some additional interviews occurred there.

The SCC campus was nearly 20 years old. Approximately 10,000 students attended its two centers, including the suburban and downtown campuses (SCC Catalog). The suburban campus student body was less diverse than its urban counterpart. Combined, the percentage of Caucasian students was approximately 50 percent. The African American portion of the student body was approximately 30 percent. The remainder of the student population was primarily Hispanic. The gender breakdown was approximately equal, with perhaps a small majority being female. The average age was nearly 30 (SCC Catalog).

The main campus was located in a peaceful suburban setting. Sitting on a small acreage, the college was surrounded by some green fields and rolling hills. Large deciduous trees marked the campus and adjacent open spaces. An apartment and single-family home development bordered the campus on at least two sides. Although residential developments were close, the campus did not exude a neighborhood feel. It seemed a bit isolated from its surroundings. Several low brown brick buildings were situated in the center of the acreage. The 1980s architecture appeared practical. Large parking lots dominated two areas around these main buildings. The observed cars were

generally American and Japanese family sedans. A number of small sport utility vehicles also occupied parking spaces.

People were very friendly and helpful. The campus had a relaxed feel about it. People were not rushing around in a maddening pattern like the urban environment of the previous case (LCC). Although the larger metropolitan area had its share of traffic congestion, crime, and other urban problems, this campus seemed removed from them. The welcoming attitude of the residents, students, and college personnel was noted.

This case will focus on the partnerships that SCC and other community colleges in this state created with high-tech businesses. During my interaction with the participants, it became increasingly clear that the state leadership was involved in numerous partnerships. As before, the colleges and participants in this case did not select one partnership as their most prized relationship. Therefore, the themes that follow result from an examination of numerous college relationships in the system as well as the insights of involved business and community leaders.

System Community College (SCC) Participants

In Table 3 the formal participants are identified with a number, a general title, and a more detailed description where appropriate. To make the reading of this case easier, only the number of the participant will follow the attributable statement within the text.

The data collection helped form a picture of how SCC created and maintained its partnerships. This picture came to life after analyzing the words and stories relayed by the participants. These representatives included the president and a selected director of the college. For classification and confidentiality purposes, they have been defined as the

Table 3

System Community College Participants

Number	General Title	Detailed Description
17	Academic Manager	
18	Community Leader	
18B	Instructor	
19	Executive Administrator	Division Director
19B	Academic Manager	Department Manager
20	Executive Administrator	Division Director
21	State Leader	
22	Executive Administrator	
23	Business Leader	Large Multinational Company
23B	Business Leader	Midsized Manufacturing Company
24	Student	

executive administrators (participant numbers 19 and 20). A dean and a department chair from the college were also interviewed. These individuals have been labeled as academic managers (participant numbers 17 and 19B). Also from the college, an instructor (participant 18B) and a student (participant number 24) were included in this research and classified as such. The business leaders (participant numbers 23 and 23B) and a community leader (participant number 18) were brought to the table for their understanding of the complicated partnerships and economic development in general. Finally, this case study also included a state leader (participant number 21).

When the data were organized and analyzed, two core themes emerged: getting a seat at the table and changing the state. These two core themes flowed naturally from the interviews, observations, and documents. The data were integrated into two core themes

needing additional organization. In this case, each core theme contained smaller sub themes. These sub themes helped form and explain the core themes. Since many of the sub themes were also quite complex, components were developed to further support and explain them. Together, these two core themes, sub themes, and components came together to explain how SCC formed successful partnerships with high-tech businesses.

Getting A Seat At The Table

The first core theme was getting a seat at the table. This statement was heard several times from participants. This emphasis on getting a seat at the table underscored some fundamental beliefs. The motivation to be included in the growth and economic development of the state and the nation was immediately recognizable. The “seat” represented involvement or participation and the “table” symbolized the national economy or the place where critical business decisions were made. From faculty to state leaders, the participants expressed their wish to interact with the most powerful corporations in the world (21). With participation they believed that they could induce new jobs and opportunities. A state leader said: “our big issue, as a new system and also as a community technical college, is to get at the table where the action is so that people understand our role” (21). This occurred, according to an executive administrator, by “going that extra mile and pushing sometimes to make sure you’re at the table that you’re supposed to be at and need to be at” (20).

At SCC, the getting a seat at the table theme involved the sub theme of infrastructure. The infrastructure sub theme included the components of people and opportunities. When taken together, these helped form the getting a seat at the table

theme. This theme was essential in how SCC created and maintained successful partnerships with high-tech businesses in the state.

Getting A Seat At The Table – Infrastructure. The first sub theme was infrastructure. The economic development strategy of this state and its community colleges was intimately related to infrastructure. Indeed, economic development and growth depends on multiple variables including infrastructure. The recent economic cycles of 2000 and 2001 were the impetus for much discussion on state resources. In the late 1990s, an incredible high technology boom swept the nation. In places from Massachusetts to Florida to California, economic growth rapidly expanded. According to state leaders, the rising tide lifted all boats, although some states – including this one – were not as fortunate in their rise. Although the reasons behind this uneven rise were numerous, SCC participants felt somewhat left behind in this economic race (21). According to a community leader, compared to other parts of the country, it has been more difficult to recruit and retain qualified people in the upper south (18). The human, physical, and financial infrastructure were significant factors in this dilemma. An executive administrator commented: “we probably haven’t tapped into the market as much as we should have” (22).

Many state leaders were actively seeking to develop the necessary market infrastructure to better support high-tech businesses. In addition, this focus on technology infrastructure was seen as a way to lift the overall economic and social welfare of the people, particularly those living in rural areas. The state leadership aggressively sought out companies for relocation or new construction. The community college system has helped in this process (21). The state government has recognized that its higher education

resources are a vital infrastructure element for economic expansion. With a centralized state higher education system, the power to allocate resources to particular colleges or programs that best served a particular employer was available. For example, the leadership of SCC has worked extensively with a global distribution company in providing state-sponsored training and education. The state and local governments have also contributed substantial time and money to making this project successful.

A committee of business and government leaders shepherded the state's Internet and networking infrastructure. This committee was assigned the task of improving the state's connectivity. The committee believed that the resolution of this problem and the technology infrastructure upgrade would help its residents have better access to information, especially via the Internet. This committee included a notable group of higher education leaders, including two community college system representatives. A community leader talked about the participants on the state committee and added: "it's got to be a group of people that have the intellectual capacity to lead. So it's got to be a group of leaders" (18). Finally, an executive administrator added: "obviously the planning committee is going to work with those major players in the state and for us to have a seat at that table is extremely important if we're going to work" (20).

Getting A Seat At The Table – Infrastructure: People. The infrastructure component included people. The first people component was students or employees. A state leader commented: "the workforce is a subset of economic development" (21). This community leader decried that in recent years many of the state's top graduates in new technology fields have left the area and moved to California, Texas, New York and other higher growth areas. This trend was worrisome for area leaders. A few participants even

confessed that they were concerned about a “brain drain” from the area. Although this migration cannot be halted, the state has tried to improve local opportunities to retain this homegrown talent and capital. These efforts were designed to make the state’s business environment more attractive for growing companies and business expansion. The college asserted that “two-thirds of the jobs projected to be created in the state over the next five years will require the type of postsecondary education and training that SCC provides” (SCC Marketing Materials). An executive administrator concluded: “the economic development challenge is about keeping the best and brightest here” (19).

The second part of the people component was the people of SCC and the college system. They played a vital role in the formation and expansion of business relationships within the larger environment. A community leader added: “I see different functions and different roles for everyone to play in the system and everybody’s important” (18). The faculties of SCC and other community colleges have engaged area businesses in this discussion. A community leader commented: “If you have great intellectual capacity amongst your faculty, then you’re going to come up with great ideas for how you spawn and create partnerships that help foster the whole economic development theme in the region” (18). The faculty have brought in advisory boards for the curriculum of their information technology programs (19). These boards have involved industry experts who have helped the college understand the current skills and the future direction of business.

According to the participants in this case, being in a less technologically developed part of the country has made finding these experts more difficult. Still, with the help of the state system and by leveraging other resources area community colleges have tapped into this knowledge pool. For example, an executive administrator discussed

how some business leaders from other states have been brought into the system for consultation (19). A community leader remarked, “It’s all about getting the right people involved. You’ve got to get the right people at the table” (18).

The community college personnel in the system have worked with other companies and state universities and helped “existing businesses to adopt new technologies” (17). In a coordinated process companies have teamed up with area universities and colleges to address the networking infrastructure in the state. According to one SCC executive administrator, these collaborations have altered the mindsets of some company leaders regarding their cooperative interactions with higher education. Business leaders needed information about the environment and how their involvement with community colleges could bolster their businesses (23). A state leader compared the process to an ecosystem. He stated: “an ecosystem basically is that you create partnerships with all those people in organizations who are really involved in aspects of your business” (21). An academic manager commented on this ecosphere: “there’s not enough of us to explore all the opportunities that are out there” (19B).

SCC’s people and this state were an important piece in the infrastructure component. They were the fundamental driver in the state’s economy. By utilizing its college personnel and business leaders, SCC and other colleges gathered critical mass. They helped structure programs that benefited the students across the state. With increased opportunities, these students had the chance to remain home and help continue this positive cycle of human infrastructure development.

Getting A Seat At The Table – Infrastructure: Opportunities. When examining the infrastructure, what were the opportunities? How was this component addressed?

The existing industries located in the upper south had a bias toward mining, manufacturing, and farming. In recent years, the mining industry has remained operational but has suffered from intense regulation, public scrutiny, and foreign competition (20). The farming industry has not experienced much growth and is often dominated by large machinery, fewer workers, and corporate farming interests (20). According to state development leaders, the overall retail and service portion of the economic area was not altogether different from other parts of the nation (22). Consequently, the focus area has been keeping and gaining high-tech jobs for the area. These jobs were highly coveted for their wages, prestige, and clean operations.

For SCC, its infrastructure presented many opportunities for collaboration. This community college system tried to understand the current business trends. A community leader opined: “It’s got to all function together, it’s got to all work together; and that’s why it’s critical that administrators of higher education have got to listen closely to what business and industry is telling them about what they need ” (18). The state community colleges helped evaluate the expectations and demands of area businesses. The college leadership had the opportunity to “problem solve and to communicate before we go in and teach” (22). This interaction provided a structure where the business interests and expectations were balanced with the potential realities and results. Building dialogue and learning how to serve their constituencies has provided for better planning and responses.

Community colleges adapted to become more student and business centered. A community leader argued: “Higher education is changing and if academics and academic administrations don’t change with it, they will be left behind” (18). An academic manager stated: “I would think more educational institutions are becoming more

business oriented. They're thinking more like businesses because their market is competitive as well, and we're seeing more unique, creative partnerships in the public/private sector" (17). SCC's people showed how an awareness of their environmental factors leads to new opportunities.

One of the more intriguing opportunities regarding the viability of the state's infrastructure involved a global transportation company. When considering its need for expansion, the company recognized that they might not have enough skilled workers for their enlarged operations. In fact, an executive administrator summarized a portion of the state's rural workforce that this company considered and stated: "you're dealing with people that probably were taught in a one room school house" (19). With this backdrop, the company considered the possibility of leaving the state and expanding in an area with better infrastructure and recruitment opportunities. The governor and his administration engaged the higher education system to see how this could be prevented. Numerous ideas and options were presented to the governor, many of which dealt with training and higher education. These options were then brought to the company and modified based on their specific needs and feedback. With a deal in place, the state and its community college system stepped up and began their work. Students and employees were trained in remote locations and even bussed to the company on a daily basis. The colleges also provided professional development for the "people that we have in the field" (22). This combination of efforts convinced the company to remain in the state and provided the governor and this community college system with a sizeable victory in their economic development efforts.

In the last decade this state system has realized the magnitude of trained workers. According to a community leader, “these workers attract new industry and support existing businesses” (18). Unfortunately, the state has also discovered that many area companies do not have the budget or the will to support such training on their own. In an attempt to achieve the desired result, a trust fund was established by the state to support training opportunities. Each year the state has given away up to \$5 million in assistance to companies (20). On approved projects, the state provided approximately 50 percent of the total training cost. The participating companies have paid the remaining half. Local community college officials often began the screening process and uncovered, “worthy projects” (20). With a simple fax and phone call, the money was released from the state office. The entire process has been completed in as little as two days. This expedient funding support has delighted all of the participating companies according to an executive administrator (20). Furthermore, most of the recipient companies have been in the high-tech arena and a majority of the community college and business training has been for the information technology (IT) sector. A state administrator remarked: “it makes it very attractive to companies to be able to leverage and really extend their internal training dollars by using the state money” (22). According to the SCC Annual Report, this program has created more than 1200 jobs since its inception.

In addition to supporting the infrastructure by helping large existing companies, the community college system also worked with the smallest companies. Colleges and businesses have collaborated with incubators or development centers. These incubators have helped support young businesses with many aspects of their growth. With cooperation between the small companies and the leaders at the college “truly innovative

companies that can scale up” have been brought into the college environment (17). This case demonstrated that these small companies could grow with the assistance of faculty and students from the college. With college involvement and recognition, these young businesses were also more attractive for outside investors and partners. An executive administrator added: “we’re looking for both companies that hear about us and come to us and say, ‘can you do this for us,’ and also actively going out there trying to find companies that need our services” (20). At SCC and throughout the state system, people were excited about the prospects of this trend as a way to grow new jobs and reap the rewards of this growth in their backyards.

Getting A Seat At The Table – Summary. Understanding its infrastructure has helped SCC to get a seat at the table. The state leadership has learned about the infrastructure of the state and its higher education. They have tried to create new economic growth. A plan of interaction and involvement with various people was implemented to access the many opportunities within the state. For the major corporations, their seat at the table was effectively guaranteed by their presence in the state. For the community colleges, however, more effort was required. The college personnel worked to set the table and then managed to interact with the guests. A community leader summarized: “you’ve got to blur the lines between government and higher education and business and industry” (18). This case showed how this could happen – especially by getting a seat at the table.

Changing The State

The second core theme that emerged was changing the state. As discussed earlier, the partnership strategies at SCC were really built on understanding and improving its

infrastructure. A state leader commented: “by functioning as a system then we can really leverage resources” (21). From the colleges working together with area businesses to the statewide infrastructure committee, this case exemplified large-scale cooperation.

Higher education, particularly that offered by the community college system, was viewed as a central means to change the state. The state’s history, including its emphasis on farming and mining, was somewhat antithetical to the new state that many have sought. Changing the state was a broad theme that tied together people from various walks of life. It was about bringing a higher quality of life to the residents. An executive administrator summarized: “We should be educating people, we should be getting knowledge out there. We should make it available to people who have never had it available to them before” (19). At SCC, the changing the state theme involved the sub theme of leveraging resources. The leveraging resources sub theme included the components of skills, outreach, and flexibility. When taken together these helped form the changing the state theme. This theme was essential in how SCC created and maintained successful partnerships with high-tech businesses.

Changing The State – Leveraging resources. The first part of changing the state pivoted on leveraging available resources. What could the community colleges provide to increase economic development and participation? The state government recognized the prominence of education resources in its economic development efforts. An educated population was deemed attractive for relocating companies (18). In addition, as discussed earlier, the state believed that its higher education efforts could spawn internal growth and business. Investing in higher education was an investment in its future. With lower than average demographics and economic statistics, many state leaders were banking on

higher education for the state's future improvement. An executive administrator remarked: "education is the key. It's the way to give people that hope for that future that they desperately need and to give them the kind of quality of life that they only dream about" (19).

Changing The State – Leveraging Resources: Skills and outreach. The workforce was perhaps the paramount resource. In this case, the skills and outreach component were remarkably clear. On assembly lines, in distribution centers, and in offices the people combined with the machines to make the entire process happen. The improvement of this workforce occurred through an emphasis on skills and outreach.

The fundamental dilemma for companies was finding the right people with the right skills. This was especially true in the information technology occupations. A community leader talked about area businesses: "They want people that understand technology, and they want people that can apply that technology to solve business problems" (18). For many companies in the area, internal training was somewhat peripheral to their core business, almost more of a distraction for the managers and executives, according to state leaders (21). An executive administrator asserted: "I think a lot of companies don't put the emphasis on training that they need to" (22). Nonetheless, having a trained and available workforce has remained relevant and essential. For this reason, an instructor at SCC said that businesses are "starting to come around and see what the community colleges have to offer" (18B). This was a real driver in how SCC used skills and outreach.

In the economic expansion of the late 1990s regional business leaders described that finding qualified workers was a significant challenge. In fact, one interviewed

company leader said that some of their employment compensation contracts were inflated by 50 percent or more just to secure qualified workers (23). For example, this company offered technology job candidates a \$75,000 starting salary (about \$25,000 more than the budgeted salary for this position). In addition to high pay, employers also spent less time evaluating the compatibility of the candidate and the organization. Just finding someone with the technology skills almost guaranteed employment regardless of “soft skills” (23). This situation has since changed and during this research in 2002, this story was relayed as an interesting anecdote.

Although the economic climate has changed, business interest on skills and training remained. When considering their employees and community colleges, businesses expected two sets of skills according to the participants in this study (23B). These included “hard” and “soft” skills. The first set was the “hard skills.” These skills included the technical knowledge and comprehension to manage advanced machines and systems. In a recent employer survey the technical knowledge ranked as the highest human resource consideration for companies (23B). Without technical expertise, area companies could not run their equipment whether milling machines or laptop computers. An executive administrator argued: “the company’s interest is in their bottom line and getting employees skilled in the areas that they need” (22). Because these “hard” skill competencies often change, the communication and collaboration between the businesses and the colleges was even more necessary.

The second set of desired employee competencies were the “soft skills.” With the economic slowdown area companies began scrutinizing the “soft skills” of their potential employees. These “soft skills” related more to the person and his or her ability

to interact with the organization and the world. A community leader summarized: “employers are now looking for students that can problem-solve, that can think critically, that can communicate. Certifications are not as important to them. They want people that understand business” (18).

In addition to the company, the college also considered its students’ needs in its skills and outreach interactions. Deemed a training program for the college or a human resource opportunity for the company, this training was all about the livelihood of a student. This was realized during the planning process in this state. An academic manager commented: “We see a lot of partnering relationships and more openness by the educational institutions in the state to be responsive to what their students are going to need down the road” (17). The college needed to provide the right blend of training to ensure greater success among its students. Finally, a college instructor considered the relevance of student and employee skills and argued: “you can bank on the skills that come out” (18B). This confidence flowed from how the college leveraged its resources with its stakeholders, particularly regarding skills.

In addition to the “hard” and “soft” skills of its students, the colleges focused on bringing opportunities and resources to those who were underserved. As mentioned earlier, the socioeconomic spectrum was incredibly broad. According to the participants, some rural areas were among the poorest in the United States. The challenge has been how to break that cycle of family and even countywide poverty. Outreach was a fundamental component of leveraging resources and changing the state. Like most states, there were unequal economic and demographic distribution. According to an executive administrator, much of the business and wealth was concentrated in one or two regional

areas. It was natural then for new businesses to consider these areas for relocation in the state. The community colleges, including SCC, recognized the helpfulness of outreach in spreading the available resources. As one state leader remarked: “our job is community development and social capital development” (21). This social progress and outreach has become a guiding mission for the community colleges.

One example of how skills and outreach affected the stakeholders included a high-tech manufacturing company that decided to locate a plant in the region. This decision was reached after high-level discussions with state leaders, including representatives from the higher education systems. Before the company even broke ground on their new facility, they hired 30 area workers. SCC then put them through 18 months of specialized education and training while the factory was being built (20). The college and the company jointly developed this education and training. When this facility opened, these initial employees led the work and supervised the training of other workers. An executive administrator summarized: “we found a way to get bright young workers in their workplace, and they found a way to provide those bright young workers education” (19).

The geographic distribution of community colleges within the system has been helpful in this outreach effort. The state system has funded community colleges in every part of the state so training opportunities could be offered to new businesses anywhere. According to an executive administrator, almost every home in the state was within a one-hour drive of a community college (20).

This expansive network of colleges was bolstered by many distance education and training options. An executive administrator said: “we need to use technology to shrink

distance. We need to promote distance education in a big way” (19). This concerted effort led to the purchase of mobile computer/technology centers that traveled from community to community. The goal of the grant program for the mobile centers was “to go anywhere in the state and provide training for where the people live, not forcing them to come to the metro areas for the training” (20). After working with people across the state, the community college leaders began to see their initiatives as larger than training and outreach. An executive administrator explained: “I know I can’t provide enough computers to get rid of the digital divide, but if we come in there and take 15 people and improve those 15 people’s lives, with a computer in that home, it’s probably affected another 50 people and we’re making some progress on it” (20). Once again the issue of leveraging resources was apparent. High-tech skills education and outreach were viewed as a way to ameliorate its economic disparities and bridge the “digital divide,” thereby changing the state.

Changing The State – Leveraging Resources: Flexibility. The final component of leveraging resources was flexibility. Although some community colleges have played a larger role than others have, the economic development of the entire state has been the objective for the state’s partnerships. A community leader commented: “I think that everyone has to have a vested interest in the outcome” (18). Much of this interest was rooted in the desire to spread the benefits of growth. Hundreds of thousands of people were “touched” every year by the impact of this state’s education and training through community colleges (19B). These efforts revolved around flexibility in leveraging limited resources.

What did the colleges, businesses, and students want from their partnerships? An academic manager commented: “I think it’s a full understanding of what everybody’s goals are in the partnership. If their goals and expectations are at odds, then the partnership’s not going to work” (17). The primary partners in this state were the community colleges themselves. The community college’s goals were numerous and diverse. A state administrator concluded “the bottom line is really economic development for the state” (22). The state government believed this was achieved by educating students in the fields and programs that would provide them with jobs and careers. This required college and business interaction and flexibility.

The interaction and flexibility was based on a prioritization of possible opportunities and their associated objectives. A state leader mentioned an example from the U.S. Military. Not far from a SCC campus there was an army base with the latest Apache attack helicopters. These new machines were capable of identifying up to 250 targets within a battle zone. The advanced technology in the helicopter allowed the crew to prioritize and destroy these targets with multiple weapons systems. This example seemed applicable to SCC and other colleges. These colleges had to identify targets within their economic development plans. The prioritization depended on countless variables. The most important variable was the partner business because they had priorities of their own. As described earlier, a company that has threatened to leave the area probably ranked high on the priority list for the state and its college system. An executive administrator described that many businesses: “want that quick fix. They have a specific need that they want to address” (22). With knowledge of that specific need, the college has formed flexible solutions.

The leaders demonstrated their flexibility by effectively merging the education and training offered by its community colleges. A state leader said: “we’re trying to build a workforce and increase their skills, and to do that we’ve got to find a way to marry industry-recognized credentials to the curricula of our technical and community colleges” (21). The state leadership decided that nearly all classes whether traditional or training should be given college credit (18B). An umbrella system of general course titles and descriptions was formed. All specific classes, even company training, fell under the most appropriate banner at each of the community colleges. This process was much faster than the creation and approval of specific curriculum with the state education authorities. As an instructor said: “if you’re looking at a formal academic analysis -- there’s always a tremendous amount of time it takes for a class to be written, to be accepted and put in place” (18B).

The rationale for this credit-based system was described as one of value. A state leader remarked: “we offer more credit for non-credit courses because non-credit courses really don’t have a currency value for all the populations we serve, like business and industry” (21). This was another example of the flexibility this state demonstrated regarding its training initiatives. The community college system has become a state resource for credit-based company training. Many companies noticed this systemic effort. The words of an influential software company leader were paraphrased by an executive administrator when he said: “we’re the first place they’ve ever seen where it’s really been done systemically and worked” (20).

The case of one area company and SCC was particularly illustrative. According to a faculty member, this company decided to train hundreds of its workers in some new

technology processes (18B). For budget reasons, the company approached area community colleges and asked for help. With a coordinated system effort, the state agreed to use a specially designed trust fund to help with the cost of the training. With the state's commitment and subsidy, the company received a substantial discount on the training. Interestingly, the lead community college (SCC) in this example did not have the internal resources to teach all of these training sessions. Nonetheless, the college leadership felt committed to the company and provided some of its promised training by contracting with a private company. Consequently, the community college used state money to hire a private company to finish the specialized training of another private company in the community. This example illustrated the flexibility and commitment of SCC and this state to the needs of area businesses. An executive administrator close to the project described: "it's a winning situation for both us and them. Because we're now providing that high-tech training and the next time they want training, they'll again come to us because we were able to provide on a rapid basis" (20).

The community college system demonstrated an ability to work together to achieve results. When questioned about its origins, the response was: "I think that these strategies all developed from a single mission stated by the governor when he took office six years ago and that was to change the per capita income to be at or near the national average" (18). The emphasis on high-tech was seen as a long-term movement, not just a "magic bullet," as one instructor at the college remarked (18B). An executive administrator remarked: "it's a matter of performance, of what we're doing and making sure people know who we are and what we can do" (20). The company examples, including how the state used its money to support private training, proved how serious

SCC and its related colleges took business and industry. In 2001/2002, the SCC system served over 2350 businesses with over 3700 credit courses (SCC Annual Report). This level of commitment has not gone unnoticed in the business world or with its students (23B). A state administrator said: “building our capacity to deliver the training and to be state-of-the-art, to have colleges equipped with the latest technology. You can’t teach people to go out and work in a workforce that’s high-tech if you aren’t high-tech yourself” (22). This state effort has resulted in numerous training initiatives and developments. A student asserted: “there will be a lot of opportunities. I’m pretty much going to be able to write my own ticket” (SCC Marketing Materials). With intense global competition, having a college partner for training has become more critical resource for area workers and their companies. A state leader said: “It’s all about coordination around results” (21).

Changing The State – Summary. System Community College worked diligently to change the state and adjust to the modern economy. It was a complicated and weighty task that leveraged their available resources in an attempt to maximize results. These resources included skills, outreach and flexibility. The state leadership appreciated the significance of education and intellectual capital. A state leader summarized: “in a systemic, statewide way, we are making sure we’re teaching what industry wants and giving our students the technical skills they need to succeed” (21). By leveraging all of its resources, SCC helped change the state. The community college system has been instrumental in the growth of business training. In fact, some in the state government referred to it as the, “crown jewel” in the governor’s administration (22).

System Community College – Conclusion. An executive administrator remarked: “A great partnership here is all about learning, meeting the challenges, making sure that everyone at the table are equal players, and then doing what you say you’re going to do” (20). System Community College challenged its environment. The people in this state tried to get a seat at the table. This effort included understanding the infrastructure, including the people and the various opportunities. All of the complicated partnerships in the state hinged on the participation of people.

With a seat at the table, the leadership worked to change the state. Perhaps hampered by its location and history, this state charged ahead. The leaders sought to change the state by leveraging their resources such as skills, outreach and even the flexibility of the system itself. Additionally, the state highlighted the results that the partnerships delivered. An interesting question and corresponding answer from a state leader was: “What types of changes need to occur? That’s what we’re going to do” (21). The SCC case was certainly unique and provided some useful insights into how community colleges and high-tech businesses form successful partnerships. Perhaps one of its internal promotions, “where do you want to go in life? SCC can help you get there,” underlined this statewide effort. For SCC creating and maintaining successful partnerships with high-tech businesses involved getting a seat at the table and changing the state. It was where they wanted to go.

Closing Observations

Having journeyed far more than a thousand miles in examining Resourceful Community College (RCC), Location Community College (LCC) and System Community College (SCC), I accumulated and produced a sizeable amount of data,

information, and insights. Clearly, the three cases were quite different in many ways. To begin, their histories and geographic locations were unique. Add to this the varying influences of the people and one begins to understand how these community colleges provided valuable insights into the formation of high-tech business partnerships. The opportunity now expands to a more panoramic view. Taken together what was significant about these cases and this study? What were the core themes or critical success factors in the partnerships that all three cases shared? How does this comprehension relate to the literature and other community colleges and high-tech businesses? The following chapter answers these queries.

CHAPTER FIVE: CONCLUSION

Management philosopher Margaret Wheatley once wrote: “everything comes into form because of relationships” (1999, p. 145). In this final chapter, the three cases and all their relationships come into final form. In the following pages, the three core themes emerging from these successful community college and high-tech business partnerships are identified and explained. The existing knowledge from the literature review combines with the case study data and my analysis to form the study’s conclusions.

After reporting the qualitative coding results and core themes of the three cases in Chapter Four, I also examined the entire body of data independent of case and location. In other words, taken together, what did the individual findings mean? What were the overall core themes in successful community college and high-tech business partnerships? The entire open coding was combined into one master list. This list was then narrowed into a shorter conceptual list. Finally, as with each individual case, a brief list of selective codes was developed. With extensive consideration and creative refinement, these final codes have become the umbrella or core themes for this study. The vast majority of the data from the three cases was condensed and synthesized under these final three themes. Some of the data fit perfectly. Without question, some of the data corresponded to more than one category or theme. Although not seamless, these final three core themes fairly represent the data from all three cases. In addition, these core themes help elucidate many of the peripheral observations and understandings gained

throughout this qualitative research project. These pieces help shape the conclusions in this chapter.

Table 4

Three Core Themes

Core Themes		
RCC	LCC	SCC
Getting Out In Front	Taking It To The Streets	Getting A Seat At The Table
Building A Ladder	Skin In The Game	Changing The State
Entire Study		
Eyeing The Prize		
People Power		
Iron Will		

The mating of the core themes from the individual cases and the core themes from the whole study engendered a significant realization related to *Mach's Principle*. This principle was described by Jaworski (1998) as: "the whole is as necessary to understand the parts as the parts are necessary to understand the whole" (p. 82). This chapter helps bring the parts and the whole together. The three identified core themes are indeed the core themes in successful community college and high-tech business partnerships that this study sought to find. As in Chapter Four, these core themes are quite involved. Therefore, each core theme also has sub themes. The sub themes help explain what the themes mean. Finally, many of the sub themes have components. In this way, the information is similarly organized as it was in Chapter Four. The three core themes in successful community college and high-tech business partnerships that emerged in this study were: (1) Eyeing The Prize, (2) People Power, and (3) Iron Will.

Eyeing The Prize

The first core theme was eyeing the prize. Eyeing the prize is all about the future and the ideas of vision and win-win. Eyeing the prize can be readily understood through the lens of sports. During some of this research, the Stanley Cup playoffs were in progress. This hockey championship showcases the simple, yet highly desired, antique silver cup that hockey players from around the globe have coveted for over 100 years. Lord Stanley's Cup, however, is much more than a large trophy or prize. It represents an end goal and a successful season. It is a crowning lifetime achievement in the sport. It motivates players to work hard so they might gain its possession and carry the cup home. In the three cases and the studied partnerships, the stakeholders also valued the outcome or prize. Like the Stanley Cup, winning partnerships represented a desirable conclusion to their hard work. Additionally, this conclusion also embodied various benefits for everyone. In this study, the eyeing the prize theme involved the sub themes of vision and win-win.

Eyeing The Prize – Vision. The first sub theme of eyeing the prize was vision. The vision component flows naturally from the word “eyeing” in this partnership core theme. What do people see? Vision is a defining philosophical and cultural concept to people around the world. An intriguing exercise on varied international perspectives helps bring this word and concept to life. It begins with people being asked to draw three circles. The first circle represents the past and the second circle represents the present. The third and final circle represents the future. The participants can draw the circles in any size and position on the Cartesian plane. The results and implications are remarkable and profound. A person tends to draw his or her circles much like his or her fellow

citizens. It appears that one's homeland and culture greatly impacts his or her perception of time and space. Which circle would you make the largest? Most Americans make the future circle the largest and the past circle the smallest (Trompenaars, 1998, p. 130). This overriding emphasis on the future is a dominant response in American culture.

Why do Americans place so much emphasis on the future and their anticipated vision of it? Why is tomorrow the preferred ripple in the space-time continuum? These are contemplative questions that apply to this study. The creation and maintenance of partnerships is a future-oriented activity. It is about defining a vision, making progress and achieving goals – or winning the prize. For RCC getting out in front was identified as a core theme. As discussed, the people of RCC spent countless hours envisioning, researching, and planning their partnerships. This time allowed the college leadership the opportunity to consider their environment, plan accordingly, and even create a map. At LCC, the skin in the game theme related to the future and their expectations of success. The college leadership was betting on its partnerships to produce desired results for the college. Investing in start-up companies involved a vision of what that company might become. At SCC the entire state system was created for future growth and changing the state was identified as a core theme. Indeed, the community colleges within that state were anticipating future needs and planning for an economic lift. It was a strategy motivated by the ambitious vision to make the state a better place to live and raise a family.

It is helpful to gain a better understanding of what vision actually means. What were the key parts of this theme or concept? How were these discovered in this research?

The vision sub theme of eyeing the prize includes the components of global perspective and individual planning to help further define this important theme.

Eyeing The Prize – Vision: Global perspective. What made eyeing the prize special? Why has vision landed at the top of the list for critical success factors in community college and high-tech business partnerships? By examining the sub theme of vision and its occurrences within all three cases some additional meaning can be gleaned. An executive administrator at RCC said: “we’re trying to look at the whole, big picture” (6). This summarizes what vision encompassed. Vision is about the attempt to gain global perspective and develop a larger view of the future.

Having a global perspective was the first consequential component of vision. People at all three community colleges referenced Bill Gates of Microsoft in their conversations during this study. This may have been related to the fact that these colleges all received sizeable grant(s) that were funded by Microsoft as described in Chapter Three. Still, from their comments, the participants believed that Mr. Gates had a remarkably clairvoyant vision. He kept his eyes focused on the future or prize. As an entrepreneur and the world’s wealthiest man, Mr. Gates has enjoyed unparalleled success.

So, what does he know about a successful vision? Mr. Gates has answered this question. To paraphrase his answer at a conference in 2001, he said: what I do best is share my enthusiasm with the world. There are at least two salient aspects to this statement. One, Mr. Gates is optimistic. This enthusiasm has probably emerged from his understanding or perspective. Mr. Gates is rumored to spend a few weeks every year in quiet contemplation. He also uses the time to read countless periodicals and books. His optimism definitely relates to the future and his vision of it. Two, Mr. Gates immediately

references the entire world in defining his personal vision. Add his global travels to his academic and intellectual prowess and one begins to appreciate his reputation for having a far-reaching perspective. His company's products are sold in every nation and even make their way out of this world aboard spacecraft. Microsoft and Bill Gates think big and far ahead.

Like Bill Gates and Microsoft, the people of all three community colleges and their partners shared a global perspective. Although definitely distinct in their geographic locations and economic surroundings, the people in the partnerships displayed an understanding of modern business and life. Administrators and academic managers at all three sites discussed the global economic slowdown and recession of 2001 and 2002. The dramatic drop in high-tech stock valuations in the U.S., Europe, and Asia directly impacted these colleges. For many universities, a 50 percent drop in the market value of Intel stock might be little more than an illustration in a financial accounting class. But, for these community colleges, this drop could signal the need for new training programs, additional opportunities for interns, or increased community outreach. The people at these colleges recognized how connected they were within the larger community and world.

At RCC administrators continually interacted with up and coming businesses and students to gain perspective on future trends. A college marketing piece labeled as, "Your First Quiz," asked, "where do you want to be tomorrow ... next month ... next year?" In fact, RCC's partnership ladder defined the community college and the high-tech businesses as parallel rails. In essence, then, their future was joined by the people (rungs) connecting their organizations. The perspective was far-reaching. At LCC the high-tech

incubator provided a close up view into the companies of tomorrow. The faculty and administration took it to the streets to gain a broader perspective. Finally, at SCC the committee in telecommunications and networking infrastructure tried to get a better vantage of the state and its course. This process involved key leaders from various occupations. Even people from other states were brought in to better evaluate their infrastructure and programs. Together, these colleges believed that by trying to understand the world from a larger perspective they increased their vision. Microsoft once promoted the slogan, “where do you want to go today.” This question encompasses the global perspective component and leads to the next component – individual planning.

Eyeing The Prize – Vision: Individual planning. Individual planning was the second component of vision in this study. A global view and a corresponding awareness can easily precipitate some degree of fear. An unstable and seemingly chaotic environment has made daily work more challenging than ever. The recent alarm in the world caused by the 2001 terrorist attacks underscored this reality. Fortunately, effective individual planning helps organizations understand their roles and how they can best move their vision forward, even in the face of turmoil.

The word “individual” is used in front of planning for a reason. An effective vision cannot be borrowed from another person or organization. It must be based on the perspective and unique identity of the individual organization. Young (1997) cautioned community colleges about trying to easily replicate successful partnerships or plans from other places. Returning to sports, the vision or “eyed prize” for a National Football League (NFL) player is certainly distinct from a National Hockey League (NHL) player. This fact alone necessitates a different individual plan. Twenty years ago, a college might

have gathered its leaders to discuss a strategic plan. This process probably occurred behind closed doors, perhaps every five or seven years. Today, the tumultuous atmosphere of the world makes this long-term planning somewhat academic and maybe even obsolete.

The three studied community colleges made strategic individual planning decisions and choices everyday. Many decisions were affected by external affairs. Consequently, multiple stakeholders were included in the planning process from students to corporate executives. At RCC instructors and administrators used the phrase, “fly by the seat of our pants,” on more than one occasion. This fast individual planning and execution has become the norm. Today’s community college simply cannot take its time in fashioning plans and strategy. The extreme competitive forces and political pressures necessitate rapid individual planning and quick response. At LCC administrators traveled to conferences to better understand and meet its planning objectives. An executive administrator at LCC declared, “we are continually developing innovative programs designed to meet the demands of a rapidly changing work environment” (11). An academic manager at SCC addressed individual planning and proclaimed, “if the market’s going one way, and your business plan another way, you have to get all your partners together and make sure you’re all hitting the right target” (17). In the literature, Perreault (2000) confirmed the significance of careful planning in obtaining quality partnerships. This interest in the future and “looking ahead” was considered a key factor for Jaffe (2001) in small business partnerships. Finally, Block (1993) carefully considered purpose and this clearly relates to vision.

The combination of a global perspective and rapid individual planning forms the basis for vision in this study. Vision was the first component of eyeing the prize. A vision, whether for the college, the community or beyond can change everything. With a clear and broad vision, the orientation of the college leadership moves to the future. What can the community college be? What is possible? These questions relate to the American philosophy regarding egalitarian education that was spawned by the Enlightenment in Europe and discussed in Chapter One. These questions were also fundamental to the growth and expansion of all three colleges. The studied colleges did not seem overly concerned with past precedents. They were interested in what they could become and perhaps more importantly, what they should become. The future circle was the biggest.

At the first case, the promotional line “find your future at RCC” was used. This statement exemplified the global perspective and individual planning that vision encompasses. For the students, the future is not limited to the community college; it is only bounded by the student’s vision and his or her desired place in the world. At LCC a student said, “I think you have to keep focused on why you’re there and what you’re trying to do” (15). These questions point to an individual understanding of the future. The Danish philosopher, Kierkegaard once said, “life must be lived forwards, but can only be understood backwards” (Forbes 1989, p. 491). This statement buttresses the need for vision in any organization. The revelations of these colleges were achieved through constant exploration and forward discussion. In the reviewed literature, one of the prominent factors in partnerships was a future orientation. These colleges showed a strong future orientation.

Eyeing The Prize - Win-Win. The second sub theme of eyeing the prize in successful community college and high-tech business partnerships was win-win. Vince Lombardi, the legendary Green Bay Packers coach, reportedly said, “winning isn’t everything, it’s the only thing.” This mentality is perhaps more prevalent now than it was during Green Bay’s winning streak in the 1960s. Americans love to win. If not a personal obsession, millions of people watch professionals compete for victory in various sporting events everyday. In addition, some of the most popular television programs in 2002 and 2003 documented how regular people competed for dates in Malibu mansions or for a million dollars on a rugged and remote Tropical Island. It would seem that everyone loves a winner.

In sports, a competition almost always produces a winner, who gets the prize, and a loser, who gets nothing (or at least a lot less). This all or nothing tradeoff makes sporting events exciting. The use of “sudden death” overtime in American football trumpets this fact of competition. This hyper competitive framework has also dominated modern business and economics. Many 1980s movies portrayed the zero-sum game principle of competition. In a nutshell, this principle holds that for every winner there is a loser (Thomas, 1990). The winning total is offset by the losing total so the sum is always zero. This hypothesized outcome virtually guarantees intense competition to become the winner. This principle remains the preferred paradigm in many business circles. Morris (1997) labels competition as only the second stage of relationships. It is marked by “rivalry and mixed motivations” (p. 61).

In the literature surrounding community colleges, business, and economic development this competitive climate was stressed. The emergence of private colleges

and training organizations was mentioned as a threat to public community college survival (Ryan & Lane, 1998; Justus, 2000; Newman, 2000). Justus quoted Carol Bothwell (a Vice President with Computer Science Corporation) when she said, “In today’s economy, the ability to learn faster than the competition and to leverage knowledge effectively is the only source of sustainable competition advantage” (p. 6). The levels of public funding for community colleges have also become a competitive factor and certainly involve the “mixed motivations” described earlier by Morris. In addition to public funding, economic development in general points to competition. A company can only locate its plant or offices in one community at a time. In 2001-2002, the business press had extensive coverage on Boeing and its corporate relocation from Seattle. Although only affecting a few hundred people in its massive workforce of tens of thousands, the competitive battle between Chicago, Dallas, and Denver was intense, with Chicago ultimately landing the aircraft company’s headquarters.

The alternative philosophy to the uber-competitive paradigm of win-lose is win-win. Most people are so accustomed to the win-lose framework that win-win seems illogical at first. Case in point. A novice negotiator or a sports fan might ask how there can be two winners? In the finals of the National Basketball Association (NBA) tournament only one team can be crowned world champions. Although true from one perspective, these examples are somewhat narrow. Outside of sports, win-win is much easier to grasp. Win-win is possible due to the heterogeneous nature of human needs and wants. People obviously seek different objectives in life. When a person buys a cup of coffee, she gives the bistro owner a couple dollars (maybe more) in exchange for the beverage. It is quite likely that both parties will close the transaction by saying, “thank

you.” This is because both parties won. The buyer wanted coffee more than her money and the seller wanted money more than his coffee. This demonstrates the simplicity of an elegant win-win solution. It also shows how the basic free market economy functions. An open market gives everyone the chance to pursue what he or she wants. In this study, understanding the win-win portion of eyeing the prize rested on understanding the different demands of the parties and how positive results were obtained for everyone.

The win-win paradigm also assumes results. Winning is about making progress, reaching milestones, and getting the prize. Perhaps the best frame of reference to view results is through interests. The classical economist Adam Smith described self-interest a few hundred years ago. Smith’s ideas held that the collective self-interest of a society results in overall economic progress, although unintended by the individual (Sievert 1997, p. 18). Stated a little differently, the world (or at least the economy of the world) turns because billions of people are just looking out for themselves. Starbucks was formed to make a profit for its investors by selling coffee and satisfying its customers – period. In the process of doing business, however, new buildings are constructed, people are paid salaries, and sales tax is collected. All of these activities drive the economy forward. It all begins with an individual and perhaps a cup a coffee. The theories of Smith in economics and even human behavior remain a centerpiece of business education today.

In recent decades, however, fresh perspectives on the issue of self-interest have emerged. The game theories of Nash and others in the literature have given researchers and practitioners more to think about with respect to results (Wylier 2003, p. 42). Nash opined that competitors could cooperate to achieve optimal results. For example, how can a restaurant’s business increase with the construction of another restaurant nearby?

Although counter-intuitive, it seems that two or more restaurants make a location a mealtime destination and this helps both businesses. So, with a broader perspective in place, does limited self-interest promote the best solution? An executive administrator at RCC related: “competition and collaboration are difficult to combine sometimes” (6). The community colleges and the high-tech businesses were successful in understanding how collaboration with each other helped them achieve their individual goals in a competitive market.

The win-win concept of this study was related to some contemporary business partnership literature. In the late 1980s, Stephen Covey declared “win-win” to be the “Fourth Habit” of highly successful people (1989). It has become a popular mantra in recent years. Win-win appeared to be the motivational drive behind the studied college partnerships with business and industry. The parties from both organizations hoped to realize their goals by helping each other and without diminishing the other party. A business leader from the SCC case told me that the process is similar to lighting a candle from another candle (23). After the two wicks meet, both parties share the benefits of light without either party losing anything. In the partnership section of Chapter Two, the win-win philosophy was pronounced. Kanter (1994) illuminated the long-term and mutual benefits of partnerships. Pappas (1998) quoted David Kjos, a manager with Kaiser Aluminum and Chemical Company:

Linking the resources of higher education with business requirements enriches the area’s economic viability and ability to compete in the global market. Companies benefit from access to new knowledge and technology, the educational community benefits from hands-on experience and the community benefits from increased high paying, technological jobs. It’s a win/win/win situation (p. 7).

Morris (1997) called this win-win arrangement the highest form of human relations. Unlike win-lose competition, he characterized win-win with “synergistic interaction” (p. 61). Finally, Dent (2000) explained a “win-win orientation” in his article on smart alliances.

Like the coffee shop participants referenced earlier, community colleges and high-tech business have different demands and goals. They want different prizes. This diversity of needs and wants sets the stage for win-win solutions. This proved true in all three cases. At RCC the college and the state entered a win-win agreement for the construction of a new building on campus. Both parties got what they wanted. The leadership of the college confirmed how well they understood their environment by arranging for the fulfillment of the state’s needs while supporting the growth of their college. Furthermore, RCC’s relationship with a major software company also showed a mutually beneficial solution. In exchange for training students in a new program, the college received free state-of-the-art software and additional financial support from the software vendor. The RCC students won because they received this valuable training and the associated job opportunities. All three parties had different needs, which were satisfied through the win-win, or in this case, win-win-win partnership.

Improvements or win-win results were common in the other two cases also. The president at LCC also set ambitious fundraising milestones and recognized the contributors. For one donor, getting her family name on the building and contributing to the college’s future was a greater “win” than the \$30 million the building could have fetched on the open market. At SCC the state leadership continuously monitored the progress of the system colleges and the state in general. Keeping score was a way to

assure the stakeholders, and the critics alike, that the partnerships were working. The benefits or wins needed to be demonstrable. In the literature, Elmuti and Katahwala (2001) outlined some of the potential wins or benefits that alliances can bring. These included new markets and technologies.

The participants and data at all three cases confirmed the importance of win-win or mutual benefits in their vision and efforts eyeing the prize. When the colleges and business leaders began with this paradigm, the entire relationship seemed to work better because both parties were concerned with more than just their own organization. The business leaders discussed how the community colleges worked with them. The explained rationale of the community college leaders blended an understanding of the market with a non-competitive desire to support the companies and their objectives. These studied college leaders appreciated that if their partner companies were successful then good results flowed to the college. The corollary for the company was also true, giving this situation the win-win component.

Eyeing The Prize – Conclusion. Eyeing the prize was a core theme in successful partnerships between community colleges and high-tech businesses. Without question, this theme was quite involved and included multiple parts. The most critical sub themes were vision and win-win. Together they formed the essence of eyeing the prize. The study participants showed that vision involved a global perspective and individual planning to be successful. In addition, the win-win sub theme illustrated the importance of winning while understanding how different stakeholders perceived the partnerships and the benefits. Like in sports, the participants in these three cases – including the community colleges, high-tech businesses, and other organizations – kept their eyes on

the prize. Perhaps the real prizes were the partnerships themselves, for these partnerships generated the desired results for everyone.

People Power

The second core theme in successful community college and high-tech business partnerships was people power. A creative science-fiction story helps clarify the meaning of people power. If aliens from another planet were to visit Earth, they would find a curious situation. The initial appearance from space would indicate a blue and white planet with large oceans, cloud formations, and several continents. Upon closer inspection, the visitors might see interesting features such as the Great Wall in China or the Hoover Dam in Nevada as well as the intermittent illumination of selected areas on each of the large landmasses. Improving their view, the aliens would also see major cities and transportation corridors connecting them. These cities would reveal large buildings and countless vehicles. The final analysis would prove the presence of sophisticated animals called humans who generally live and work in the cities.

This macro-thought piece on aliens helps remind the reader of his or her powerful place on this planet. In millions of years, humans have continuously produced and shaped their future. From hundreds of miles away, astronauts can now see the effects of electricity and lighting around the world. It is an astonishing achievement. Humans, largely through cooperative means, have recently accomplished the unimaginable. Even the great Renaissance thinkers might be surprised by today's computer and electronic inventions that are measured in microns and yet run almost every machine on Earth.

Like a planet, a community college or high-tech business is a special place. These institutions have various features and functions that define their role. The common

denominator is people. People power these organizations. As described in Chapters One and Two, corporate America is constantly seeking new people with the right skills. The expectations for future employees are in almost constant flux. Without its employees, even the multi-billion dollar Microsoft is nothing more than hollow buildings and vacant cubicles. Human resources shape the organization. The structures of modern organizations, including community colleges and businesses, give form to the dreams of people. Morris (1997) commented, "By developing, maintaining, refining, extending, and improving business structures, on whatever scale, we give people the means of discovering, developing, and utilizing their innate talents" (p. 104).

Although modern society often creates organizational labels for purposes of clarity and classification, the key ingredient is the people. For example, when a financial commentator on CNBC tells his viewers to sell Cisco stock, it is about more than a four-letter ticker symbol on a trading exchange in lower Manhattan. The real translation is that this commentator has lost confidence in the people of Cisco. Perhaps the thousands who work at Cisco are not producing what the market is demanding or maybe the leadership made some bad strategic decisions. Their failed efforts might have triggered the downgrade of the company and its stock. The judgment of the on-air pundit absolutely affects the employees and the thousands of shareholders who actually own the company. It is amazing that such a simple television event can require this length of analysis to understand where the people actually enter the picture. Alas, to the average person, the faceless organization has become the norm in America.

All three cases verified people power in their operations. This recognition was made quite early. Considered a nominated college or case at the airport, these institutions

quickly became the combination of the interviewed people and their personalities. The organizations developed personal faces. It is now impossible for me to discuss the organizations without picturing their people.

At RCC the people were involved in everything. Within minutes of beginning each interview, the names of additional people who had been involved in various partnerships at the college were documented. This was an example of the “snowball” sampling described in Chapter Three. It was immediately clear that people dominated their partnership paradigm. At LCC the people understood their role within a city of millions. The business leaders there were blinded at times by the vast number of nearby stakeholders. The college leadership has worked to be a part of the “corporate club” in the area by bringing clarity to the business people regarding the college and its capabilities. At SCC the cultural norms dominated the interactions. People seemed friendly and respectful to all of the other stakeholders. An executive administrator wrote that: “SCC changed lives, and the future of the state for the better” (SCC Annual Report). Once again, the emphasis was individual lives and how this impacted the larger region or economy.

Turning to the literature, Wheatley wrote: “people support what they create” (1999, p. 68). Perhaps this explains the involvement and excitement recorded at the three sites. The interviewed participants had a hand in the creation and maintenance of their partnerships. The people power theme was fundamental. Outsiders, whether space aliens or CNBC commentators, would have been impressed with how these colleges formed their partnerships and the benefits that have been empowered. An executive with a large software company instructed the leadership of RCC, “you’ve got to learn how to use your

people better” (1). In this study, the people power theme involved the sub themes of executive leadership, teamwork, communications, and integrity.

People Power – Executive leadership. The first sub theme of people power was executive leadership. America is passionate about its leaders. The President of the United States is good example. Almost weekly, a poll is conducted and released regarding the President’s job approval rating. This number goes up and down with changing events and public perceptions. This number is vital to the candidates in their campaigns. Large companies and sports teams also have notable leaders. Even now, it is hard to imagine General Electric without thinking of Jack Welch or Apple without Steve Jobs. Even after their retirement, Americans like to know who is in charge – the executive leader. Babe Ruth is forever connected to the Yankees and Michael Jordan to the Bulls. Having a strong leader helps people relate to the organization.

This phenomenon was also applicable in these cases. The presidents or leaders of all three colleges were strong figures. The presidents outlined a compelling vision for their colleges and their communities. This vision was shared with many people at the college and beyond. The other stakeholders helped the college presidents in the clarification and focus of their grander visions. At RCC the CEO visit was an essential part of the executive leadership. The president spent time each month visiting with business leaders about their organizations and the college. Almost every participant mentioned the president and the administration of the college as an encouraging force in the partnership process. Even alone with my guaranteed confidentiality and me, the faculty and academic managers complimented the vision and diligence of their executive administration. It appeared that the excitement and hard work of the administration

empowered other people to create the change they wished to see in the organization and the community at large. This directly related to the RCC themes of getting out in front and building a ladder. The president was the one out in front and also formed the first rung of their partnership ladder. This first rung was the most difficult as it involved bringing two independent rails together on a close and parallel track. There were no preexisting ties to make this alignment process easier. It rested with the executive administration and their corporate counterparts. At RCC it was the president who “wants it to happen, who makes it happen and does it” according to a community leader (5).

The process was remarkably similar at LCC. The LCC president indicated that he spent significant time with community boards and organizations. These groups have helped him develop relationships with top business executives who have supported the college. Through these interactions, he was introduced to start-up companies that needed help. The president at LCC has also committed the college’s resources or “skin” to helping these companies. These executive relationships have also occurred because of LCC’s commitment to taking it to the streets. Even beyond the president, other college leaders worked to build executive level relationships with area businesses. An academic manager commented that it was about “having someone at the top who recognizes that if we’re not getting a good report from business, we’ve got a problem” (14).

Finally, at SCC the executive leadership portion was noteworthy on a broad scale. When encouraging companies to relocate or to build in the state, top representatives of the community college system were always, “at the table.” Even the governor in this state was closely involved in this process and put a recognizable face on the economic

development and business partnership work. This top-level commitment was helpful in the state's attempts to attract and retain companies in high-tech fields.

In the literature, Wharton (1997) wrote about the consequences of the leadership being involved and committed to the performance of the business community. The leaders at the three community colleges were aware of their significant public roles. They helped give their community colleges a recognizable face within their communities. This supported the work of the college in creating partnerships, attracting students, and generating additional funding. Taking a leading role in the community was essential in gathering support from area companies and organization. In the three cases, this executive leadership at the top held the framework in place for additional teamwork in the relationships.

People Power – Teamwork. Teamwork was the second sub theme of the people power ingredient. Although America is perhaps obsessed with celebrity leaders, most people realize the importance of teamwork. Without an army, even the President does not have much power as Commander In Chief. The same is true of corporate and sports leaders. A leader cannot do it without his or her team. With a foundation of strong executive leadership, a powerful team can accomplish remarkable goals by working together. It has been said “many hands make light work.” This was apparent with the teams in this study. Together they formed webs of connections that facilitated easier and more effective interaction.

The analogy of a spider and its web is worthwhile to examine in the context of people power and teamwork. In the literature, the process of networking and the existence of complex webs were discussed. In the section on higher education and

business relationships in Chapter Two, Walshok (1997) illustrated “webs of talent.” The author showed how the teamwork in the San Diego area precipitated positive effects on business growth. Dent (2000) wrote: “partnerships are systems, rather than simply parts” (p. 35). Wheatley (1999) also discussed the emphasis on the whole system and its chaotic or web-like connectedness. Regarding this involvement, including multiple connections in the partnership literature, O’Dell and James (1999) wrote: “according to some research, failure to include all key stakeholders may be a significant factor leading to the downfall of some collaborations” (p. 41). Helgesen (1995) also wrote about the importance of inclusion and involvement in building strong organizations. The spider and its web provide a valuable example, which is supported by the literature and these cases.

Continuing the spider example and its relevance to teamwork, in the past decade leading scientists have begun to recognize the unbelievable strength of a spider’s web (Forbes, 2001, Online). Unfortunately, gathering substantial quantities of natural spider silk is almost impossible as spiders do not produce enough and do not function well in a controlled production environment. A Canadian company has pioneered the technology for producing large amounts of refined spider silk in the mammary glands of goats. It is a brave new world. Many times stronger than steel in testing, this silk has even outperformed DuPont’s Kevlar (the material used in bullet resistant vests). A rope (perhaps just the thickness of a human finger) of this new spider silk can lift the weight of a Boeing 747 off the tarmac (Forbes, 2001, Online). This real world example demonstrates the powerful and natural strength of a spider’s web.

Like a spider, the people at all three community colleges worked thoroughly to build a network of strong connections in their teamwork efforts with business. The

department and program leaders at these colleges worked together to achieve common objectives. This helped the colleges to capitalize on the breadth and depth of available knowledge within their teams. The profiled colleges were also willing to ask for help in their planning and execution. The role of advisory boards at each of the colleges underscored the significance of outside expertise and teamwork. The advisory boards helped the studied colleges with their direct knowledge of business, technology standards and trends while providing the human resource connections. The interviewed people at all three sites were upbeat and enthusiastic about their jobs and the direct impact they had on students and the community in general. They believed that the strong ties and linkages in their partnership work helped improve the community.

Indeed, the teamwork at these colleges and businesses engendered powerful results. When imagined in a visual or graphic form, the structure of the studied relationships became similar to a web in its structure and function. When asked about the current status of a partnership, an executive administrator at RCC could not define its structural and practical limits. Upon closer scrutiny, this person revealed that so many people were involved that it was nearly impossible to recount all of the involvement with two major companies. In fact, the network or web of contacts was so broad, the college was purchasing software to track all of its contacts with their partner companies. At LCC the intense physical proximity of its corporate neighbors necessitated having its people “on the streets” everyday. The companies could not be forgotten because they were so close. The urban environment was its own web of interconnecting people, organizations, and even infrastructure. At SCC the state system produced a network of colleges with a common hierarchy. A community college administrator was recognized by the governor

and his staff for his team's business development work with a software company. This interconnectedness was a powerful motivator for additional teamwork. The entire SCC system relied on teamwork. A state leader maintained: "we can do more things at the systemic level" (21).

These various interpersonal connections were mined by these three community colleges. RCC has used its research into skill standards as an avenue into a broad array of high-tech companies and other colleges. Personal connections with numerous business and community leaders have resulted from a dialogue about necessary work skills. In fact, an RCC participant displayed perhaps 100 of his name badges from conferences and events he had attended with various organizations. LCC administrators have also traveled across the nation to develop relationships at conferences and tradeshow. At SCC the entire system has sent its economic development prospects to the influential leaders in its state government. All of the interviewed people at the three sites were involved stakeholders who believed in teamwork and the connections that tied them together with their partner institutions and society at large.

In closing the sub theme of teamwork, it is instructive to step back. For decades a common bit of employment advice has been "it's not what you know, it's who you know." Although probably overused, like most clichés, there is some truth contained in this admonition. In a world of over six billion people it is difficult to communicate sometimes. There is so much noise and chatter. The quaint little town portrayed in old movies has been relegated to sentimental history. Knowing everyone in town is largely unheard of in 2005 (not to mention impossible in places like Los Angeles and New York). Nonetheless, as Wheatley wrote: "great things are possible when we increase

participation” (p. 46). McGregor (1998) surveyed the importance of commitment of quality people within the organization. Participation and teamwork form the ties that support the activities of community colleges and high-tech businesses.

People Power – Communication. The third sub theme in the people power theme of successful community college and high-tech business partnerships was communication. Communication is one of the most fundamental aspects of human life. People feel the need to explain and to be understood. It is essential in developing the executive leadership and teamwork just discussed. Ancient Greek philosophers, including Plato and Aristotle, communicated in open-air forums and then documented their communications about man’s social nature in books. On a daily basis, humans communicate on so many levels. From long letters to instant online messages, most people are never out of touch. At all three colleges, mobile phones were popular tools of modern communication. Busy students used their cell phones as a lifeline to work and family in between activities and classes. At RCC I had a conversation about a popular promotional slogan for Verizon in 2002 – “can you hear me now.” It seemed remarkably apropos at this well-connected campus.

Communication is elementary in any relationship. Effective partnerships provide each party with the opportunity to communicate and exchange meaning. It has been recounted in the popular press that long-term marriage partners rarely need to talk, especially during a common event such as dinner. With years of experience and acute powers of observation, they communicate without saying many words. Ironically, this subtle and advanced communication can be a problem in itself if one or both parties are not sharing their actual thoughts. An academic manager at SCC explained their

partnership communication. He said: "It's a lot like a marriage. You're communicating as you're reaching your milestones and as you're learning new aspects of what you're doing in the partnership" (17). This phenomenon was also seen in the literature on forming new businesses. According to Jaffe (2002), communicating and resolving differences were imperative tasks in small business partnerships. In this study, the communication sub theme included the components of listening and feedback and marketing.

People Power – Communication: Listening and feedback. The first component of communication was listening and feedback. It is said that when one listens, he or she is open to learning. Unfortunately, listening is a skill that most American schools forget to teach. In K-12, teachers spend years helping students with their reading, writing, and speaking. Alas, one of the most meaningful skills, listening, is somewhat forgotten. From a cursory review of popular culture it would seem that most Americans want to be heard. Daytime television shows are filled with people telling everyone about the sordid details of their private lives. Rap music artists want their young listeners to relate to their frustrations with other people and the seemingly unjust world. Even on the now syndicated and popular television program, *Frasier*, the title character commonly exclaims, "I'm listening."

On point, the people at community colleges and high-tech businesses also want to be heard. Many of the interviewed college personnel recalled the surprise from area businesses when they were first contacted. Most business leaders were not accustomed to having someone call, willing to listen to their needs and wants. For the business leaders, this communication with community college personnel was new and refreshing. It was a positive and welcome change from angry customers, suppliers, and difficult stakeholders.

The business leaders also returned the favor and dedicated time to hear more about the community colleges and their situations.

Listening directly relates to understanding. During many communication opportunities, at least one party is so eager to be understood, he or she forgets about the other party and likely loses any meaning or understanding in his or her words. This directly applies to Steven Covey's "Fifth Habit," which is "seek first to understand and then to be understood" (1989). It also mirrors the St. Francis Prayer. Effective relationships are built on mutual understanding. The importance of mutual understanding was communicated at all three sites. Allowing the other parties to express themselves first gives the listener a better sense of the situation. In complex business negotiations, listening can be a real advantage. A skilled communicator adapts his or her comments based on the new knowledge he or she just gained from listening. In the studied cases, this occurred with the businesses as they explained what employee skills they were looking for. In all three cases, community college leaders gained an understanding of business needs before offering particular solutions. Listening was a good first step in communication and involved feedback.

The listening and talking phases of communication often progress into successful interaction with feedback from both parties. For this study, feedback was specific information that was relayed with the intent of improving future outcomes. This feedback process can become dialogue. Dialogue has been defined as, "the flow of meaning" (Senge, p. 10). This level of communication helps everyone in their efforts to improve and grow the relationship. An instructor at LCC said: "it was something that we really

just took for granted, people tell us, this is what we need; this is what we want, and we say, ‘okay, we’ll try to give it to you’” (9).

At RCC the advisory committee members were invited to college events to get their feedback. In addition, they frequently interacted on a friendly level with instructors and academic managers. The college not only asked for feedback, it also watched for it. Through shadowing and observing, the college personnel learned about area businesses. A business leader expressed his appreciation about an exclusive yearly meeting with the college president (8B). He felt it demonstrated a long-term commitment to business and their needs. At LCC a faculty member commented that his partners were just a phone call away. Their friendly communications involved feedback as a natural part of the conversation. Although not as formal, this listening and feedback was perhaps equally productive. Finally, at SCC, the business leaders were treated to luncheons and other events where state economic development people and community college representatives were listening and available for feedback. An executive administrator at SCC commented: “We need to be even more market driven by business and industry” (22). This focus on the market meant listening and feedback.

The three cases also confirmed the prominence of forming feedback channels. What was the experience during and after the relationship? Where could the college improve its performance? How can the relationship provide better results? These leading questions provided valuable feedback for these colleges. LCC personnel not only asked their partners but their students also. A LCC student remarked, “I happen to be very open, and talk to people, you know, that’s the whole point” (15). In addition, these feedback and assessment channels confirmed the commitment of the college to its partner

and the success of everyone, including the students. As one business leader in this study said, “it’s always the restaurants with good service and great food that have the comment cards available on the table” (23B). The desire to listen and get feedback speaks volumes about the organization. This was observed at all three sites.

People Power – Communication: Marketing. The final component of successful communication was marketing. By definition, marketing is a broad business field, sometimes including the elements of product, price, place and promotion. Perhaps its most recognized component or, “P,” to use the marketing nomenclature is promotion. Promotion relates to the creation of a specific communication message for a targeted audience. Since the organization pays for this message, it usually spends time and effort in developing the best promotion possible. For many companies this marketing message becomes a cultural symbol or phrase in the form of a trademark. For example, BMW has used the slogan “The Ultimate Driving Machine” for decades. The management of BMW often asks its designers and engineers whether its new products live up to this reputation and marketing-inspired brand. This type of marketing not only promotes the product but also ensures that the company is successful in delivering on its promotional message.

Historically, community colleges have not spent substantial sums of money on these marketing or promotional efforts. This could be changing. With the multiplication of higher education institutions, including private colleges and training providers around the world, community colleges are facing new competition from various directions. Add to this the exploding trend of distance education and the outlook becomes even more jaded. In Chapter Two, Ryan and Heim (1997), Stone (1991), and Doucette (1998)

helped define this competitive marketplace and the potential consequences for community colleges.

The community colleges in this study developed their marketing and promotion in an effort to increase their success, including partnerships with high-tech businesses. RCC tried to build its branding efforts around its high-tech capacity and program offerings. This was seen with its Training Institute and skill standards relationships. The Training Institute even created a colorful brochure with well-chosen photographs and corporate style communication bullets. The skill standards were combined and presented in thoughtful manuals that were sold across the nation. Also at RCC, for example, a large software company used the campus to film a promotional video. This cooperation was free for the college and even instructive for several of its students. In return, however, RCC received additional promotion and support from the company. An academic manager said: "I am motivated to seek more partnerships, to seek more opportunities so that I can be more resourceful" (3C).

The people of LCC took its promotion a step further. In addition to its more traditional communication efforts, LCC secured billboards and transportation placards around the city with its picture and a carefully crafted message. In fact, an executive administrator explained that some of the pictures were partially artificial (modified on computers much like celebrity photos on magazine covers) to give the college a more favorable view (11). For example, a scenic attraction was moved to create a more attractive billboard and message for the college. Of the three cases, SCC and its fellow colleges in the state were probably the least involved in this type of marketing communication. Perhaps this related to their systemic approach and the challenge of

creating a promotional message for the whole state including rural and urban areas. It is a place for additional research.

In this study, the communication sub theme of people power involved the components of listening and feedback and marketing. These communication efforts helped the colleges to form their partnerships. Once operational, these components assisted the people in the partnership to grow in their knowledge of each other and the larger competitive environment.

People Power – Integrity. The final sub theme of people power was integrity. Like any relationship, successful community college and high-tech business partnerships demand integrity. The studied partnerships began with personal relationships. These personal relationships were built on trust and integrity. The significance of the partnerships went beyond the financial resources of the collaboration, however. Tom Brokaw once said: “It’s easy to make a buck. It’s a lot harder to make a difference.” The concept of integrity is somewhat hidden in most relationships, but its presence is elementary to the entire partnership. Integrity makes the relationship more powerful all by itself. In this section, integrity and trust are briefly explored.

Today in America, whether buying a piece of fruit or an expensive automobile, there is a general assumption of integrity in the relationship. Americans trust that the local grocery store has edible fruit in its inventory. People understand that the government, shippers and growers also share responsibility for the safety of this simple piece of fruit. With this trust, the agriculture and food industries of the nation conduct their business. The same phenomenon is true with automobiles. Voluntary nationwide recalls costing millions of dollars prove how much companies value integrity in the

market. In most industrialized nations, there is a certain expectation of trust in everyday business relationships – even when the buyer and seller never physically meet – perhaps in 2005 this is the EBAY model of commerce and integrity.

The Tylenol case from the 1980s has become the archetype in understanding integrity and the preservation of trust with a large organization. Faced with several cyanide-tainted packages and some severe health consequences for several people, Johnson and Johnson (parent company of Tylenol) ordered an unprecedented nationwide recall. Millions of capsules and pills were collected and discarded even though the number of tainted packages was infinitesimally small. The company proactively valued the public trust and put its substantial financial concerns aside. In addition to the recall, the company developed state-of-the-art packaging to prevent future tampering. All of these industry-leading efforts strengthened the image and integrity of the company and preserved the product's trust. Tylenol sales quickly grew beyond their pre-contamination crisis levels in the years following the tragedy (Thomas, 1990).

In the literature, the importance of integrity and trust also comes to light. Sturgeon (2000) summarized: “Successful partnerships require a few essential ingredients: a common interest, followed by an integrity that supports trust” (p. 21). Dent (2000) and MacMillan (2000) mentioned trust and mutual commitment in business relationships. Without question, trust and commitment were critical to the long-term relationships that Kanter (1994) described. Additionally, Block's (1993), five elements to effective partnerships revolved around integrity and include, honesty, accountability and no abdication (p. 29).

Integrity and trust are equally important in any college and high-tech business partnership. The relationship needs to be built on this foundation. This was particularly true for the community colleges and high-tech businesses in this study. The first party in the relationship needed to understand that the other party had ethical standards rooted in strong convictions. For the college and the business, these standards should be defined early on. All of the individuals within the organization should then uphold and exemplify these standards which they helped create.

The leaders in all three cases demonstrated integrity as they created their partnerships with high-tech businesses. At RCC the college personnel simply told their partner companies about their current situation and how their objectives fit into an overall vision. This honest communication and assessment reinforced the perception of integrity. It flowed from RCC's dedication to getting out in front. Moreover, this honesty helped secure the strength of the partners in RCC's ladder. These partners understood what the college needed and what its goals were. This supported the honesty of the partners and how they felt about the community college. At LCC academic managers informed company representatives that their for-credit curriculum could not change as fast as the company wanted before making a commitment. This honest representation built trust and helped promote their professional training opportunities. At both RCC and LCC unrealistic business demands regarding low-pay and high-skill job prospects were corrected. People at both colleges summarized the business fantasy of a "minimum wage Ph.D." candidate for their jobs. As one community leader at RCC said about business: "they're going to tell you that they want a 22-year-old Ph.D. who will work for \$5.50 an

hour. And you have to be able to tell them, look, you know that clearly isn't realistic, let's talk about what we can provide" (5).

Finally, at SCC, the community colleges honestly discussed how much impact they were having in distressed areas of the state with large businesses. An executive administrator remarked: "In my mind it's about doing the right thing. I try not to think about the politics of the matters so much, I try to stand on the principle. We're doing it for the right reasons and I always contend that it's not what we do, it's what we're not doing" (19). This candid view impressed companies with business interests in the area. Nevertheless, as a community leader lamented: "you have to recognize you're not going to solve all the worlds' problems overnight. These are very complex relationships; they're very interdependent relationships, and they take a long time to build and foster" (18). SCC's mission relied on an honest assessment of what the college could do to improve economic development and welfare in the state.

After defining and upholding standards of integrity, it was essential for both organizations to commit to their partnerships. In all of the studied cases, the colleges and businesses committed resources toward the partnerships. With little more than a verbal agreement in some cases, the colleges made significant decisions about classes and personnel. A business leader stated: "community colleges (including RCC) are much more responsive to companies and I've heard this from many people" (8). The credibility of the partner business and its commitment was assumed. If a partner business had reneged on its promise, the college would have been in a difficult situation. Some of the businesses also banked on the colleges and their ability to train workers who were needed

“just-in-time.” This commitment was indispensable in forming and expanding these working relationships.

Interestingly, a poem on communication and integrity summarized this section quite well. I had the good fortune of finding a book of poems in the president’s office at LCC while waiting for the interview. The following was the first reviewed poem.

We must talk
until there are no more words

We must explain
until everything is understood

We must be honest
until nothing is hidden

We must listen
until everything has been said

We must question
so that we know why

We must be fair
so that everyone’s basic needs are met

If there is no communication
there will be no bond

If there is no bond
there will be no friendship.

Schutz (2001)

This serendipitous poem summarizes many of the lessons learned about effective communication, integrity and trust. Indeed the value of good communication extends beyond partnerships and into lasting human friendships. Integrity served an essential task in the people power theme of the studied partnerships. Integrity was so elemental to a successful relationship that it is not addressed in much of the accumulated data.

Nonetheless, much like a seemingly unimportant “Jenga” block, integrity quietly supports the structure of any partnership.

People Power – Conclusion. In this study, people power was a core theme and the second ingredient in successful community college and high-tech business partnerships. Without question, this ingredient was intricate and involved numerous parts. The most critical sub themes were executive leadership, teamwork, communication, and integrity. Executive leadership was pivotal at all three sites. The vision and enthusiasm of these leaders helped spark the teamwork that built these partnerships. Communication guided the interaction and included the pieces of listening, feedback and marketing. Even with the best leadership, teamwork and communication cannot ultimately succeed without a foundation of integrity. Partnerships, including those studied in these three cases, demand personal trust and commitment. A community leader at RCC summarized: “You can characterize partnerships in terms of institution to institution but it has to be people to people” (5). When taken together, these components helped the people in these three cases to change their worlds. This substantiated the power of people – one person at a time. It was an interesting global view.

Iron Will

The third and final core theme in successful partnerships between community colleges and high-tech businesses emerging from this study was iron will. Like the previous themes of eyeing the prize and people power, the iron will theme emerged after examining the notes and transcripts from all of the interviews. In particular, this theme stemmed from a thoughtful consideration of the partnerships in this study. A common thread among the colleges and businesses was a strong and determined outlook. But this

outlook was even more powerful than a day-to-day motivation. Many participants seemed to believe that they could shape the future, even with knowledge of their situation and limited resources. Taken together, these observations formed the core theme iron will. Upon further investigation, I discovered a book and movie with this title. The main character in the story, appropriately named Will, led a low-budget sled dog team through hundreds of miles of snow and ice covered terrain in Alaska. In many ways, this dramatic plot reinforced the selection of iron will as a core theme. The individual words also make the point. Iron is a strong and durable element. Will is a motivation. In this study, iron will involved the sub themes of an aggressive attitude, making resources available, and good luck.

Iron Will – Aggressive attitude. The American economy has been built on an aggressive attitude. Whether it was the colonists throwing imported and over-taxed tea into Boston Harbor or the speculators searching for gold in the West, Americans have pushed the status quo almost as fast as the boundaries of the frontier. On numerous occasions in his online columns, the publisher of *Forbes* magazine has attributed the affluence of the United States to the millions of entrepreneurs who live here and embody this aggressive attitude even today. Unlike many places in the world, some of America's most successful and dynamic companies are new. In 1960 perhaps even 1970, no one had ever heard of Wal-Mart let alone Microsoft or Amazon. Today these three companies have a combined market capitalization in the hundreds of billions. Some of the wealthiest people in the world, according to the annual *Forbes* list, gained their fortunes from these young companies. The founders including Sam Walton, Bill Gates and Jeff Bezos have become cultural icons. Many working people look up to them almost like their children

idealize the stars of the silver screen in Hollywood. Their aggressive attitudes and spirit are inspirational for many who hope to begin something new.

An aggressive attitude like those described in business also existed at the three studied community colleges. The college leaders pushed out into the community and sought new relationships with businesses. The partnerships, particularly those with high-tech companies, stretched the traditional ways of higher education. The college leaders became somewhat entrepreneurial in their quest for new opportunities. These opportunities have benefited the colleges, the businesses, and the students. They flowed from an aggressive attitude. In this section the component of risk and dedication defines the aggressive attitude.

Iron Will – Aggressive attitude: Risk and dedication. An aggressive attitude was present in the community colleges and businesses in this study. It is difficult to adequately express this aggressive attitude without discussing some of the features. Perhaps the first feature is risk. Starting something new is a very risky activity. According to historical data and the popular press, the vast majority of new businesses and partnerships fail. Nevertheless, the intrepid individual or organization manages this risk in the hope that its venture will be the exception. It is uncomfortable and frightening to begin new ventures. The uncertainty and risk are unsettling for many.

Starting new partnerships at community colleges also involves risk. Working closely with high-tech businesses is something outside of the ordinary for many in academia. In the reviewed literature, this was especially true for many four-year colleges and universities. The old “elitist” construct of higher education caused many faculty and administrators to ignore for-profit enterprises and market events. Robinson and Daigle

(1999) and Campbell (1999) documented some of the problems that companies encounter when trying to interact with these esteemed higher education institutions. These organizations have not realized how they might benefit through closer collaborations with higher education institutions. They believed that academic pursuits should be cordoned off from business activities. As a result, they were not as forthcoming in their assistance.

The three studied community colleges also encountered substantial risk in their relationships. At RCC the president talked with nationally recognized chief executives in a peer-to-peer context like no one from the college had ever done before. These CEO visits began with a risky and courageous phone call within the first year of her administration. The administration also talked about internal college opposition to outside business partnerships. Some faculty worried that their freedom and the education of the students could be compromised with these partnerships. The question was posed: were the interests of business trumping the greater educational good? After a great deal of communication, the administration and faculty reached a consensus regarding RCC's interaction with business. The college would create partnerships with high-tech businesses but only after establishing criteria and standards for "hard" and "soft" skills. Its work developing skill standards was equally risky and involved asking business leaders to define the required skills and jobs. The RCC theme of getting out in front acknowledged that some resistance was natural. Much like a racecar at the front of the pack, the winds of change push hardest on the leader. An executive administrator said that the college needed to "walk the talk" (6). This pointed to the risk involved in getting ahead of the pack.

This controversy over risk also occurred in discussions at LCC and SCC. As discussed in Chapter Four, the administration of LCC worked to expedite state requirements and created training programs to accommodate business needs. At LCC faculty members asking large software companies for additional funding were courageous. In fact, many at LCC deemed requesting additional support after the end of the grant inappropriate until one of their instructors did it. The college also invested its time and resources into start-up companies. This venture capital arrangement defined a new level of risk. The LCC leadership proved to businesses that it had a vested interest or skin in the game. At SCC almost all of their offerings were assigned college credit, even company-specific training. This was a very risky move for an entire community college system. The leadership of SCC argued that changing the state required this level of new thinking and risk. At SCC having the state give money to large companies for their internal high-tech training was also a risky and courageous public policy choice.

All three of these examples authenticated a type of dedication in the face of risk. After a risky start, dedication or persistence kept the venture moving forward. The new venture became analogous to a baby for the stakeholders. It has been written in various publications that Thomas Edison was so dedicated to his ideas that he only slept two to four hours a day. Like a doting father, Edison stayed up most of the night with his inventions. In the late 1990s, the Silicon Valley in California was renowned for its intrepid entrepreneurs and dedicated workforce. New companies began in garages and basements. Some of these new businesses used sheets of plywood for desks and concrete blocks and raw lumber-formed bookshelves. Employees even took turns using office equipment and supplies and saved leftover pizza and Coke for late night work sessions. It

seemed that the lack of capital and profit was a good source of creative thinking for these dedicated people.

The colleges and businesses in these cases also demonstrated a related form of dedication. Engaging companies and using grant money propelled all three colleges to gain additional assets and recognition. Community events and sponsorships gave the colleges new funding sources and helped them stay alive even with diminished public funding. At RCC every participant was delighted to talk about his or her dedication to the college's partnerships. For some of them, it was similar to the way they might talk about their children or grandchildren. Several participants shuffled through papers to retrieve flyers promoting events and photos showing their friends and colleagues eating fried chicken at the partnership picnics.

At LCC the leadership was so dedicated to some new companies that it donated office space for them to use. This gave the college an equity position in these companies and formed relationships with up-and-coming entrepreneurs. Also at LCC a recent tragedy brought the campus together with its partners. One or two participants began to cry when recounting their recent, emotional experiences with area people and businesses after this event. An academic manager said: "this is the real thing" (12).

SCC also demonstrated its dedication and aggressive attitude. When it hired private training companies to perform some fast and specialized training under a college contract some eyebrows were raised. Even though SCC did not have the internal resources, it quickly provided them and in turn demonstrated a dedication to their corporate partner. One of participants contacted numerous people across the state for me to meet. Another administrator became emotional when discussing the positive impact of

higher education in depressed rural areas. This type of dedication flowed from a unique bond between the people at the colleges, the businesses in the community, and others throughout their service area.

Although not mentioned frequently, the effects of an aggressive attitude are available in the literature on partnerships. The components of risk and dedication relate to this aggressive attitude. In recent years, these concepts have appeared on the national radar. Business books on innovation and speed to market have become best sellers. In their article, Warford and Flynn (2000) discussed the challenges of internal college policies in forming new relationships. The interaction with the new partnership was explained in this process. Campbell (1999) also showed how “initial resistance” might exist at the college or university. Wharton (1997) and others in the literature promoted “energy and commitment” from the community college in engaging area business and forming partnerships. Doucette (1998) wrote: “It is market forces that are pushing community colleges to fulfill its destiny: to make universal access to lifelong learning meaningful” (p. 87). Kanter (1994) underlined the significance of freedom in making partnership decisions. This freedom supports the ideas of risk and dedication. The three studied colleges provided evidence that an aggressive attitude can support the organization while offering benefits to area companies and the larger community.

Iron Will – Making resources available. The second sub theme of the iron will ingredient in this study was making resources available. As previously explained, resources drive the economy of the world. Natural resources, such as oil and wood, fuel the cars and frame the houses across America. Resources help form the basis of all financial value on the planet. The allocation and control of resources has sparked

countless struggles throughout history. Whether it was spice in the 1200s, gold in the 1500s, or oil in the 1990s, people and nations have struggled to gain control of new resources. There are numerous resources in any partnership. Earlier the human resource, or people power, was described as a core theme in the studied partnerships. In addition to people and their physical and intellectual resources, there are other key resources that help keep the partnership moving. In this study, these included the components of money and time.

Iron Will – Making resources available: Money. Without question, money is a vital resource to community colleges and high-tech businesses. Like oil in the physical sense, money lubricates the engines of commerce and activity. Even with the best intentions, an organization cannot survive without money. Community colleges and businesses are equally subject to this truth. Community colleges have typically relied on tuition dollars and public support for a majority of their funding. Unfortunately, the public funding piece is becoming more tenuous everyday. As governments try to balance their budgets and prioritize their spending, community colleges have often been left behind. Many experts in the reviewed literature, including Dougherty and Bakia (2000) and Goldenkoff (2001) argued that higher education funding was in serious peril. The interviewed community college personnel in this study confirmed this general supposition.

The realities of public funding in 2002, 2003, and 2004 have made partnerships even more critical to the success of community colleges. All three community colleges recognized the significance of money in their operations. Without adequate funding, their colleges could not employ the instructors necessary to teach their classes. In these three

cases, the colleges learned to generate money from their relationships. This occurred in two primary ways. The first way was through offering additional training and education for the employees of a partner company. These classes, or contract training, provided financial support for the instructors and college administration. This additional education and training also brought new students into the community college world. This increased tuition and state funding. The second way was through philanthropy. The three colleges received additional money in the form of grants and gifts. This money was then used to grow the capabilities of the college and support the students.

The emphasis on money was clear at all three sites. Using donated software and industry knowledge, RCC students were trained in the latest programs and technologies. College leaders worked with numerous companies to define the skill standards. The partner companies then hired the graduates upon their completion of the classes or programs. For the partner businesses, there was much less need for training when a strong community college partner like RCC was on board. This saved the companies a tremendous amount of money. Perhaps this was why a large manufacturing company was planning to outsource millions of dollars in training to area community colleges, including RCC. LCC has also sponsored research into area business trends and training options. This knowledge has helped the college gain acceptance of its training from business leaders. Outsourcing training is a cost-effective solution for companies in difficult economic times and the community college can be the best place for this variety of education and training. Turning to SCC, a system college in one district agreed to train the employees in a company's high technology applications. This outsourcing was remarkably cost effective for the partner company all by itself. Add to this the state

funding for business training in the state, and it was clear that the company received a very good deal. Still, by providing the training, SCC also increased its stature and financial standing.

Money was equally imperative for the partnering businesses in this study. For the businesses, human resources are often the most expensive asset. At a major airline mentioned in this study, well over 50 percent of its expenses involved human resources in the form of salary and benefits, and this was in an industry where one aircraft can easily cost 50 million dollars. Managing human resources is cost intensive. Simply finding qualified employees can cost companies millions every year. The relocation decisions of companies in all three cases were also impacted by this reality. Corporate executives asked the question: Would the proposed location give the company enough access to qualified workers? Without a base of specific knowledge and skills in the area, the company has to invest additional money into training for its new recruits. Even after they are hired, the immediate concern of the company's management relates to the training of these new workers.

The reviewed literature, including Stone (1991), Shutte (1999), Dunne and Rawlins (2000), and Vinten (2000) explained how these training issues were effecting businesses everywhere. Other industrialized nations have more structured programs for training students. In America, this training readily equates to time and money. How can this training be provided in a cost efficient manner? The answer might include partnerships with community colleges like those profiled in this study.

Iron Will – Making resources available: Time. The second component of making resources available is time. Efficiency is defined by some as “doing things right.” It

relates more to productivity and time management. Effectiveness is defined by some as “doing the right thing.” In this way, it relates to leadership and less to management. Both of these concepts pivot on the use of resources – especially time. At all three cases, the expression “bang for your buck” was used. That expression references effectiveness and certainly efficiency. The studied colleges and businesses worked hard to maximize their efficiency and effectiveness. As with money, the partnerships helped stretch the available time resources of each institution. In a related article from the literature, there is also the new concept of “patching.” Zukoski and Shortell (2001) define it as “the partnerships ability to reposition assets, competencies, and resources to address changing needs and priorities” (p. 24). The studied colleges and businesses used their relationships to “patch” their organizations and manage limited resources, including time.

Like other organizations, community colleges and high-tech businesses must ensure their time is spent on the most meaningful projects. A partnership with a community college can reduce the time a business spends on its training programs thereby potentially improving the time to market for the company. Having qualified people in the “pipeline” is absolutely beneficial for the company. With partnerships in place, the colleges can provide training much faster because they already know the company. In these relationships, the partner companies also recognized that their college partners could, “ramp up” their training and education offerings if necessary. Up-to-date training and education ultimately serves the students better as well. A state leader at SCC asserted: “we’re primarily focused on developing a long-term, organizational relationship as their education and training partner” (21). In 2002, Steve Ballmer of Microsoft said: “ten years ahead, it will be impossible to be an effective participant in almost any job in

our society without the right kind of training on information technology” (Microsoft Press Release).

In the reviewed literature on economic development and college/workforce partnerships the resources piece helped set the discussion and debate. How to maximize resources is perhaps the primary concern of every organization. It directly relates to the definition of economic development given by the American Economic Development Council in Chapter One of this study. Historically, the physical resources or capital seem to follow the human or intellectual capital. Even the money tends to follow the brains. Places such as the Silicon Valley in California demonstrate how the physical resources can lag the intellectual and financial capital. The roads, buildings and even utilities are much slower in responding to this dynamic growth. Freeland, Marini and Weighart (1998) and Moran and Ghoshal (1999) discussed the effective use of resources, and the resulting potential for economic growth and development in their articles.

Although numerous resources are necessary in a partnership, the three studied cases provided a ranking regarding importance. For these cases, after human resources (discussed in the People Power theme) the resources of money and time topped the list. Some contemporary commentators have said “time is money.” Perhaps this expression indicates the supremacy of money in modern life. The community colleges and high-tech businesses in this study included a necessary analysis of resources in their partnership process.

Iron Will – Good luck. The third and final sub theme of the iron will ingredient was good luck. Miguel de Cervantes once wrote: “a stout man’s heart breaks bad luck” (Forbes 1989, p. 40). Indeed, an iron will and good luck would seem to go hand in hand.

Although the expression “good luck” never directly appeared in any of the written materials or transcripts, this researcher believes it is salient. There is an “x” factor in these three cases and even the literature. An academic manager at RCC called it “planned happenstance” (3). Perhaps this phenomenon was best characterized as good luck.

The metaphysical story of a tomato grower and his business is instructive and relates to this sub theme of good luck. It was relayed to me many years ago and rediscovered during the course of this study. In an attempt to grow the world’s best tomatoes, a farmer decided to do some homework. He read every book ever written on the vegetable and eventually discovered it was a fruit. After exhaustive library research, the farmer talked to everyone he knew. The range of input was nearly incomprehensible but the farmer managed to synthesize the relevant knowledge and began his work. With special soil, ideal lighting, controlled temperature, proper fertilizer and effective pest control, the farmer was ready. Into the soil he dropped the first prized seed. The question was then asked, “Mr. Tomato Grower, can you guarantee that your research and work will result in the world’s best tomato?” The farmer replied, “no, I have done everything I can but ultimately the life is in the seed.”

The tomato grower parable illustrates this luck factor through the “life is in the seed” conclusion. All three of the cases evaluated in this research contained core themes. These themes and their application helped them achieve success in their partnerships. Unfortunately, even the best researcher or participant cannot identify every factor. The community colleges and high-tech businesses in the three cases had some good luck in their partnership work. It is possible to build a scenario where they would not have succeeded. Changing variables, particularly the highlighted themes, or even geographic

location or leadership might have changed their results. Perhaps the present economy would stifle their efforts if they began their work now instead of three or five years ago. There are too many variables to consider.

People in all three cases expressed their surprise and delight with some of their work and apparent good luck. The results showcased the power of their partnerships and working combinations. At RCC a former student and graduate described how his life has changed because of the college's partnerships. After receiving his training, this student went to work for a high-tech company that had a partnership with the college. After some time he decided to go back to RCC. He now teaches the very high-tech skills he learned at RCC and practiced in industry. At LCC a chance lunch meeting with an area business leader led to a donation of \$10,000 that same day. Another meeting, described earlier, led to a \$30 million donation. This person's company has since started a larger financial relationship with the college. At SCC a small businessman complimented an area company on its global distribution and remarked how its location supported his operation. This large distribution company would have relocated without the training provided by the local community college. In this instance, a significant SCC partnership helped small companies without any direct ties to the college. I developed the analogy of a snowball with an executive administrator in the SCC case (22). The snowball accumulates more snow as it rolls down the mountain. This growth draws more and more attention from people who happen to be skiing or recreating in the area. The momentum of the entire event keeps building as the snowball gets larger and larger. Upon close inspection, like the snowball, it was hard to find where the effects of the momentum ended in these cases. It resembled an avalanche of good luck.

Not surprisingly, the literature does not adequately address the good luck factor. Some of the reviewed articles described the benefits that can be achieved through partnerships, particularly with a system view. The Goldenkoff (2001) article mentioned “partnering with unusual suspects.” This advice related to the unexpected consequences of forming relationships. Walshok declared that: “The creative process is hydraulic when it works: good ideas beget more ideas; energetic, creative people draw other energetic, creative people; and financial backing increases with each creative venture” (p. 86). Covey (1989) described synergy as his “Sixth Habit.” Synergy, perhaps best explained in the scientific context of solar fusion, touches on the good luck and seemingly magical results that come from intense combinations. The partnerships in this study illustrated this synergistic power.

It would seem that the very ignition of a partnership creates unexpected results. The iron will in these partnerships endowed good luck or magic. This magic helped make the entire process come together. It also created some of the excitement that led everyone to work hard and support the relationship. Like a courtship between two young lovers, the surprise and suspense of not knowing what the future may hold is captivating. The English and American poet, T.S. Eliot wrote: “We shall not cease from exploration and the end of all our exploring will be to arrive where we started and know the place for the first time” (Jaworski, p. 187). The colleges and businesses in this study were still exploring what was possible in their partnerships and the fantastical strength that good luck has produced once the iron will is forged.

Iron Will – Conclusion. In this study, iron will was a core theme in the successful partnerships of community colleges and high-tech businesses. Without question, this

ingredient was quite complex and included numerous parts. The most critical sub themes identified by this researcher were aggressive attitude, making resources available and good luck. The aggressive attitude at the three sites resembled that of an entrepreneur. In all three cases, the college leadership took considerable risk and dedicated their organizations to their partnerships. The leaders also made resources available and appreciated the importance of money and time in their equations. Finally, there was good luck. Like most new ventures, it was almost impossible to predict how these partnerships would work. These cases proved that taking the chance and having the will often enabled better or good luck. When combined, these components formed the foundation of this ingredient called iron will. This theme or ingredient displayed a natural strength – perhaps like the metal contained in its name.

Importance of the Findings

The findings contained in this research study can be used in various ways by colleges, businesses and community leaders. The broad concept of partnerships continues to make headlines in almost every facet of human life. For example, many writers and social scientists have argued that humans tend to move from dependence to independence. This can occur on an individual level (from a baby to an adult) or on a national scale (from foreign rule to democracy). The blessings of independence are incredibly bountiful. The freedom achieved in the late 1700s set the stage for the unparalleled growth of the United States of America during the past two centuries. The question is: what is the next step?

For many writers, interdependence is the next phase in the evolution of humankind. Interdependence rests on a foundation of independence. Indeed without

independence, interdependence might be a favorable and altogether inaccurate way of describing dependence. Interdependence is about two or more humans, organizations or even nations working together to become more than they are individually. A good marriage exemplifies this concept. Ideally, both the husband and wife achieve greater successes as a couple. They can build on each other's strengths and help each other's weaknesses.

On a macro scale some political scientists and economists are predicting the rise of interdependence on a global scale. Every nation will perhaps someday cooperate with other nations. This peaceful cooperation could help improve the economic, political and social realities of the world. In some ways it resembles the themes of Adam Smith and his division of labor (Sievert, 1997, p. 18). Each person and perhaps nation could spend its time doing what it does best. In theory, this would maximize the efficiency and perhaps effectiveness of the planet. Interdependence is about successful collaboration. Great partnerships help produce this next level of collaboration. If well envisioned and carefully executed, partnerships do indeed make a difference. Margaret Wheatley wrote: "our range of creative expression increases as we join with others" (SW, p.18). The central questions revolve around understanding how these relationships are created and nurtured. These questions raise countless opportunities in almost every field and discipline.

The implications of this study may prompt some questions regarding education, partnerships, economic development, global politics, and other philosophical concerns. This is perhaps a gap or limitation in the conclusions of this study. Although clearly defined in the context of this research, what significance do these partnership factors and

economic development trends have for society at large? The realities outlined in this study, such as global competition, high-technology product development, outsourcing, and skills training, are driving economic change. Their impact on partnerships between community colleges and high-tech businesses was outlined. The larger metaphysical question revolves around our ultimate goals and direction as a society. Stated a little differently, are we on the right road? If this study has triggered these considerations, it is a tribute to this work and the thoughtfulness of the reader.

Recommendations for Future Research and Application

A great need exists for continued research in the area of effective partnerships in almost every field of study. This study focused on the successful partnerships among community colleges and high-tech businesses. These two organizations form a vital part of modern American life. With effective partnerships, millions of people can be assisted by the combination of these two institutions. Indeed, hundreds were witnessed in the course of this study alone.

The first opportunity for additional research would focus on quantitative research. A quantitative survey could be developed, perhaps based on the three ingredients obtained in this study. A large quantity of community colleges could be polled about their relationships with high-tech businesses. The high-tech businesses could also be surveyed. It would be worthwhile to compare these quantitative findings to what this researcher has found with qualitative research at the three sites. The researcher could also gain statistical knowledge of the colleges and businesses for comparison purposes.

Second, there are also numerous avenues for the expansion or continuation of this study in the qualitative arena. For example, it would be interesting to see how other colleges or businesses around the nation perceive this list. Other inquiries might include:

1. What do other community colleges consider core themes in their partnerships?
2. What other variables influence the partnerships and their perceived success?
3. If non high-tech companies were considered, would the core themes be different?
4. For these three ingredients, which one is the most important?
5. How do these ingredients impact the partnership in the long-term?

This study provides some limited insight into this remarkably complex area. With a little creativity and a lot of effort, future researchers could expand on this research and its conclusions. The potential rewards of growing this knowledge base are worthwhile.

Third, there is the consideration of relationships among the core themes or critical success factors within the cases and for the entire study. Analogous to the partnerships themselves, these themes are not isolated in their relationship or significance to the larger environment. Each theme interacts in dynamic ways with the other themes. Alas, the very organization or classification of specific themes exaggerates the differences and thus minimizes the effects of interdependence among them. Although organized in a linear or hierarchical fashion in this study, it would be interesting to research how these factors affect each other. In other words, is one factor actually more influential than another? If so, what issues must be considered in their connection to one another. These questions quickly bring up complex interactions like those seen in natural ecosystems or perhaps even capitalistic markets. Further qualitative research could help define some of the

dynamic elements involved in understanding successful partnerships in a non-linear model. It is research worthy of a beautiful mind.

In addition to further research, there is the possibility for further application of these findings to other community colleges and high-tech businesses. Community colleges might consider the cases in Chapter Four and the critical success factors in Chapter Five. It would be helpful for the interested college to find its closest match (in terms of location, demographics, and culture) from the three cases. This would eliminate some of the variables inherent in the utilization of outside data. With a matching college, the community college leader could assess where their partnership process is headed. In other words, where do they want to go? It would be helpful to make notes and compare thoughts with other stakeholders within the college while examining the core themes and stories contained within a case. These findings could provide a good starting point for a leader within a community college, business, or other organization. They could become the kick off for internal and external discussions. If relationships have already been formed, these core themes could help reinforce or change the current heading. The findings could be worthwhile for uncovering and resolving potential trouble spots. If the partnership failed, the reader could potentially discover what was missing by examining these cases and their documented successes.

In addition to community colleges, high-tech businesses might also benefit from the application of these findings. This research provided more data from the studied community colleges. Most of the partnership work began with the community colleges. Nevertheless, the high-tech businesses were major players and beneficiaries in these partnerships. How could they be more proactive in forming and changing these

partnerships? They can drive how higher education responds to the changing market demands and trends. The findings reported here would help them to understand the perspective of the community college and how they might collaborate more effectively in the future.

In sum, the three core themes from Chapter Five could assist the interested reader in the creation and maintenance of his or her partnership. Building on the best efforts and critical success factors of other organizations can propel any organization to unprecedented heights. Why not stand on the shoulders of giants? This was one of the ideas considered early in this study.

Closing Thoughts

In an address to the American Association of Community Colleges (AACC) in 2002, Steve Ballmer, Chief Executive Officer of Microsoft, said: “we’re interested in making sure that people have the resources to learn, to grow - to participate in new things” (Microsoft Press Release, Jan. 2002). This declaration helps bring this study to a close. The modern economic environment is uncertain and ever changing. The dynamics of international business, politics and life continue to change, minute-by-minute.

This electric environment requires adjustment, steering and adaptation. The “old thinking” or “conventional wisdom” about most subjects is probably unfit. Tom Peters quoted Lew Platt (former CEO of HP) when he wrote: “whatever made you successful in the past won’t in the future” (1997). Even with all of the chaos and confusion, a simple fact remains. Humans lead every organization in the world. Indeed, the planet’s resources are also controlled by humans within these businesses, colleges, governments, and other organized groups. With the effective use of available resources, including people,

anything is possible. The 20th Century testified to this fact. From Henry Ford and the Wright Brothers to the leaders not yet famous, people have ignited unrivaled global advancement.

Community colleges are special American organizations. From their philosophical beginning, they were conceived to help bring resources together and help people reach their dreams. The community college is an institution with the entire community in mind. This community includes numerous businesses. With effective cooperation, the rewards of partnerships extend beyond the individual institutions or organizations. Indeed, the entire economic development of a region can be supported by partnerships and the quality of life hangs in the balance. When community colleges become involved, people have the resources to learn, grow and participate in new things – much like Mr. Ballmer of Microsoft proclaimed.

This study examined how three community colleges have formed successful partnerships with high-tech businesses. This collaboration is relatively new. The demands on community colleges and high-tech businesses are perhaps greater than ever. The risks are equally foreboding. Nevertheless, great partnerships between these organizations generate results for the community. Pappas (1998) summarized: “The presence of higher education in a community often is an economic development success in and of itself” (p. 5).

For Resourceful Community College (RCC), Location Community College (LCC), and System Community College (SCC), the benefits from their high-tech partnerships were clear. The work, however, is not finished. Opportunity knocks on many doors at unexpected times. These three cases demonstrated how some simple ingredients

including eyeing the prize, people power and iron will have made a real difference. John Clendenin, the retired CEO of Bell South once declared: “The bottom line in America’s fight for long-term competitiveness ultimately will be won or lost not in the halls of Congress, not in the boardrooms around the world, but in America’s classrooms.”

It is the sincere hope of this researcher that these core themes will help other community colleges and businesses in their partnerships. The process is powerful. Morris (1997) wrote: “collaborative thinking and working can create more fulfilling and productive relationships, making for better and stronger organizations. It can usher in not just a limited improvement in how we do what we do, but a major improvement in what we are” (p. 62)

Finally, there are the words of Goethe, the German philosopher. He exclaimed: “Whatever you can do, or dream you can, begin it. Boldness has genius, power, and magic in it” (Jaworski, p. 15). The time for bold dreams and action is now. The green flag for partnerships is flying. Working together, America’s community colleges and high-tech businesses can drive economic development and steer their institutions into the future. The race is worth winning for everyone. You know, Mario Andretti also said, “you have to believe -- you cannot win the race unless you finish it” (personal communication, February 14, 2005).

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