

2012

Creating employable graduates in career and technical education: Defining the partnership between business and the community college

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**Creating employable graduates in career and technical education:
Defining the partnership between business and the community college**

by

Norbert Joseph Thomes

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Educational Leadership)

Program of Study Committee:
Frankie Santos Laanan, Major Professor
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Steven Mickelson
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**Iowa State University
Ames, Iowa
2012**

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ABSTRACT

The skill set required to attain quality employment is not being fully addressed in the community colleges (Business-Higher Education Forum, 2011; Corporate Voices for Working Families, 2011; Daggett, 2011; Laanan, Compton, & Friedel, 2006). This disconnect produces laborers with skill sets that do not meet the needs of employers. Ironically, while the need for employees with increased skills rises annually (Augustine et al., 2010), many graduates have difficulty finding employment in their career areas (Corporate Voices for Working Families). Minimizing this disconnect will supply businesses with the skilled employees they need, thereby increasing graduate placement.

This study describes a partnership between education and business at a rural midwestern community college. This partnership exists to facilitate the documentation of skills graduates will need to be employable through co-curricular definition by the education and business partners. The results of this research document the workings of the partnership and show how these partnerships can be defined using strategies like the educational model defined by Amey, Eddy, and Campbell (2010) or the business/education model employed by Business-Higher Education Forum (2011).

CHAPTER 1.

INTRODUCTION

Background

Career development is an organized approach used to match employee goals with business needs. ...The purpose of career development is to:

- Enhance each employee's current job performance.
- Enable individuals to take advantage of future job opportunities.
- Fulfill [business'] goals for a dynamic and effective workforce.

(Commonwealth of Virginia, 2011, para. 1-2)

More succinctly, career development is about building employment skills and promoting lifelong learning (American Society of Civil Engineers, 2011).

Career development encompasses training new employees for required job skills and [re]training current employees to develop additional skills (National Career Development Association, 2011). Employment skills include both technical knowledge specific to the job, known as hard skills, and personal attributes, referred to as soft skills. Hard skills are “the basics of a skilled occupation, core industry skills training such as tool identification, industry math/science, and industry-related reading/literacy” (U. S. Department of Labor Employment and Training Administration, 2011, p. 15729). Soft skills “enhance an individual's interactions, job performance, and career prospects” (Illinois Institute of Technology School of Business, 2011, para. 2) and include effective communication, team work, customer satisfaction, and other attributes that are transferrable between careers (Hoffman, 2007).

While some businesses have internal career development programs in place (National Career Development Association, 2011), increased responsibility for training has been assigned to the community colleges (The White House, 2011b). Community colleges play an important role in employee development as they are “uniquely positioned to graduate more Americans with the skills that businesses and the economy will need to compete in the twenty-first century” (The White House, para. 10). However, the community college cannot define effective career training without partnering with business. Only through partnership can the appropriate skill set that satisfies the needs of both the employer and the employee be defined (Soares, 2010).

Problem

There is a disconnect between rapidly-changing on-the-job skill sets and the community college curricula, producing workers with skills that do not match the needs of employers (Business-Higher Education Forum, 2011; Corporate Voices for Working Families, 2011; Daggett, 2011; Laanan, Compton, & Friedel, 2006), even while the call for skilled laborers rises every year (Augustine et al., 2010). Graduates with mismatched skills account for about one third of all unemployed workers (Corporate Voices for Working Families, 2011). Minimizing this disconnect will supply businesses with the skilled employees they need, thereby benefiting the businesses, the community college, graduates, and ultimately the economy.

Purpose of the Study

The purpose of this case study is to

- develop an understanding of graduate preparedness through the eyes of employer and faculty,
- ascertain the process of developing the skill set needed for employment,
- describe how the process of evaluating graduate mastery of required skills can inform the curriculum-definition process, and
- document the partnership between business and faculty that makes the process work.

This study documents the process of business and community college partnering in a career and technical program at a midwestern community college. Comparisons are drawn between practical experience and models for partnering by researchers like Amey (2010), Laanan, Compton, and Friedel (2006) and Soares (2010) as well as community-based models like Business-Higher Education Forum (2011).

Replication of or addition to these models will further knowledge by defining and documenting the importance of partnerships to student success and employability after graduation.

Research Questions

- How do faculty and employers describe the critical academic skill set for career development?
- How do faculty and employers evaluate career and technical graduates for job readiness? How well does the curriculum prepare graduates for employment?

- How do graduates of community college career and technical programs describe their experiences in the workforce regarding job readiness and employee socialization?

Significance of the Study

This case study impacts policy and practice in career and technical programs at community colleges in three ways. First, this study documents a strategy for forming a business/education partnership. Results of this research include a recap of benefits to partnering between business and education. Second, this study describes a strategy for using the business/education partnership to define curricular content that addresses business skill sets, showing how this joint effort can produce graduates that are more ready to join the workforce and ease into employment faster with minimal additional investment on the part of the new employer. Finally, Amey, Eddy, and Campbell (2010) published a model for educational partnership that describes the cooperative evolution and workings of K12 and post-secondary coalitions to ease transition and success throughout the student's education. This study validates this model for business/education partnerships.

Theoretical Framework

Anfara and Mertz (2006) stated that theoretical frameworks help researchers understand the world in the context of "empirical or quasi-empirical theory of social and/or psychological processes" (p. xxvii). This framework is applied as a lens that helps the researcher see the phenomena and understand its implications (Anfara & Mertz). The theoretical lens employed in this study is based off the work of Amey, Eddy, and Campbell (2010), Lepak and Snell (1999), and Hanson (2008). Amey,

Eddy, and Campbell built on Amey, Eddy, and Ozaki's (2007) previous work to theoretically define the partnership relationship between community colleges and other educational entities. Their partnership models serves as a basis for explaining how the partnership between business and community colleges is formed and evolves. Theories used to explain interactions within this study are recapped in this section.

Social capital plays an important role in every relationship designed to meet a productive end (Amey, Eddy, & Campbell, 2010). The components of social capital include density, trust, respect, integrity, commitment, amount of interaction, centrality, and personal power (Amey, Eddy, & Campbell; Granovetter, 1983). Of all the social capital components, density, centrality, and trust are the characteristics that affect partnerships most (Amey, Eddy, & Campbell). Density refers to the strength and closeness of the relationships (Granovetter, 1983). Centrality defines the extent to which a person is central to the working of the partnership. Trust builds flexibility as members believe all are working for a common good (Amey, Eddy, & Campbell). Social capital theory helps describe the interactions within the partnership between faculty and business partners.

Organizational capital refers to "resources, power, influence, authority, communication systems, and other aspects of the organization upon which members can draw to facilitate or achieve particular partnership goals" (Amey, Eddy, & Campbell, 2010, p. 338). Amey, Eddy, and Campbell continued by explaining that organizational capital is used to facilitate and achieve institutional goals and, unlike social capital, organizational capital is not limited to social structures and

relationships. Organizational capital is unevenly distributed when the partnership forms and the distribution continues to change throughout the evolution of the partnership (Amey, Eddy, & Campbell). Organizational capital theory helps explain the dynamics of the partnership in this study.

According to Amey, Eddy, and Campbell (2010), partnership capital develops “when there are shared norms, shared beliefs, and networking that align processes among individual collaborators” (p. 341). Partnership capital is an important part of partnership development in that, when it develops and is sustained by the partners, it promotes networking, sharing of beliefs and norms, and aligning of processes. “Partnership capital helps institutionalize the partnership and serves as a basis for sustaining the collaboration” (p. 342). Corroboration between partners and the partnership working toward common goals will be partially explained by partnership capital. Social capital, organizational capital, and partnership capital are at the heart of Amey, Eddy, and Campbell’s work on partnering between educational entities.

One major difference between the education-only model in Amey, Eddy, and Campbell’s (2010) work and the business/education partnership in this study is the importance of human capital. Human capital, according to Lepak and Snell (1999), is the investment made by a business in the training and development of their employees. Lepak and Snell added that dollars spent on employee development are viewed as a source of future productivity. Alamgir (1979) agreed and added that the return on investment in human capital explains the long-term growth in the economy. These stances will help to explain how businesses justify investing effort and money into the training of employment skills and why business partners are willing to invest

in helping define program curriculum. Human capital is also important to the community. "A community's economic vitality no longer hinges as much on its geographic location as on its human capital" (Business-Higher Education Forum, 2011, p. 8). Business-Higher Education Forum added that without substantive human capital, the community's economy would wither.

To fully understand business/education partnerships, additional theories must be explored. Hanson (2008) stated application-based learning consists of several theories which support student application of classroom knowledge. Within these theories, learning mimics real life and knowledge is reinforced through application. Hanson listed three theories that apply directly to this discussion of career development partnerships: authentic learning, problem-based learning, and experiential learning. Authentic learning (Cronin, 1993) lets students "encounter and master situations that resemble real life" (p. 79). Maina (2004) added that authentic learning and critical thinking worked hand in hand, enabling the student to apply knowledge in new ways to solve problems outside the classroom. Problem-based learning teaches students the iterative process of assessing what they know, identifying what they need to know, gathering new information, and building new hypotheses from this new data (Stepien & Gallagher, 1993). Experiential learning, according to Wharton and Parry (2003), incorporates activities that simulate experiences from business in which the knowledge can be applied. These experiences present real problems that require creative thinking to solve. By using real-life problems in the classroom, application-based learning produces students who are more likely to be prepared for employment after graduation

(Hanson, 2008). Hanson asserted that learning to apply business coursework at the community college to professional employment relates closely to this framework. Application-based learning theory will assist in describing the value of real-world business problems to teach employment skills and help in answering questions about program content and required skill base.

Research Process and Setting

The research was conducted using a case study method. The case study method will follow Yin's (1994) design strategies. Data will come from several sources, including hermeneutic study of historical data, meeting minutes, and program reviews. Interviews will be used to collect specific data from participants. Reviews of student performance by faculty and business partners will be included as input into the curriculum design process. For further information on the methodology of the study, see chapter 3.

The research will be conducted at a rural, midwestern community college. The total enrollment at the college is over 3,700. There are about 80 full-time faculty and 160 part-time instructors. Faculty and students in two career development programs will be studied, an information systems technology program and a graphic design program. There are three full-time and four part-time faculty in the study area. For more information on the research site, refer to chapters 3 and 4.

Definition of Terms

Advisory board: A group of faculty and community members that discuss program change and content. Advisory boards act as sounding boards for ideas and possible change to curriculum.

Baby Boomer generation: People born in the post-World War II era, specifically from 1946 to 1964.

Career and technical education (CTE): An integration of technical and academic training aimed at producing employees for specific careers (Laanan, Compton, & Friedel, 2006).

Career development: Career development is seen as “encompassing the development of the whole person, but places a critical emphasis on gaining the skills and experience for work in order to find one’s vocation in life” (International Association for Education and Vocational Guidance, 2011, p. 3).

Employee socialization: Employee socialization is “the process of moving from ‘outsider’ to ‘insider’ within an organization... Members of an organization can be ‘socialized’ more than once within an organization as their role or function changes” (Beck, 2011, slide 6).

General education: While all students require very specific technical knowledge to successfully gain employment in their desired fields, there is also a set of skills that all employees need regardless of their chosen careers. These skills, taught in general education classes, include how to communicate, function as a citizen, and make sense of the world.

Graduate: While the term graduate can imply many levels of successful completion, for this study a graduate is defined as a student that successfully completes a two-year career and technical program at a community college.

Job readiness: Possessing the skills needed to succeed on the job, including work ethic and pre-employment skills. Pre-employment skills include technical skills

required to do the task and soft skills for working with people (MacAllum & Johnson, 2003).

Researcher Stance and Assumptions

As a member of the faculty, I am a firm believer in the idea that student success is the prime objective of education. By “student success” I do not mean course completion or even graduation. I am referring to the student receiving whatever education she/he came to school to gain and then effectively using it to better her/his life. To this end, the process of faculty and business partners working together to ensure graduates attain employment fits tightly into my philosophy on education and educational success.

Several assumptions guide my study:

- Faculty are dedicated to student learning and success.
- Local businesspersons want students to graduate with skills that make the graduate potentially employable in their line of business.
- Students are intent on graduating with skills that make them employable in the career area of their choice.

Summary

There is a disconnect that exists between what skills businesses need in their employees and what is being taught in the community colleges. This disconnect is causing businesses to not find the qualified employees they need, graduates to not find employment in their desired field, and faculty to guess at what is relevant in the curriculum. This has direct ramifications for local business, student success, community college enrollment and success, and the overall economy.

Research has been done on the role of community colleges in the education of career seekers (Laanan, Compton & Friedel, 2006), the partnerships between community colleges and other educational institutions (Amey, Eddy, & Ozaki, 2007; Amey, 2010; Amey, Eddy, & Campbell, 2010) and community-based partnerships like Business-Higher Education Forum (2011), but there are holes in the literature regarding how community colleges and businesses can work together to influence curriculum in directions that give students the skills needed to find appropriate employment after graduation. The purpose of this study was to examine a current partnership between education and business and to document the model that defines its processes and goals.

Chapter two will recap the current literature regarding business and community colleges' roles in creating employable graduates. Beginning with the need for higher education and the role of the community college, the literature review will examine changes to the workforce, documenting career development, and various partnership models for education. At the end of the chapter, a short synopsis of gaps in the literature will be discussed.

Chapter three will describe the methodology of the study. Relying heavily on Yin's (1994) model for case study research, chapter 3 will detail the epistemology, theoretical perspective, methodology, and methods in the study. Also chronicled in chapter three will be the participants, propositions, unit of analysis, data collection and analysis, and goodness and trustworthiness.

CHAPTER 2.

LITERATURE REVIEW

The Need for Higher Education and the Role of the Community College

Out of every ten 9th graders nationally, only three will obtain an associate's or bachelor's degree in time. These results simply aren't good enough. We need more people attending and finishing college with a certificate or degree in order to keep up and move up in the global economy. (National Conference of State Legislatures, 2011)

The Obama Administration predicted that in the coming years jobs that require at least an associate degree will grow twice as fast as jobs that require no college experience (The White House, 2011b). By 2018, it was projected that nearly two-thirds of all new jobs will require more than a high school diploma with nearly half of those requiring some college but less than a bachelor's degree (Carnevale, Smith, & Strohl, 2010). Meanwhile, Fitzgerald (2011) reported an already-existing disparity in potential workers applying for employment. Specifically, Fitzgerald's findings showed 28 to 48 job seekers per online opening in industries that require little or no training beyond high school (like farming, fishing, construction, and forestry) and less than one job seeker per online job opening in industries that require postsecondary education, including health care and computer technology. These indicators point to the need for higher education, culminating with a challenge from President Obama: every American over the age of eighteen should complete at least one year of post-secondary education with the hope that most would complete some type of post-secondary degree or certificate program (The White House).

Most students gain this additional training and attain their educational goals at community colleges (The White House, 2011b). Community colleges serve the post-

secondary needs of the community in many ways, including economically preparing students to enter the workforce directly (Boggs, 2010). According to Laanan, Compton, and Friedel (2006), the role of the community college is to provide a more educated workforce which in turn incentivizes the economy and produces a substantial return on investment. It is the duty of the community college to stay competitive in the ever-changing workplace, both in the sense of curriculum and investment. The community college is the hub of training and retraining for the workforce (Laanan, Compton, and Friedel), partially because the style of education offered by community colleges reduced the stress of training to [re]enter the workforce (VanWagoner, Bowman, & Spraggs, 2005). "Community colleges are a choice for students who want a personalized college experience - challenging but nurturing - regardless of their long-term academic goals" (VanWagoner, Bowman, & Spraggs, pg. 39).

The community college experience offers more than just job training; monetary and lifestyle rewards come with higher education. Pascarella and Terenzini (2005) stated that any post-secondary training increased individuals' chances of employment and translated to higher earnings, and that an associate degree increased earnings even more. Belfield and Bailey (2011) reported that over a series of studies on wage differentials, people with associate degrees made between 9% and 24% more than their counterparts with only a high school diploma. The Image America Foundation (2011) found graduates of two-year programs outearn high school graduates by 26%. Research by The U. S. Department of Labor's Bureau of Labor Statistics (2011) showed graduates of associate programs earned, on

average, about 18% more than high school graduates and 63% more than workers without a high school diploma. Additionally, many students experienced unexpected positive life change. Research has shown the benefits of attending community college included better health, increased well-being, decreased criminal activity, and less reliance on the welfare system, each of which may be just as important as the increased wages (Belfield & Bailey).

The need for postsecondary education is well documented, but it does not tell the entire career development story. The 21st-century workforce is undergoing significant, rapid changes. These changes will strongly influence the direction of career development.

The 21st-Century Workforce

According to the U. S. Department of Labor's Bureau of Labor Statistics (2011) and results of Gallup polls (Clifton, 2011), several interesting changes are occurring in the 21st-century workforce:

- For the first time in our history, the fastest growing segment of the workforce is people of color. The number of women in the workforce is also rising steadily.
- Members of the workforce are working longer into their lives.
- While more people of color and more women are working than ever before and people are working longer into their lives, growth in the labor force has actually decreased each decade since the 1970's.
- The average length of time spent with a single employer is decreasing. This equates to more careers in a worker's lifetime than ever before.

- For the first time in polling history, people report that, first and foremost, the most important thing in their lives is to have a quality job, one with a steady paycheck and regular working hours totally thirty or more hours per week.

Additionally, because the Baby Boomer generation is aging, the labor force is steadily growing older. The Bureau of Labor Statistics projected that from 2006 to 2016, the number of workers ages 55 to 64 will increase by 36.5% while the number of workers who are 65 and older will increase by 81%. Aging of the workforce was echoed by the North Iowa Corridor Economic Development Corporation (2011). When local businesses were asked “How many employees do you have in each of the following age ranges?”, three areas showed change between 2010 and 2011. There were decreases in the number of employees in the 19-29 and 30-39 age ranges and growth in the 60-65 age range. All other age ranges remained stable.

Because more people of color and more women are joining the workforce, workers are working longer, and workers are changing jobs more often, we have a workforce that needs career development for new workers and recurring career development throughout a worker’s lifetime.

The Need for Career Development

We need a more educated workforce to fill the openings left by retiring Baby Boomers, meet the increasing skill requirements of today’s jobs, and jobs for tomorrow. Nations that have figured this out have become our strongest competitors in the global marketplace. (National Conference of State Legislatures, 2011)

Beginning with the return of World War II veterans, the community college system was responsible for addressing the need for skilled workers in an ever-

changing economy (Boggs, 2010). Still true today, community colleges have trained many Americans as they start or change careers, addressing the needs of the vast majority of employees in certain career areas. Over 50 percent of the nation's registered nurses and health-care providers and over 80 percent of the first responders, including EMTs, police, and firefighters, received their formal training in community colleges, as well as a growing percentage of the technological workforce (National Commission on Community Colleges, 2008).

[Re]training employees for new careers is one of the opportunities at which community colleges excel (The White House, 2011b). Looking beyond the changes to workforce demographics defined above, changes in technology and economies dictate more frequent career changes than in the past. While the exact number is very difficult to calculate, the most cited average number of careers in the American worker's lifetime is seven (Bialik, 2010).

Often, the need for career development is recognized by the worker at an early age. For traditional-aged college freshmen, career preparation is considered the most crucial factor in determining the value of post-secondary education (Farrell, 2007). Farrell surveyed over 6,000 traditional-age college freshmen and found that 72% said training for their profession was very important to them, while 62% ranked the strength of the academic program of second importance (Farrell).

Businesses, too, recognize the need for formal training for their workers. Fitzgerald (2011) posited that over two-thirds of employers surveyed in 2010 demanded graduates have the ability to solve complex problems, think critically, communicate effectively, and use technology before they would be considered for

employment. According to the North Iowa Corridor Economic Development Corporation (2011), 75% of local businesses that responded to the 2011 Business Retention and Expansion Survey reported some form of formal workforce training program in place. Of these respondents, 91% stated their training would grow or remain the same for the next year. The White House (2011b) stated responsibility for this formal training will increasingly fall on the community colleges.

Electronic portfolios have become an integral component of the career development process. Students create electronic portfolios to demonstrate their academic accomplishments and reflect on their experiences (Young, 2002). These portfolios assist in the assessment of job-related skills and employability within the context of the hiring process. Simply stated, students who demonstrated enhanced skill sets improved their likelihood of employment opportunities. But do the students possess the skills desired by the employer? There is no way community college faculty can be sure unless they look outside the walls of the classroom for answers. This requires partnering with other entities to help describe and define the curriculum.

A Partnering Model for Education

The literature points to several types of partnering within academia. Most popular (and arguably best described) is partnering between academic entities. Major researchers of cross-academia partnering, Amey, Eddy, and Campbell (2010), defined three steps in the formation and evolution of educational partnerships. Step one is the formation of the partnership. Important to step one are the reasons why the partners join and what the partners contribute to the partnership. Step two

describes how the partnership develops and evolves over time and identifies potential outcomes. The third step defines incorporation of the partnership from which partnership capital is created.

In step one, Amey, Eddy, and Campbell (2010) discussed the pre-existing reasons why partners are interested in participating in a partnership. These antecedents include “the resources available to the individual partners, the motivations they have for partnering, the policy context in which they operate, and existing relationships in which they are involved” (pp. 336-337). Whatever the reasons for becoming a partner, there are two things that all participants have in common at the time of formation: social capital and organizational capital. [See figure 1.]

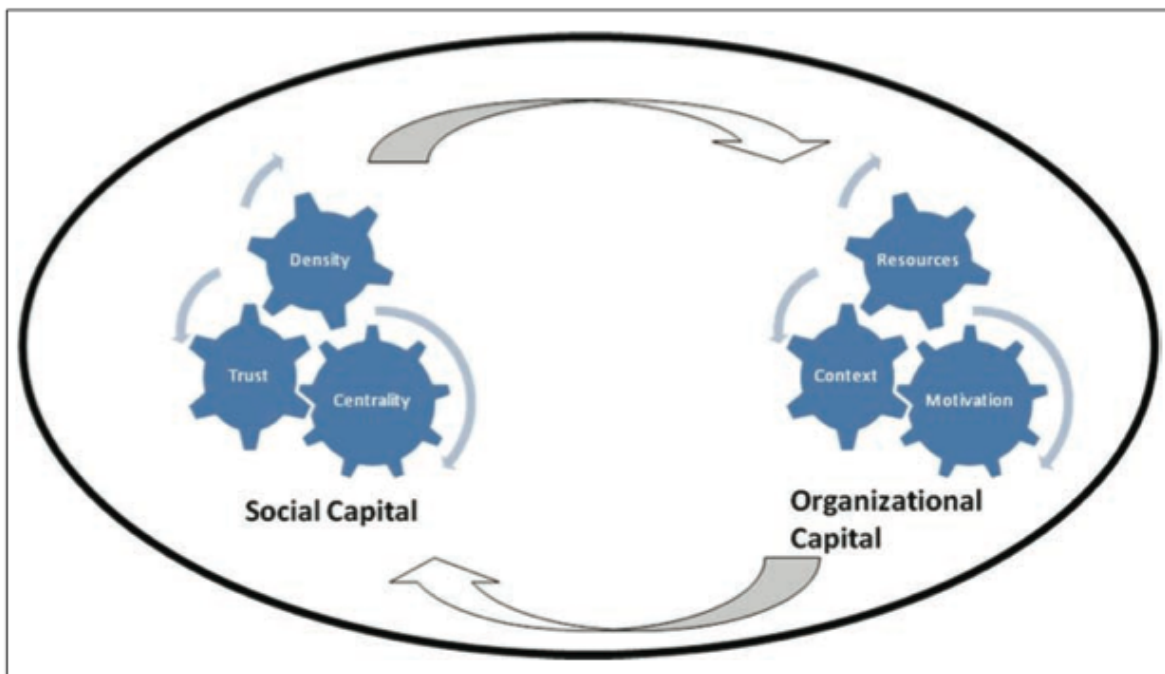


Figure 1. Partnership antecedents (Amey, Eddy, & Campbell, 2010, p. 336).

“Social capital and organizational capital are critical at the beginning of the partnership” (Amey, Eddy, & Campbell, 2010, p. 338). Amey, Eddy, and Campbell documented several types of social capital that play into the formation of educational partnerships, including personal and/or professional connections to other people, individual reputations, institutional reputations, available resources, trustworthiness for follow-through, and genuineness of mission and goals. They described density, centrality, and trust as the three main outcomes of social capital as it pertains to partnership formation. Organizational capital refers to the individual or group qualities that help organize a partnership, including power, influence, authority, and communication (Amey, Eddy, & Campbell). According to Amey, Eddy, and Campbell, it is organizational capital that facilitates and achieves institutional goals.

“Organizational capital refers to resources, power, influence, authority, communication systems, and other aspects of the organization upon which members can draw to facilitate or achieve particular partnership goals” (p. 338). If potential partners enter an arrangement with established social and organizational capital, the partnership has an increased opportunity of success than if the partnership is mandated by a board or the government (Amey, Eddy, & Campbell).

Step two of Amey, Eddy, and Campbell’s (2010) model described development and evolution of the partnership, the collaboration between partners beyond the personal reasons they had for originally entering into the partnership. While all partners share the vision of the overarching goals at this point in the partnership, there may be differences in motivation at the “micro level” (p. 339). Building trust in the members of the partnership will help get beyond issues. As roles

are established and trust is built, the more formal characteristics of the partnership are abandoned in favor of a more flexible organization (Amey, Eddy, & Campbell).

[See figure 2.]

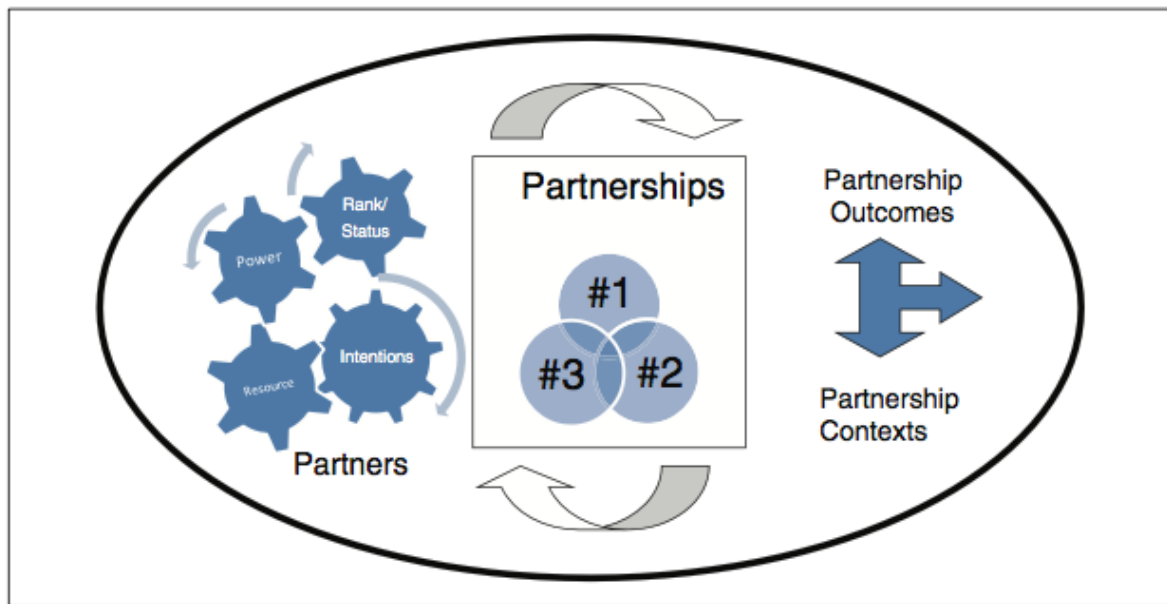


Figure 2. Partnership development (Amey, Eddy, & Campbell, 2010, p. 340).

According to Amey, Eddy, and Campbell (2010) the process of trust building is circular and mutually reinforcing by nature. While a partnership begins with a formal process like a contract, the formal process is soon replaced with trust, a more informal force. Once trust is established, roles are defined and accountability can be assigned (Amey, Eddy, and Campbell). Intentions must align to promote partnership development. Without this alignment of intentions, additional social and organizational capital may be required.

According to Amey, Eddy, and Campbell (2010), the third step of the partnership process includes the creation of partnership capital. "Partnership capital is evidenced when there is networking, when shared beliefs regarding the focus and

processes of the partnership are created, and when time spent working as a team results in a sense of shared norms and an alignment of processes” (p. 342). See figure 3 below.

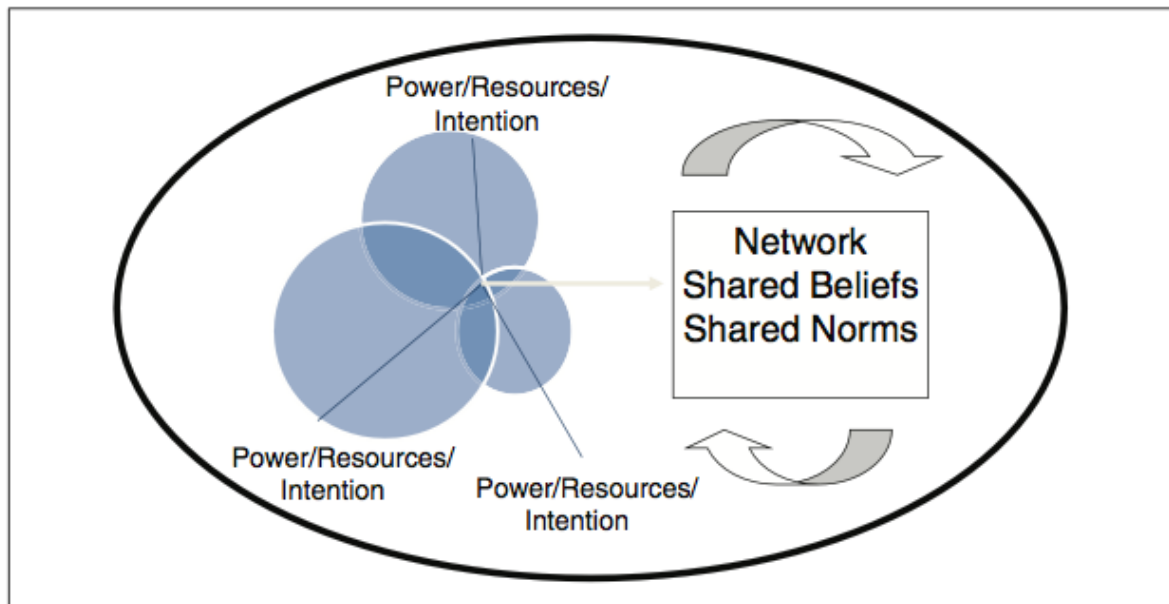


Figure 3. Partnership capital (Amey, Eddy, & Campbell, 2010, p. 342).

Partnership capital institutionalizes the partnership and sustains the collaboration (Amey, Eddy, & Campbell, 2010). While individual levels of capital vary in strength and fluctuate over time, it is important to note the areas of intersection or overlap in the partners' capital. This is where the partners agree on shared norms, shared beliefs, and networking. It is this sharing that represents the partnership capital.

Amey, Eddy, and Campbell (2010) use this model to explain partnering between K12 and postsecondary institutions and it works well for describing the evolution of these education-only partnerships. What is missing from this model,

however, is the introduction of business leaders into the partnership. Such business/ education partnerships exist, as witnessed below.

Partnering with Business

Community colleges partner closely with industry and other community/ business entities to respond to the needs of local economies (Boggs, 2010; Amey, 2010; Clifton, 2011). It is the community college that offers training and support when a new business needs employees, when an established business requires additional training for the current workers, and when local governments write growth and development plans (VanWagoner, Bowman, & Spraggs, 2005). However, community colleges are limited in successfully accomplishing the goal of creating employable graduates without assistance.

This assistance often comes in the form of defining the skill set required to acquire and retain a job, known as employability skills (Saterfiel & McLarty, 1995). This skill set, traditionally described as the technical skills required for a vocational career, has been expanded to include communications, problem solving, personal relationships, and organizational skills required for all employment (Saterfiel & McLarty). Often these same business partners are called upon to aid in the assessment of outcomes at the time of graduation (Saterfiel & McLarty).

However, there must be agreement between the parties in any partnership before it can be successful. Strand, Marullo, Cutforth, Stoecker, and Donohue (2003) stated there are three principles that motivated business and college partnerships. To be successful, the partners first share a worldview where philosophical agreements are obtained while enacting upon their philosophical positions through

program objectives. Next, partnership members achieve a consensual agreement concerning goals and strategies that are juxtaposed with aforementioned objectives. Finally, all members have mutual trust and respect. It is believed that trust and respect enable each partner to know the other acted appropriately and made a genuine effort to not compromise their partner's interests (Strand, Marullo, Cutforth, Stoecker, & Donohue, 2003).

Louisville, Kentucky, is one community where this type of partnership has been initiated. According to Business-Higher Education Forum (2010), Louisville has developed a consortium of business leaders and educators to streamline the transition from K12 into postsecondary education and the transition into the workforce upon completion. The goals of the organization are to:

- “Create a strong college-going culture in Louisville’s schools, workplaces, and neighborhoods.
- “Increase alignment and rigor across the K-12 and postsecondary education systems.
- “Ensure that the citizens of Louisville can access and afford postsecondary education.
- “Ensure all Louisville students will be able to progress through postsecondary institutions to ultimately attain needed postsecondary credentials.
- “Galvanize Louisville’s education, business, and community leaders to achieve a long-term, common education agenda”

(Business-Higher Education Forum, 2010, pg. 3).

According to Business-Higher Education Forum (2010; 2011) the idea behind the Louisville effort is to dramatically increase the number of baccalaureate degrees awarded in the community, creating a more highly-educated, employment-ready workforce. The focus is on a seamless experience starting in kindergarten and culminating with a four-year degree and employment. However, the process is not complete until the skills developed in the classroom are validated against the needs for gainful employment. Gauging student (and thereby program) success substantiates employable skills and leads to discussion on additional needs in the curricula.

Gauging Student and Program Success

Some scholars argue that more important than how many students enroll in and start at a community college is the number of students that persist and exit through graduation, transfer, or employment (VanWagoner, Bowman, & Spraggs, 2005). To achieve this definition of success, students build upon their learning, collect constructive feedback on their work, and show that they have the skills needed to be employable. The electronic portfolio has become a valuable tool for students to demonstrate higher learning and its connection to program outcomes, critical thinking skills, personal growth, and educational development (Day, 2009). While these educational outcomes are well documented, some students articulate that the most important reason to create a portfolio is to improve their probability of finding employment (Young, 2002).

Electronic portfolios are an expression of the student's self and identity, showing progress and commitment over time (Cambridge, 2010). They cut across

disciplinary lines while demonstrating service, leadership, educational prowess, and work experience (Edwards & Burnham, 2009). Making the student's work public encourages feedback from other students and causes learning to occur during the feedback process (Fahey, Lawrence, Paratore, 2007). Allowing more feedback in the classroom has statistically positive effects on the students' perception of learning performances (Chang & Tseng, 2009).

But using an electronic portfolio for feedback can also foster additional changes within the classroom. In the past, assignments were complete when the assessment occurred. Now, with electronic portfolios, conversation continues through a reflection process of what was learned and how learning occurred (Fahey, Lawrence, & Paratore, 2007). Assessment ideas can come from the faculty or the students. Alverno College in Milwaukee, Wisconsin, used a type of grounded theory to develop outcomes from the bottom up, incorporating student input into the selection of what best demonstrates student success (Day, 2009). However, a challenge remains in using electronic portfolios as assessment tools for multiple courses. While a well-designed electronic portfolio easily shows student success across courses (and often across educational areas of the college), this contradicts the traditional one-grade-for-one-class paradigm, drawing criticism and causing discomfort (Edwards & Burnham, 2009).

While electronic portfolios are a superior tool for assessing student success, portfolio assessment can also offer valuable input into program success and organizational decision making. Many institutions have found that electronic portfolios have supplied an alignment of student self-articulation with institutional

direction. This makes both more effective (Cambridge, 2010). Based on portfolio content, decisions can be made on future direction and program curricula (Cambridge).

Institutions typically revisit learning outcomes before designing an electronic portfolio system (Day, 2009). First-year experience includes introduction to electronic portfolios and the core expectations placed on them by the educational institution. Instructions include what to store and how to store it for future use (Edwards & Burnham, 2009).

Summary

The literature clearly shows the value of higher education and the community college's contribution to success, especially in areas like health care and computer technology. It is equally apparent that, in order to be successful in any career, the employee must complete rigorous career development, often several times within the employment lifetime. As technology and the economy evolve, career development must also evolve to teach the current (and future) skills needed to be successful in the working world.

Correctly defining the content of career development is a job the community college cannot complete in a vacuum. Even with the use of electronic portfolios to gauge success, the bridge between business need and curricular content is not always crossed. Partnerships with business are required. While the literature points to partnerships between business and education clearly generating jobs within the community (Clifton, 2011), there is little in the literature regarding partnerships

between business and education defining the curriculum that generates employees to fill these new jobs. This style of partnership is the subject of this study.

Chapter three spells out the methodologies of this study. The research is defined in respect to epistemology, theoretical perspective, methodology, and methods. Discussion includes descriptions of the site, participants, and unit of analysis. This is followed by data collection and analysis as well as descriptions of goodness and trustworthiness of the study.

CHAPTER 3.

METHODOLOGY

What makes qualitative research unique is the openness and freedom of expression afforded the researcher. Oldfather and West (1994) compared qualitative research to playing jazz music, stating “the jazz metaphor creates a pathway for making explicit the tacit understandings that enable us to make our way as researchers without prescriptions of ‘fully orchestrated scores’” (p. 23). While both qualitative research and jazz have well-defined rules that guide the player in the basics of construction, the final product of both is very much a set of reflections and reactions to input from other players in the environment. These reflections and reactions, according to Oldfather and West, are what makes both qualitative research and jazz a product of the player’s personal response.

However, before qualitative research can begin, the researcher must have a clear understanding of the ground rules alluded to by Oldfather and West (1994). These rules for quality research are visited in further detail in this chapter. The time for reaction and reflection comes after the data have been collected and is illuminated in the final chapters of this dissertation.

Creswell (1998) posited that qualitative researchers approach their studies with a worldview paradigm. A worldview paradigm, according to Guba (1990), is “a basic set of beliefs that guide action” (p. 17) and define the inquiry process. Adding to the definition of worldview paradigm, Crotty (1998) listed four basic elements to any research process: epistemology, theoretical perspective, methodology, and methods. Epistemology, according to Creswell (2009), underscores the worldview

paradigm and is our basic set of beliefs. Theoretical perspective, in Crotty's words, defines our way of making sense of our world. Methodology describes our plan of action or how the study will be conducted (Crotty; Creswell). Finally, the methods are the steps performed in the collection and analysis of research data (Creswell). In summary, to complete a successful qualitative research project, the researcher must be guided by their basic beliefs and carefully consider these basic elements of quality research. These are the "tacit understandings that enable us to make our way" (Oldfather & West, 1994, p. 23).

Epistemology

Crotty (1998) defined epistemology as a way of understanding and explaining what we know and how we know it. He added that epistemology represents the philosophical grounding for our knowledge. Meaning is built from the overall human experience as well as the personal experience of the researcher.

This study follows the precepts of a constructivist epistemology. Creswell (2009) stated constructivism is the process of individuals seeking to understand the world in which they work and live. He postulated that meaning was assigned by the researcher using past experience and cultural/sociological underpinnings. Crotty (1998) identified several assumptions related to constructivism:

- Meanings are constructed by human beings making sense of the world they live in,
- humans use historical and social perspectives to interpret their world, and
- qualitative research is largely inductive with the researcher generating meaning from the collected data.

Crotty pointed out that constructivism downplays human knowledge and therefore builds knowledge from the researcher's perspective. This implies the resulting analysis reflects the researcher's own reality.

Creswell (1998) further stated that in constructivism the researchers must reduce the distance between themselves and the research to fully understand the meaning of the research data. In this study, I researched the participants, partnerships, and curriculum from the career and technical program area in which I teach. Knowledge was constructed from data collected in our program area and analyzed in this study. Building this knowledge is a creative process, not a mechanical one; it is the researcher's job to actively create meaning out of the collected data (Esterberg, 2002). Data must be examined, coded, and reduced into meaningful themes (Esterberg).

Theoretical Perspective

Theoretical perspective is a way of examining the world and making sense of it; it is the philosophical stance that informs the methodology of the study (Crotty, 1998). Crotty added the theoretical perspective "provides a context for the process and grounds its logic and criteria" (p. 7). Merriam (2002) stated there are several philosophical stances available to the researcher and each provides a look at how people experience and interact with their world and the meaning they derive from it. Creswell (2009) added that theoretical perspective "shapes the types of questions asked, informs how data are collected and analyzed, and provides a call for action or change" (p. 62).

Merriam (2002) stated learning how individuals “experience and interact with their social world, the meaning it has for them, is considered an interpretive qualitative approach” (p. 4). Crotty (1998) added interpretivism has its roots in the work of Max Weber and his concern with *Verstehen* (understanding). This quest for understanding, according to Weber’s work, required an interpretation of the human experience. Since my study’s objective is to understand and interpret the experiences of the participants in the study, an interpretivist theoretical perspective was employed.

Methodology

Methodology addresses the process of the research, describing how the research will be accomplished (Creswell, 2009). Crotty (1998) added that the methodology is the strategy or course of action the researcher plans to undertake. My research was conducted utilizing phenomenology. Phenomenology, according to the Stanford Encyclopedia of Philosophy (2011), studies the “appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience” (para. 4). Crotty agreed and added that nothing truly has meaning until a human being experiences it and applies a meaning to it. This applied meaning, continued Crotty, is different for every person based on the experiences they have had in their life. I relied on my experiences working with education, students, and businesspersons to apply meaning to the data collected in this research.

Methods

There are several methods that can be used in a phenomenological research study and for this study the data were collected and analyzed using a case study. A case study, according to Merriam (2002), involves researching a bounded group called a case. This group, also known as a bounded system (Creswell, 1998), is defined by some finite quality such as membership, time, or location. This research documented a bounded system consisting of the faculty and students in two program areas at a midwestern community college and the business partners that are part of the advisory board for the program areas. The results are documented using the case study reporting structure introduced by Lincoln and Guba (1985):

- a recap of the problem,
- a thick description of the bounded case,
- a thorough description of the observations made during the study,
- a discussion of all items studied in depth, and
- the outcomes and “lessons learned” (p. 362).

Yin (1994) stated that there are six sources of information that need to be collected as part of a case study. These information types include documentation, archival records, interviews, direct observations, participant observations, and physical artifacts. To fulfill Yin’s requirements for information sources, this research included the following data samples: Documentation of program curriculum as defined at the time of the study, minutes from meetings between faculty and business partners, and reviews of student portfolio content. Results of past portfolio reviews and archived minutes from meetings with business partners served as the

archival records. Interviews were conducted with business partners, chamber of commerce executives, members of faculty, and graduates that have completed the process and found employment in their field. Being a member of the faculty in this program area, I was a direct observer and active participant in all meetings, reviews, and definitions of program content. Physical artifacts include examples of student portfolio work that directly or indirectly address the objectives of the program and the skill set required for employment. Data were collected through semi-structured interviews and hermeneutic examination of existing documents and artifacts.

This study followed Yin's (1994) strategy for holistic, single-case design. This strategy is appropriate for my study because, according to Yin, single-case designs are analogous to single experiments and work well to "confirm, challenge, or extend the theory" (p. 38). Yin described holistic designs as examining "only the global nature of a program or an organization (p. 42)" as opposed to embedded case studies that require multiple units of analysis.

Research Site

The college in this study is located in a rural area of the midwest, serving a nine-county area. It has a long history, with its roots in a junior college that started in the early part of the twentieth century. It moved from being a junior college to becoming a community college during the 1960's. The college is governed by a nine-member board, each member elected by constituents from one of nine districts in the college service area.

There are over 3,700 for-credit students enrolled at the college. The average student age is 23.1 with 55% of the student population being female. The college

offers both transfer and career tracks with 56% of the students in the transfer track. There are about 80 full-time faculty and 160 adjuncts. The college has a 17:1 student-to-instructor ratio.

This study examined the graphic design and information systems technology programs at the community college. While there are marked differences between the programs, they share a program leader and are both part of the business division of the college. The programs are relatively small, graduating between 10 and 15 students each annually. They are both considered career and technical programs, meaning they are designed to prepare graduates to enter the workforce upon graduation. In spite of being career preparatory programs, there are graduates each year from both areas that transfer to four-year universities to continue their studies.

The graphic design program includes one full-time instructor and two part-time instructors. Graphic design has traditionally had a predominately female student body. Information systems technology includes three full-time instructors and two part-time instructors. The student population of the information technology program is mainly males.

Participants

Participants in this study were selected through purposeful sampling. In purposeful sampling, “the researcher actively selects the most productive sample to answer the research question” (Marshall, 1996, p. 523). All participants in this study are from one of four groups: faculty who teach in the career and technical programs in the study, businesspersons who have worked with the faculty from the same career and technical programs in the study, graduates of the programs in the study

who were employed by the business partners in the study, and representatives of a local chamber of commerce or economic development corporation active in promoting business/education partnering.

Four members of faculty from the studied program areas were included in this study, two full-time and two part-time. The first full-time faculty participant, an instructor from information systems technology, was the program leader shared by the graphic design and information systems technology program areas. This program leader works most closely with the business partners and the advisory boards. The other members of the faculty in this study are instructors in the specific program areas, two from graphic design (one full time and one part time) and one additional part-time faculty member from information technology. I am the full-time graphic design instructor in the study. The part-time information systems technology instructor is also the division chair for the program area. All faculty participants in this study met following criteria at the time of the study:

- Instructors were current members of the graphic design or information technology faculty, interfacing with students within the program throughout the students' college experience.
- Each instructor was active in defining and implementing program curricula.

The business partners in the study consisted of seven local employers. All of the local employers met the following criteria at the time of the study:

- Each partner was an active member of the program advisory board and/or served recently as a partner reviewer for student electronic portfolio presentations.

- Some portion of the employer's business focused on graphic design or information technology.

Four recent graduates were included to gain the student perspective on preparation for employment. Adding the student voice to this study served as a validation method by triangulating input gathered from the faculty and business partners. The graduates in the study met the following criteria at the time of the study:

- The student graduated from the community college in the study in the last two years with a degree in either graphic design or information systems technology.
- The graduate was employed by one the business partners in the study. While employment did not need to be current, it was in their chosen area of interest.

Chamber executives and economic developers in this study met the following criteria at the time of the study:

- Each participant was an active member of their respective organization.
- Each participant was an active proponent of business/education partnerships to create employable graduates for the local community.

One chamber executive was interviewed in this study.

Study propositions

Yin (1994) stated that study propositions direct attention to items that need to be examined within the research. These are often items, according to Yin, that point the researcher at additional issues that must be studied that are not covered directly

by the research questions. Propositions can cause reflection on theoretical issues and direct the researcher toward relevant evidence (Yin).

There are several propositions addressed in this study:

- Members of the partnership collaborate because they derive mutual benefits.
- Partnerships follow prescribed evolutionary steps as they form and mature.
- Successful educational programs and, ultimately, successful graduates result in economic advances for all members of the partnership.

Unit of analysis

According to Yin (1994), the unit of analysis defines what is being studied. It is the unit of analysis that represents the bounded system in the case study - the time, place, program, event, activity, and/or individuals that are being studied (Creswell, 1998). Yin explained that “the definition of the unit of analysis (and therefore the case) is related to the way the initial research questions have been defined” (Yin, p. 22). Thus the unit of analysis and the case itself must be carefully selected to contain the answers to the research questions themselves (Yin).

In this study, the unit of analysis is defined as follows:

- four members of faculty, two full time and two part time, all of whom teach in the programs being researched,
- seven local businesspersons that are active members of the advisory boards for the program areas and/or have participated in the most recent review of graduate portfolios,

- a chamber of commerce executive director and/or a member of the economic development corporation active in promoting business/ education partnerships, and
- four recent graduates from the programs in the study, each of whom is or was employed by one of the employers in the case.

While the case focused on the most recent cycle of faculty and business partner corroboration toward program content, it is not truly bounded by time. Hermeneutic investigation of past reviews, advisory board meeting minutes, past curriculum, and other artifacts were included.

Data Collection

Yin (1994) declared the necessity for six sources of evidence in a quality case study. These six sources (documentation, archival records, interviews, direct observation, participant observation, and physical artifacts) are recapped in this section.

Documentation

Yin (1994) posited that documentation, with the exception of studies of preliterate societies, is likely to be relevant in all case studies. He continued by adding that the importance of documents is not based completely on their accuracy and they should not be used literally as a recording of exact history. The most important use of documents in a case study is to corroborate and augment other sources. Documents are only useful if they reenforce data collected through other means (Yin).

In this study, documentation included current program curriculum, recent minutes from meetings with business partners, and current reviews of student portfolio content. Each of these forms of documentation was readily available. These documents showed the current state of the program curriculum and helped explain the state of graduate preparedness at the time of the study.

Archival records

According to Yin (1994), archival records, often in computerized form, are relevant to many case studies. Like documentation, archival records cannot be completely taken at face value. Special care must be taken to ascertain the conditions under which the records were created (Yin). Yin continued by saying it is up to the researcher to understand these records were archived for a specific purpose other than the research and may be written in a way that reduces their quality as research data.

Archival records include past portfolio reviews, programmatic changes, and archived minutes from meetings with business partners. These data document the evolution of the curriculum and the programmatic changes made in the recent past. Archival records and documentation work closely together to explain program evolution.

Interviews

Interviews are one of the most important sources of data for a case study (Yin, 1994). Yin stated that interviews are an essential data source “because most case studies are about human affairs” (p. 85). He added that interviews can take on several forms, but interviews are commonly of a semi-structured nature. Using a

semi-structured format with open-ended questions encourages the respondent to add their own insights and opinions. This not only adds to the richness of the response but often opens new lines of questioning the researcher may not have followed in a more structured environment (Yin).

Interviews were conducted with business partners, a chamber executive and/or an economic developer, members of faculty, and recent graduates that have entered the workforce in their chosen field. Interview questions were open-ended (Yin, 1994) and responses were digitally recorded for later transcription and analysis. Each individual interview lasted less than one hour. For security purposes, all recordings and transcriptions were stored in electronic format on equipment accessible only to the researcher. See appendix A for interview questions.

Direct and participant observation

Yin (1994) listed two types of observations as necessary data sources: direct observation and participant observation. In direct observation, the researcher visits the case study site (Yin). In participant observation, the researcher takes on an active role in the research, often assuming several roles as a contributor to the case (Yin).

I participated as a direct observer and active participant in all meetings, reviews, and definitions of program content within the program areas. I met with business partners, faculty, and students regarding curriculum on a regular basis and attend all advisory board meetings. I also actively participated in the review of student portfolios, the assessment tool for determining program success as well as student success and employability.

Physical artifacts

Finally, Yin (1994) listed physical artifacts as a case-study data source.

Physical artifacts include anything that can be collected or observed as part of a field visit (Yin). According to Yin, physical artifacts often have the least impact as a data source.

Physical artifacts for this study included examples of student portfolio work that directly or indirectly address the objectives of the program and the skill set required for employment. These artifacts were stored on college computers and readily available for analysis.

Data Analysis

Yin (1994) stated there must be an overlying general strategy that governs the data analysis process. Yin selected “relying on theoretical propositions” (p. 103) as the most desirable strategy for case study analysis. The implication is that the research questions and the study propositions drove the collection of data, so it is only logical that they also drive the analysis. Data should be organized and then analyzed for answers to the research questions and the propositions.

Creswell (1998) asserted that data analysis in a case study begins with a detailed description of the case and its setting. Stake (1995) agreed and advocated for four forms of data analysis and interpretation once the case was fully described: categorical aggregation, direct interpretation, patterns, and naturalistic generalizations. Categorical aggregation refers to collecting the data around central themes. These themes are generated by the researcher and the researcher is free to create as many themes as required. Merriam (2002) and Esterberg (2002)

referred to this action as coding. Direct interpretation, unlike categorical aggregation, looks for single themes within a data set. Direct interpretation is the process of pulling the data apart and reassembling it in a more meaningful way while categorical aggregation (coding) is the grouping of data from multiple sources around themes to validate data from individual sources (Stake; Merriam). Stake described categorical aggregation and direct interpretation as opposites.

Establishing patterns is a technique for finding correspondence between two or more categories. Merriam refers to this process as axial coding. In patterning, themes of data are examined for similarity and regrouped around larger themes. Naturalistic generalization are ways that others can learn from the data and generalize it to their own case. In this study, I employed categorical aggregation, also known as coding, to thematically analyze the data, patterns or axial coding to establish connections between the categories, and naturalistic generalizations to make the results useful to other researchers and readers.

Ensuring Goodness and Trustworthiness

Merriam (2002) defined goodness in research as conducting a study in a “rigorous, systematic, and ethical manner, such that the results can be trusted” (p. 24). Merriam and Yin (1994) listed several quality-related issues to address in qualitative research: internal validity, reliability, external validity (sometimes called generalizability), and ethical issues.

Internal validity

According to Merriam (2002), internal validity addresses congruity between what is reported and what is reality. Yin (1994) called this construct validity and

defined it as “establishing correct operational measures for the concepts being studied” (p. 33). Merriam listed several strategies to help ensure the findings are internally valid of which the most well known is triangulation. Triangulation uses multiple investigators, data sources, or theories and cross checks results for consistency (Merriam). In this study, I extracted data from multiple sources to triangulate. Data were collected through interviews, direct observations, and hermeneutic examination of portfolio reviews and meeting minutes. Data sources were triangulated and checked for consistency.

To further validate my study, I employed member checking, peer reviews, and author positioning. Member checking is the process of having interviewees review and validate transcripts of interviews and proof the final product to ensure they are not misrepresented (Merriam, 2002). This strategy ensures that the researcher has not misinterpreted what was said during the interview. Peer review is defined as having other researchers read and review your work to ensure that it follows prescribed methods (Merriam). This study was peer reviewed by three fellow researchers and two peers from Midwestern’s administration before submission. Author position has to do with the researcher’s personal beliefs and experiences. The author position is included in chapter one of this paper.

Reliability

Reliability refers to the extent to which a study can be replicated (Merriam, 2002). Replication implies the study is documented with enough thick, rich description to allow another researcher to perform the same study. It also carries implication regarding the training of the researcher, as a well-trained researcher will

more likely follow prescribed methods, thus making the research easier to replicate (Merriam). This does not imply, however, that replication of the study by another researcher would result in exactly the same results as each researcher would interpret the data in different ways based on their own theoretical lens (Merriam). The descriptions of methodology in chapter three and the case in chapter four of this paper will serve as that roadmap to replication of the study.

External validity

Yin (1994) and Merriam (2002) described external validity as ensuring the results of the research can be generalized to other populations. This generalization is not automatic, the research must be replicated in a second population to demonstrate the results apply. Once replication occurs, the results will be accepted for a larger number of populations (Yin). While I am not planning to replicate this study in a second population, the descriptions of the methodology and the description of the case will make the research easier to replicate by future researchers.

Ethical issues

Honesty, ethics, and protection of participants are issues that pertain to all qualitative research (Merriam, 2002). In this research, I was open and honest with all participants, followed the rules of good research, conformed to the regulations of the Iowa State University Institutional Review Board, and protected the identities of all participants to the best of my ability.

Limitations and Delimitations

The delimitations of this study are as follows:

- The study focused on two-year career and technical programs at a rural, midwestern community college.
- Business partners in this study focused on either information technology or graphic design as a key component of their business.
- The students in the study were graduates of either an information technology or graphic design program at the community college.
- All graduates in this study have found employment in their chosen fields.

The limitations of the study are as follows:

- Because the study is delimited to a small group of career and technical students at a single midwestern community college, the findings may not generalize to some other populations. Chapter 3 discusses the transferability and trustworthiness of the study, easing the generalization.
- Students that have graduated but have not found employment in their chosen field did not have a voice in this study. Future research on these graduates and why they did not find employment would be appropriate.
- Likewise, business partners that have not found suitable graduates from the career and technical programs in this research did not have a voice in this study. Future research as to why suitable graduates were not found would be appropriate.

Summary

This examination of the curriculum-definition partnership between faculty and business is defined by a holistic, single-case case study. Relying heavily on Yin (1994), Merriam (2002), and Creswell (1994 & 2009) for the underlying constraints of

case study research, this study documented the workings of a current partnership at a rural midwestern community college. The case in this study included business partners, faculty, and graduates from two career and technical programs within the college, as well as business leaders from the community.

Data were collected from multiple sources using Yin's (1994) model for complete data collection. Yin's required data sources include documentation, archival records, interviews, direct observation, participant observation, and physical artifacts. These data were thematically coded, pattern checked, and analyzed for content.

Chapter four explores the bounded case in greater detail. Discussion includes thick description of the unit of analysis and observations made during the study. Chapter five reports the findings of the data analysis. Chapter six concludes with a summary, recommendations, and reflections.

CHAPTER 4.

DESCRIPTION OF THE CASE

Case Overview

This chapter describes the community college, program areas, participants in the research, and timeframe that constitutes the unit of analysis. Using rich, thick descriptions, chapter four describes in detail the characteristics of the case. Data were collected from artifacts and interviews with participants. Artifacts include data from college and business web sites, published meeting minutes, course catalogs, course curricula, and reviews of student portfolio presentations. Open-ended interviews were used to collect specific information regarding the participants in the research and their views.

The Community College

It feels like you are leaving town and entering farm country. The space between buildings begins to grow. You start to see crops. You cross a bridge over a small, picturesque river. You pass a field with a small herd of cattle. But within a mile of the city there is a wide, concrete sign on the north side of the road announcing a community college. A two-lane blacktop road just past the sign runs north toward a grove of trees. If not for the row of ornamental trees on the west side of the road, this would look like any other two-lane blacktop in farm country - corn on one side and soy beans on the other. Further to the west, down in a shallow valley are a small farm and some farm animals. What is not immediately obvious is that the corn, soy

beans, cows, and hogs in this snapshot of Americana are raised by agriculture students at a community college.

It is about a half-mile drive before you see the traditional school buildings and parking lots of a college. Emerging from the corn and the trees are buildings, mostly two story, made of concrete and brick. Sturdy buildings, buildings that represent the strength of the educational system.

Midwestern Community College serves a nine-county, rural area in the heartland of America. The nine counties support a total population of slightly over 140,000 and cover just over 3,600 square miles. The largest city in the Midwestern Community College service area has a population of 27,000. With a history that draws its roots from a junior college established in 1918, Midwestern has a long, rich tradition. It has been an integral part of the community for many years.

The campus covers 500 countryside acres. Facilities include a recreation center, a 1200-seat community auditorium, a conference center, student dormitories and apartments, an entrepreneurial center, a complete farm, a fire-training facility, an activity center, and various academic and administrative buildings. The college grounds include several practice fields for various sports, two ponds, and many walking paths. It is not uncommon to cross campus on one of the walking paths and be greeted by students, faculty, and Canada geese.

Like so many other rural areas in America, this part of the country is seeing shrinking population and difficult economic times. Midwestern has an enrollment of slightly over 3,700 students, well below the national average for community college enrollment of 10,600 (American Association of Community Colleges, 2011).

Midwestern Community College has set new enrollment records several years in a row, at least partly due to the higher-than-normal unemployment in the service area, forcing local people to look into learning new skills and starting new careers. Enrollment has now leveled off and has started to shrink slightly.

Fifty-three percent of Midwestern's total enrollment are full-time students with the remaining 47% attending Midwestern Community College part time. While the average age is just over twenty-three years, only 30% of the students are over the age of twenty-three. Ninety-five percent of Midwestern's students are in-state residents, 55% are women, and 9% of the enrollment are people of color. Fifty-six percent of the students are enrolled in transfer programs, meaning they are planning to transfer to a four-year institution after graduation to continue their education. The remaining 44% are enrolled in career/technical programs, signifying they are preparing to enter the workforce upon completion of their education at Midwestern Community College.

Midwestern employs about 80 full-time faculty and 160 adjunct instructors. A total of 76,000 credits hours were taught in 2010-2011 with about two-thirds of the credit hours taught by full-time instructors. The student-to-faculty ratio is 17:1 with average class size around 20 students. Faculty are accessible to students and, due to small class sizes, greetings are often by first name.

Graduates of Midwestern can earn any of 36 different associates degrees or receive a diploma from one of 38 certificate programs. Midwestern is accredited through the Higher Learning Commission. According to the Higher Learning Commission (2010), there are five specific criteria for accreditation: (1) mission and

integrity, (2) preparing for the future, (3) student learning and effective teaching, (4) acquisition, discovery, and application of knowledge, and (5) engagement and service. College programs earning discipline-specific accreditations include Associate Degree Nursing, Automotive Service Technology, Emergency Medical Technician, Mechanical Design Technology, Medical Assistant, Physical Therapist Assistant, and Practical Nursing.

The community college is governed by a nine-member board, with board members being elected from each of nine geographic districts. The district boundaries do not coincide with the nine county boundaries, but are instead organized around the larger towns in the service area. Board members are elected by general election and serve four-year terms.

Midwestern serves several important roles in the community. It is the training ground for employees. It is the incubator for many new businesses. It is a cultural hub for the community. It supplies affordable education to many new high school graduates as well as people beginning a new career. In short, Midwestern, like so many other small-town community colleges in the Midwest, is central to the needs of the community.

The Program Areas of Study

“Community colleges are uniquely positioned to provide the education and training that will prepare students for the jobs in the 21st century. . . Getting Americans back to work is America’s great challenge. And community colleges are critically important to preparing graduates for those jobs.” (The White House, 2011b). Increasingly, students select their college of choice based not only on location of the

school (many choose their community college because of its proximity to home) or the final cost, but in which employment fields the college offers formal training (Chute, 2009). To fulfill these charges, community colleges must offer a wide variety of skills training pertinent to the needs of the business community and reflective of the real needs for employment.

Curriculum at Midwestern Community College is divided into distinct educational areas: arts and sciences and career/technical programs. The arts and sciences curriculum focuses on the overall general education of the student as preparation for an Associates of Art degree and a likely transfer to a four-year institution. The career/technical programs focus on employability and joining the workforce and include studies in agricultural technology, business, family and human services, health, industrial technology, and public service. Graduates from the career/technical areas are preparing for a career and often do not go on for a baccalaureate degree. Unlike the arts and sciences students, career/technical students take fewer general education courses and focus on the skills needed to enter the workforce in their chosen field upon completion of their program at Midwestern. This is not to imply that arts and sciences students learn nothing about their chosen field. The arts and sciences graduates do complete classes in their chosen field but focus mainly on completion of all four-year general education requirements.

The business division at Midwestern Community College falls into the career/technical area and consists of four major academic clusters: accounting, information technology, marketing and management, and professional administrative services.

The accounting cluster prepares students to enter the accounting field or, in the case of some students, acts as a springboard toward transfer and an eventual four-year accounting degree. Information technology instructs students in two major areas: information systems technology and graphic design. These areas of study will be defined in more detail later in this dissertation. Marketing and management includes many diverse areas, including food service and hospitality management, sports management, marketing and sales, banking, insurance, entrepreneurship, and supervision. Professional administrative services includes the skills needed to become an office assistant, medical assistant, or legal assistant. The case study described in this dissertation focuses on two of the career areas in Midwestern's business division: information systems technology and graphic design.

Midwestern's information systems technology program prepares students for careers working with computer hardware and software systems in the business environment. Curriculum includes preparation for business operations, decision making, and the foundations of using technology to advance the business. Information systems technology students prepare for careers in the areas of network administrators, PC technicians, software testers, and help-desk operators.

All students in the information systems technology areas study a similar set of core technology classes. These classes are designed to give a working understanding of business technology as well as allow for easier transfer between program areas. Beyond the technology core, students experience curriculum specific to their particular career of choice.

Midwestern's graphic design program teaches aesthetics, color and detail, balance, proportion, and beauty, all as part of the creation of collateral for advertising, marketing, and sales of products and services. Designers must produce works in accordance to the needs of the client and its appeal to the customer and viewer audience. Successful designers often provide the face of the business to the customer base.

Graphic design students study many areas of art and design. Graduates will have a good foundation in art, studying many of the same principles and elements as art majors. In addition to these foundational studies, design students learn how to create works using computer technology and state-of-the-art software, often creating a series of pieces that fit into a single theme or message.

Both program areas in this research rely heavily on application-based learning in the curriculum. According to Hanson (2008), there are several reasons to use application-based learning in the classroom. First, by presenting the materials in a real-world context, students correlate classroom knowledge to the business environment, making the learning more significant to the students. Next, the projects assigned in the classroom teach skills that apply directly to the graduates' experience in the workplace, making them valuable employees faster. Finally, students that experience application-based learning learn to handle both positive and negative influencers in the work environment.

Both program areas share requirements for general education. Understanding the importance of the soft skills, the skills that define individual's interactions, job performance, and career prospects (Illinois Institute of Technology School of

Business, 2011), Midwestern has set specific expectations of each of the students in these program areas. Graduates will leave the college with skills in composition and speech, math and/or natural science, humanities, and social science.

Successful graduates of the information systems technology programs at Midwestern earn an Associate of Science/Business degree. The AS/B degree is designed to give the graduate a strong background in the technical areas of her/his career choice and enough general education classes to allow for either entering the workforce or smoothly transferring to a four-year institution. Students that fulfill the requirements for graduation in Midwestern's graphic design program earn an Associate of Applied Science degree. The AAS degree is designed to supply the graduates with strong technical skills in their area of study and the basic transferrable skills needed to function on the job.

The programs in the information systems technology area fall within the Science, Technology, Engineering, and Math (STEM) category. Like so many STEM areas of education, the student body is primarily male in composition with only 19% of the enrollment in information systems technology being female during the 2010-2011 academic year. Graphic design, while it has a large technology-based component in the curriculum, is not part of STEM. Unlike the STEM programs, enrollment in the graphic design program at Midwestern is predominantly female; 57% of graphic design students were female to 43% male students during the 2010-2011 school year. The average age of students in both of these study areas is well over Midwestern's campus-wide average of 23, with an average age of 28 in information systems technology and an average age of 31 in graphic design. The

actual ages very widely. The youngest student in information systems technology is 18 and the oldest is 59. In graphic design, the youngest is 18 and the oldest 62.

While the majority of the students in both programs call the largest town in the service area home (which is also the location of Midwestern Community College), many commute to the campus. Students come from every corner of the nine-county service area, some driving over an hour to get to school.

While information systems technology and graphic design share many requirements, expectations, courses, and even some faculty time, there is one area where the two areas are very diverse - the student personality. Information systems technology students are generally concrete sequential thinkers while the design students are generally much more free thinking. This shows up in the several ways, from educationally important characteristics like thinking and problem-solving skills to lesser important attributes like appearance and dress.

While these two programs seem very different, there are many things they share. Besides both being part of the same cluster in Midwestern's business division, they also shared the same program leader. This program leader's responsibilities include course/room scheduling, faculty coordination, course content, program assessment, and program promotion. Because both of these two programs are considered career/technical, the students in information systems technology and graphic design invest over two-thirds of their credit hours in courses that teach skills related directly to their field of study. The remaining time is spend in general education classes. The abbreviated general education requirements are nearly identical for both programs. Beyond the general education classes, these programs

share a “technology core” in which the students learn basic skills in web site design and computer maintenance. Finally, students in both of these programs begin electronic portfolios early in their college careers and continue to add and update the portfolios until they graduate. Before graduating, all students in these program areas deliver a formal presentation of their electronic portfolios to a panel of business people, faculty, and peer students, collecting feedback before attempting to use the portfolio during job seeking.

There are four full-time faculty members and several part-time instructors in the two program areas. Information systems technology includes three full-time instructors who focus on upper-level courses and two part-time instructors who teach entry-level classes. One of the part-time instructors in the information systems technology program area is also the chair for the business division. In the graphic design area, there is one full-time teacher handling most of the upper-level design classes. There are also several part-time instructors in graphic design teaching entry-level courses and several foundational art courses. The number of instructors any given design student will have in the classroom depends on the scheduling and elective options selected at registration. All full-time faculty and most part-time faculty are between 40 and 65 years of age.

Business partnerships are an important part of the curriculum in both program areas. Advisory boards populated by local business people meet regularly to assist in the definition of overall program direction and course selection. Internships are offered at area businesses for students to gain experience. Business people assist in the review of graduate-elect portfolios the end of each school year. Local

businesses provide employment opportunities to Midwestern's graduates as budgets allow.

The Participant Groups

Without proper input, faculty would be defining graduate employability based solely on personal experience, speculation, and journal articles. Defining graduate employability is impossible without the input of both the business people that understand the requirements of the job and the graduates that ultimately join the workforce (Saterfield & McLarty, 1995). It is the business people that supply the requirements for employment in their respective industries and graduates in the workforce that have lived the employee-socialization process that hold the answer to preparedness (Saterfiel & McLarty).

When originally considering the design of this dissertation, I was convinced there were exactly three groups of individuals I would be interviewing: faculty, graduates in the workforce, and employers, as demonstrated in Figure 4 below:

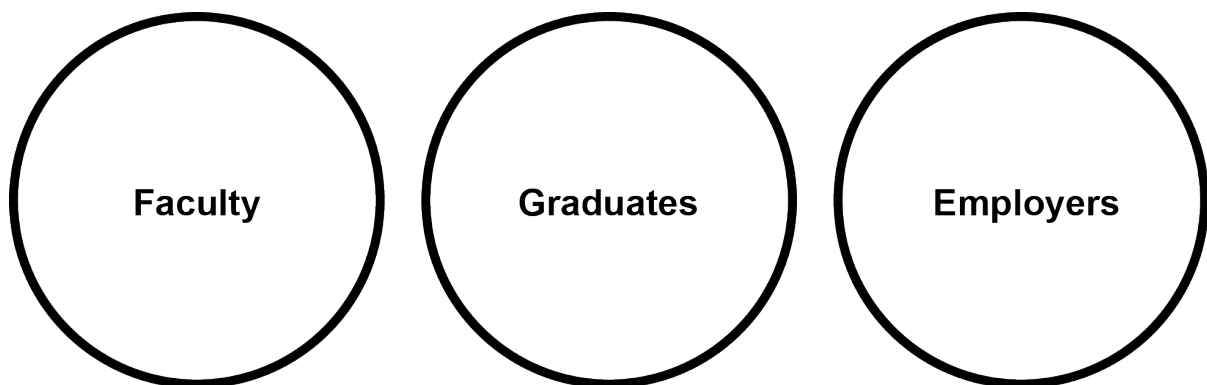


Figure 4. Planned grouping of participants into three distinct groups.

Each of these three groups held a core piece of the meaning I was to derive from my research. The faculty facilitate the classroom experience. The graduates in the

workforce represent the experience of employee socialization and preparedness. The employers hold the knowledge of the skills required of a successful employee. I made the conscious decision to include the chamber executive in the study with the employer group, as she represented the interests of the business community in similar ways to the local business owners.

What I quickly discovered was the three-group model did not address all aspects of the research. While the faculty, graduate, and employer groups were indeed viable, valuable sources of interview data, there were two additional groups I had not counted on finding. Figure 5 shows the positioning of the faculty-graduate and employer-graduate groups:

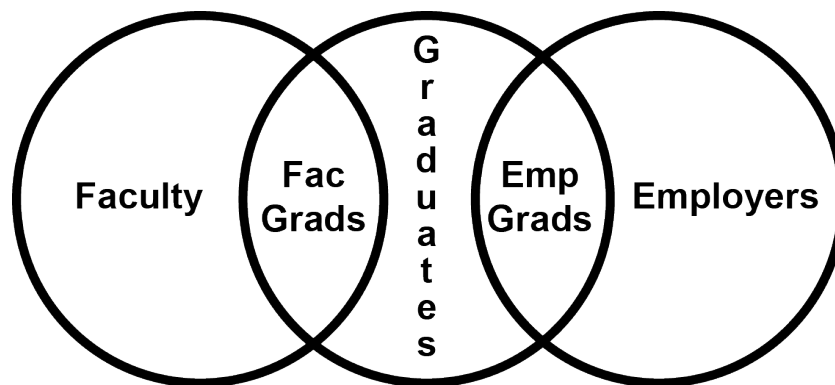


Figure 5. Grouping of participants into five groups.

Of the four faculty interviewed, two were graduates of Midwestern Community College. This same manifestation occurred within the employers, as six of the employers interviewed were also graduates of Midwestern. While it was too early to know if there were to be differences in the thematic analysis because of these crossovers, I made the decision to analyze the data in five groups instead of three, understanding there was a distinct possibility of later regrouping the participants

back into the original three groups of faculty, employers, and graduates. How the recognition of the faculty-graduate and employer-graduate groups effects the thematic data will be further explored in Chapter 5 and Chapter 6.

What follows is further discussion of the participant groups in the research design. The faculty group includes both full-time and adjunct instructors from the program areas in the study. The graduate group includes individuals that have recently made the transition from the program areas in this dissertation into their chosen career. The employer group includes people in the field that are familiar with the program areas either through the advisory board process or by participation in electronic portfolio reviews. Furthermore, members of the employer group are familiar with skill sets required for employment in their field and are part of the hiring process. Descriptions in this chapter of the faculty and employer groups include the members of the faculty-graduate group and the employer-graduate groups, respectively. As stated earlier, relevance of the faculty-graduate or employer-graduate groups cannot be determined until data have been thematically analyzed.

Data were collected from the participants via open-ended interviews. Interviews were recorded with participant permission. Recordings were transcribed and the transcriptions member checked for accuracy. Selected quotes were taken from the transcripts for use in this dissertation. It should be noted that quotes were taken “as is” from the transcripts with no changes to grammar or syntax. The draft of the dissertation was distributed to all participants for final member checking to guarantee accuracy of the quotes and the analysis. The same draft was distributed to peer reviewers from within the cohort and within Midwestern’s administrative body.

The Faculty and Faculty-Graduate Groups

The faculty in the areas of study are a colorful lot. They come from widely varied backgrounds, work experiences, and philosophies. Even their off-hours activities cover the gamut of hobbies and interests. One is a high school football coach, another is a vintner. One bowls, another runs a hobby farm and raises livestock (including fainting goats). There is a photographer, a home brewer, and a motorcycle enthusiast. Their teaching styles are just as varied, yet they work together to ensure student success both in and out of the classroom.

There were a total of four faculty interviewed for this study, two full time and two part time. One full-time instructor and one part-time instructor were from the information system technology program. The full-time instructor is female and the part-time instructor is male. The second full-time and part-time instructors were part of the graphic design program area. In this program, the full-time instructor is male and the part-time instructor is female. All faculty participants in this research are natives of the Midwest with two coming from Midwestern's home state and two coming from neighboring states.

There is a wide variety of experience and education amongst the faculty in this study and in the program areas in general. Because both information system technology and graphic design are career programs, teachers can qualify to teach in one of two ways, either with school-based training or by completing 6,000 hours of recent and relevant subject-related work experience. Some of the faculty have been teaching their entire professional lifetime while others, because of the ability to teach

with relevant business experience, moved into teaching after various careers in the non-education world.

Ann - Graphic Design Instructor

Ann did not attend college immediately after high school; it just wasn't what members of her family did. Instead, she got a job and occasionally took classes when her employer required them. She decided to complete her two-year degree after she had turned 40, enrolled at Midwestern, and became hooked on education.

Ann is one of two regular part-time instructors in the program areas in this research. Being an adjunct instructor means Ann is issued a new teaching contract and/or assignment every semester. She receives no employee benefits. She is limited in the number of credits she can teach each term to no more than half the maximum amount of a full-time instructor.

I seriously don't think there is any difference between adjunct instructors and regular instructors other than the hours we're on campus. The importance is still there to be a good instructor and to be there for your students. Obviously, we don't get paid nearly enough, and comparison wise, it's really quite sad. But with my experiences on campus, I have to say . . . I've always felt like I fit in, and that I was always treated like a full-time employee, and I know a lot of times adjuncts don't feel that way. But I did. I was welcomed, and I felt really good about that. (Ann, personal communication, October 11, 2011)

She teaches entry-level courses for graphic design and information system technology students. She earned an associates degree in web design and an associates of arts from Midwestern and a bachelor's degree in Human Services. She completed her two-year degrees while working and raising a family. She finished her four-year degree in Human Services in the evenings and on line while also holding down a job. Her work experience includes many varied activities, but the ones most

relevant to her employment at Midwestern include several years as a teaching assistant in her local K12 school district, computer assembly, freelance web design, photography, and work study employment at Midwestern as a web designer.

Ann has a second job in the information system technology and graphic design program areas. Several of the entry-level classes in these areas are offered at high schools within Midwestern's service area for dual credit, meaning the students earn both high school and college credit simultaneously. Ann is the liaison between the college and high school faculty.

I make sure that they had all the software, and if they had any types of issues, I would work with them on that. And then I would go and talk with the students . . . about IT, what we had on campus, what to offer them, and just really talked up the IT department, and it was kind of a recruiting tool as well. (Ann, personal communication, October 11, 2011)

Ann has been an adjunct instructor at Midwestern for five years. She takes her role very seriously and believes she is an integral part of the higher-education process.

Part of being a teacher is working with a lot of issues with the students and behaviors and things like that. You're a counselor and sometimes you're a parent, too. So I went back and got my four-year degree in human relations and psych because I figured it would really help me in dealing with the students. So many students come on campus and they just have so many issues they are dealing with that . . . It's really tough for them to focus on work and [classes] . . . A lot of times they need a helping hand for a little bit. (Ann, personal communication, October 11, 2011)

Edward - Information System Technology Instructor

Like many high school-aged students, Edward was strongly influenced by a few teachers he particularly admired. In Edward's case, these teachers taught math

and science, so upon completion of his high school degree, he went on to a four-year institution to pursue mathematics. During his time in college, Edward planned to add an engineering degree and take his double major into the engineering field. He interned in the school system and his responsibilities included teaching and some coaching. He found that education and coaching were his loves.

I started teaching math, . . . really liked it. At the time I was a senior in college, they started offering the very first programming classes. And it was so interesting, . . . I took to that and did well. You know, seemed to come naturally. . . So, I got really involved with that. . . It was on a teletype. . . and we could have the kids programming in BASIC. I ended up having some kids do that independently. We used to have a term where the kids could take anything for a week or two weeks, and it was really cool. (Edward, personal communication, October 13, 2011)

Edward is the only instructor in the information systems technology area that has been in education his entire career lifetime.

I taught elementary math and physical education. It was a great experience, teaching elementary, I think everybody should have to . . . because of the challenge. It's a whole different challenge, the students are energetic, but they don't . . . retain as well. Their brains are growing so fast during that time period . . . It was fun for me.

My first summer rolls around, and I'm going to paint barns with another teacher, but I look into [a 4-year school], I thought maybe I should pick up a computer class or two.

Well, next thing you know I am enrolled for six weeks of computer classes and I just love them, and so then I did that every summer. And one of the summers I did two terms, and so I have started working towards an undergraduate degree in computer science.

At that time, my wife and I are both thinking I'll be teaching a few more years, and get into the technology world. That was the plan. (Edward, personal communication, October 13, 2011)

Edward intended to teach for a few years and then seek employment in the professional arena. After briefly teaching in the high school and elementary school environments, Edward took a job at Midwestern Community College. He has been at Midwestern for over 24 years. He says he used to record long-term goals on his wall calendar each year and then go back years later to see if he was on the right track. After ten years of teaching, he looked at his first calendar and he saw that his goal was to be out of teaching within ten years. He entered the same goal on the current calendar and, ten years later, read it again. At that point, Edward decided he might as well quit planning on getting out of teaching.

Elizabeth - Information System Technology Instructor

Elizabeth planned to become a teacher after completing college, not in the information system technology field she teaches today, but instead in physical education.

I went to be a PE major . . . and an art minor and the teaching jobs were abysmal. My dad said, “you need to learn how to type because you may not get the teaching job,” so I came to [Midwestern] and took a . . . nine-month clerical program with full intentions of continuing on with my art/PE thing. I ended up taking a data processing class . . . I realized that I was like the only one in the class that got it. (She was also the only female in the class.) I looked around and went “Huh, this is kind of cool.” (Elizabeth, personal communication, October 11, 2011)

Elizabeth completed the clerical program and took a data-entry job at the age of 20. She eventually completed a bachelor’s degree in management information systems by taking evening classes over a five-year period. While completing her degree, she worked 45 to 50 hours per week and raised two small children.

Throughout her professional life, Elizabeth lived a repeating cycle of learning new skills and advancing her career until she found herself selling computer software and consulting local businesses. Because she had amassed experience in training and enjoyed it, she took a job at a small business school teaching information technology. While teaching at the business school, she worked toward a master's degree in educational technology leadership.

I was pretty much the only computer teacher there so what they have, I taught it, and then in '98 [Midwestern] started running an ad for the program leader for the new IT programs over here. And I didn't apply, and I didn't apply, and I didn't apply, and then all of a sudden one day I said, "hmm, maybe I will apply for that." (Elizabeth, personal communication, October 11, 2011)

Not only did she get the job, but Elizabeth has taught computer networking courses at Midwestern for over 12 years. She has been the program leader over that entire time and has been responsible for both information systems technology and graphic design. Her duties include instructor and course scheduling, faculty coordination, course content, program assessment, and program promotion.

Joe - Graphic Design Instructor

Although he never planned to be in education, Joe teaches graphic design full time at Midwestern Community College. He has a bachelor's degree in computer science and worked first as a computer programmer and later worked in marketing, advertising, and training for a computer software company. As Joe put it:

I was going to be a [computer] programmer my entire life. Becoming an educator was never even on the radar. (He laughs.) Funny how life is sometimes. I got a job as a programmer right out of college and, after 12 years, I was laid off as part of a departmental closing.

They brought in career placement specialists to help us with résumés and applications. As part of the process, we all took personality and career placement tests. The placement expert said everyone in the room was perfectly suited to be a programmer except for one person. She pointed at me. She said I was supposed to be a writer, an actor, or a teacher. I laughed at her.

It took about four months before I had a job in a marketing group writing ads and brochures. Soon after that, I was teaching customers how to use our software. I guess she was smarter than I thought. (Joe, personal communication, October 13, 2011)

Much of Joe's training in graphic design came as a result of seminars, workshops, self education, and working one-on-one with professional designers. He worked closely with a graphic designer as part of his marketing job for the software firm. Since Joe knew little about graphic design and the designer knew little about computers, they trained each other in their areas of expertise. He also took several art courses at Midwestern to round out his foundational background. Having a working knowledge of programming and marketing, Joe was asked to write the company's first web site when the Internet was evolving into a business tool in the early- to mid-1990's.

As a person with both computer programming knowledge and experience in advertising and marketing, the company asked me to do their first web site. That was in late 1993. The Internet was still pretty young then. So was I. (He laughs.)

As I look back, I might have had the perfect background to get into the Internet. There was a lot of coding in those days to get things to work and being able to write a good, strong marketing message for the site really helped. (Joe, personal communication, October 13, 2011)

It was this business-related experience in marketing and the Internet that gave Joe the credentials to teach graphic design.

Joe has been teaching at Midwestern for over 10 years. It was during that time that he earned his master's degree in education. His responsibilities have recently expanded to include teaching some computer programming classes and assisting in faculty development.

The Employer and Employer-Graduate Groups

Midwestern Community College is situated in the heartland of America. Major employers in the region include the medical, insurance, food processing, computer software, and manufacturing arenas, but because of the nature of Midwestern's rural setting, there are relatively few large businesses in the area. There are, however, many small businesses and entrepreneurial ventures. The majority of all businesses are located in the same community as Midwestern, which makes perfect sense because it is easily the largest community in Midwestern's service region.

Because so many local businesses are smaller in size, the support staffs, including those for information technology and graphic design, are small or nonexistent (Cohen, 2005). Employees who work on small support staffs often know each other personally and professionally quite well. Businesses that cannot afford their own support staffs turn to freelance entrepreneurs or share support people with other small businesses (Cohen).

The businesses in this study come from a wide variety of sizes and business sectors. Larger businesses include a hospital and a large manufacturer. Mid-sized businesses include a newspaper, a multi-location car dealer, and another, smaller manufacturer. Finally, small business is represented by an independent networking and PC repair entrepreneur.

Deb - IT Manager

In the age of frequent changes in careers and employers, Deb is a bit of an anomaly.

I worked at the newspaper since 1973. I was a teenager when I started my job here, and worked in nearly all departments throughout my career. . . This is my only job ever. It's going to be 39 years in March. (Deb, personal communication, November 10, 2011).

Deb began her post-secondary education after she started her job at the newspaper. But, even though she has spent her entire professional career in the same building, she hasn't been without advancement or career shifts.

I started out in the advertising department as a salesperson for classified advertising on the phone, then proceeded to be classified outside sales, then went to retail sales, went to classified manager, went to retail manager, went to production assistant, production supervisor, production manager, IT manager. So, that's been my path.

Now I'm responsible for the creative department that designs our advertising here. Also for the IT staff which is a staff of only one. I have one technician, responsible for the entire network here, network operations in all computer hardware, responsible for the phone system, for the door lock security system, for the camera security system. That just about covers that I think. (Deb, personal communication, November 10, 2011)

When computers entered the newspaper business, no one in the office had computer experience. "I raised my hand and said I'd like to learn" (Deb, personal communication, November 10, 2011). Deb soon found she enjoyed working with computers. She attended a small, local four-year school and, because of her interest in computers, earned a Microsoft certification.

At that time, I already held this position, and it was just a matter of upgrading my skill set, so that would be a better match with what I was doing, so a very limited college certification just for Microsoft, that is it. (Deb, personal communication, November 10, 2011)

From there, her training was mostly hands on. This brought her both a deeper understanding of the use of computers in the industry and a respect for the ever-changing environment.

Most difficult was actually merging into the IT department. Without any training, it was totally new. I didn't have a lot of resources at that time. We had a few people at the corporate office who came up, put the servers in on a Friday, and on Saturday we were using them.

They went home, and it's like, "Okay, well, what do we need to know now?" I did get some training on our editorial system and on our classified system. They were proprietary systems . . . So, I did spend about a month off and on, learning those systems, so that we could keep going, but that was the most difficult part because it wasn't a lot of support, and you had to absorb new material everyday and you know really its not any different now because things changed so quick, but now you have resources. (Deb, personal communication, November 10, 2011)

Francis - Tech Support Supervisor

Francis has lived his entire lifetime in the same town in Midwestern Community College's service area and, like so many other local kids, went to Midwestern to start his post-secondary education.

I grew up . . . here, and my first school was [Midwestern]. I took the college-level examination program, and tested out of the first year of college, and so I graduated in one year. Then I went to [a state regent college] for four quarters in a row. I started in the fall and went through the summer and then took some time off and went to Europe for a few months. (Francis, personal communication, November 29, 2011)

After his return, he put off further education and started a job at his current place of employment. He tried furthering his college education at a new school, but it didn't go well and, in Francis' words, "that was the end of my education" (Francis, personal communication, November 29, 2011). It may have been the end of his classroom education, but Francis had much more education in his future.

Ironically, one of the reasons he halted his education was his dislike for the impersonal nature of computers.

One of the reasons I left was the keypunch machines. I just didn't feel the human contact . . . with the computer was very instantaneous when you're to keypunch a program and wait till the next day to get some results. But in the few years after that, there was an ad on Paul Harvey talking about Apple, where some geek guys in a garage have taken a screen and attached to a computer and made it a small and user-friendly, and it just excited me. (Francis, personal communication, November 29, 2011)

Francis was intrigued by the idea of a computer that spontaneously interacted with its user. He found a small company about 10 miles away that was willing to let him bring in a computer and work for free to show them what he (and his Apple computer) could do.

I worked for a couple of weeks for nothing, and showed them a few things, and then I figured out how to do it on my computer. He decided to start paying me, so I worked there for a few years, but then their business downturned a little bit. I applied at [my current place of employment] and I've been there ever since, so [my success] was a little education and self education and employment history, too. (Francis, personal communication, November 29, 2011)

Francis' jokes about his first few weeks at his current place of employment, but the bottom line fits in with several others workers I interviewed: Francis made adjustments to his career after he was employed.

I started . . . as a PC programmer, but then I got into tech support pretty quickly. I was working with another person and he had a problem. I was reading a card and I accidentally crashed the mainframe. I had only been there a couple of weeks. But a few weeks after that, they must have recognized something in me, and asked me to stay away from the programs, and start in tech support. (Francis, personal communication, November 29, 2011)

He must have worked out the problems because Francis has worked in technical support at this company for 27 years. He began working on the mainframes and has since expanded, much as the technical field has in general, to support everything from personal computers to the mid-range computers to the mainframes he crashed early in his career.

Jenn - Chamber of Commerce Executive

Jenn runs the chamber of commerce in Midwestern's hometown and she regularly interfaces with about 650 member businesses. While there are some large businesses in the region, such as a hospital, software firms, and several manufacturers, the average chamber member is a small business. The 650 chamber members equate to about 18,000 employees, or an average of just under 28 employees per business. Those 18,000 employees represent roughly 8% of the entire populace of the Midwestern Community College service area.

Besides serving the chamber members, Jenn's responsibilities include other business-related operations.

The chamber of commerce is a business, so we have finances that we have to worry about, and HR things, . . . and all of the things that enable us to be an organization so we can accomplish our mission. But I really try to focus as many of our resources towards mission as possible. (Jenn, personal communication, November 10, 2011)

Like so many other people in the business world, Jenn did not start her professional lifetime in her current job.

I have an undergraduate degree [at a state regent school] . . . in English, went there back when they still had the undergraduate writer's workshop, and so that was really my deal. . . I thought that I would be an editor. I really thought that was more the direction I would go, but got into banking, and it was so easy to not have to look for a job if you're [employed]. And then you get on a path, and you can't get off.

I worked as a bank teller part time. . . [and] when that ended, I was the bank president . . . and the bigger part of my job was regional executive for the state, so I had that 10 locations that all reported to me. (Jenn, personal communication, November 10, 2011)

When she was asked to transplant her family to a new state, she declined.

Then I started working for the Chamber of Commerce. I was on the Chamber of Board when I was with the bank and when the director left, one of my board colleagues said, you should do this job, and I thought I should give it a shot, anyway. So here I am. And since I've been at the chamber I got a master's degree in servant leadership. And that has been as valuable as the professional designations that I've earned. (Jenn, personal communication, November 10, 2011)

And while she dreamt of being an editor while in college, she now says being the chamber executive is truly her dream job.

Laura - Business Applications Analyst

Laura had her life all figured out. After high school, she was going to college to become a teacher. But life got in the way.

Originally, I was planning of becoming a teacher and I went to a four-year college through church up in [a larger metropolitan area near by]. Then I got engaged, . . . and at that time, in the early 1970's, elementary teaching positions were far, far between and most people weren't retiring, so they weren't going to be openings coming. . . My mom always said, "have a college something to fall back on," so I said okay, I got an accounting degree. And we farmed, the farming crisis came along, [our youngest son] came along, medical bills came along, and we needed another income. (Laura, personal communication, November 17, 2011)

Like so many people do in poor economic times, Laura did what she could to help support her family and pay the bills.

I had two part time jobs, one was in the morning, one was in the afternoon. Then the school [at which I was employed] closed. I lost the morning [job]. It's hard to find a second part time job and the kids said "Mom, go back to school." What for? I mean, I needed to go back, but what to do? That's when [Midwestern] offered their first [information

system technology] program. I liked computers. I had one at home. We had one since '89, so I enrolled in that, night classes. I still kept working while taking the night classes, struggled through network administration until the web program . . . was offered. (Laura, personal communication, November 17, 2011)

While Laura did well in the information systems technology courses, there was something about the web design curriculum that really attracted her.

I loved it. And so I ended up taking the JavaScript class. I felt like I was always ready to drown, but the instructor says to stick with it, so then I took a Perl class, and was fortunate to get the job here. So, my degree is in network administration and I fortunately don't have to use it too often. (Laura, personal communication, November 17, 2011)

These days, Laura has very little to do with network administration. She works at the local hospital and is responsible for the hospital's intranet and portions of the hospital-network's intranet. She trains other hospital employees on using software packages to contribute content to the web sites and the proper way to build their web pages. She also functions as the support person for these activities. She is responsible for all hospital websites statewide, including their customer portals. But is doesn't end there.

And then along with that I set up all the smart phones [to connect to] the email programs. There were jobs I've done imaging PCs, kill diskings PCs, and I'm also responsible for the backup tapes everyday. I have to swap the tapes out in the server for the backup system. Even though [my job is] more web focused, you are still on the team, so you do whatever. (Laura, personal communication, November 17, 2011)

That "whatever" may well include working the help desk in the near future. Laura mentioned during the interview there were two help-desk employees leaving in the near future and she is looking for people to fill the roles. She asked Midwestern faculty to advertise the openings in class. Hire local.

Marie - Online Manager

Marie started her education at Midwestern, studying her general education courses but concentrating much of her time on journalism. Upon completion of her degree, she found employment at a local, small-town newspaper selling advertisements. After she gained experience, she was recruited by a larger paper in a larger town just down the road.

I guess I was recruited from here to come over, and so I was [at my first job] about three years, and then came over here, and at that time, online was not on the radar. (Marie, personal communication, November 2, 2011)

She spent the next 10 years selling advertisements for the largest newspaper in the region. She moved into team management and soon the Internet came into play in the newspaper industry. When asked about her preparedness for a job working with the Internet, Marie replied with a description of her experience and a hint at how she looks at potential employees when it is time to hire:

It was basically for advertising for the most part, but when I started doing other things, . . . we got a lot of training here and through [our parent company] for the Internet part. It's a lot of instinct, and self training, and just catching on to things; not waiting for someone to tell you to do something, and that's a lot of what I look for when I hire people even for the Internet, you've got to have that instinct to just come up with ideas because if there is no pattern, there is no groundwork to follow. (Marie, personal communication, November 2, 2011)

Marie continued by adding that she was often sent to training over the years and that the parent company owned other larger papers that also served as references when questions arose.

She had worked with several chambers of commerce in the region and was very familiar with many of the local businesses. This gave her the inside track on knowing how businesses in the area worked and what they needed to be successful. Because people were familiar with her and the newspaper she worked for, the move from print only to print and Internet was easier as the trust and reputation were already established.

Marie's current job is very different from the selling of print ads she did early in her career.

I take care of pretty much all of the online advertising, anything from all the services that we offer, . . . from banners, large ads, videos, email products, search engine products, websites, emails and then total news site. Also, anything that has to do with any news that goes up online is my responsibility with an online editor. [The editor] works with the newsroom to post multimedia, so that's video, photos, slide shows, and special websites that we host for elections and all breaking news stories, email blasts that goes out for the news, and advertising vehicles. (Marie, personal communication, November 2, 2011)

Michael - Interactive Marketing Manager

Michael had the good fortune of receiving sound advice from a friend. He focused his education around network administration and computer repair, but with his friend's advice, he knew he would be more employable with a well-rounded education.

Somebody who is out in the workforce at the time when I was out of a job and looking to go back to school told me that I should dip my hands in everything: into the network side, into the IT side, and into web development and graphic design. . . Basically because in this kind of area right here where I plan on staying, I should broaden into everything, so I should have my hands in everything which I think is why I got the job that I did. (Michael, personal communication, November 2, 2011)

Michael lives in Midwestern's service area, a rural area of the Midwest, and wanted to change to a new career but not relocate out of the area. His friend's advice was sound; in an area with many smaller businesses, support employees are often asked to take on more than one role in the business.

Besides having a wide base of knowledge before entering the job market, Michael has two other suggestions for would-be graduates.

If I wouldn't have had my electronic portfolio and I wouldn't have had the web development side of it, even though I only had one or two classes, . . . I wouldn't have this job. (Michael, personal communication, November 2, 2011)

While it was his portfolio that demonstrated his abilities and skills during the interview process, there was yet another reason Michael feels he landed a job in his field after graduation.

I had an internship . . . installing computers that had Rosetta Stone. I set up computers for the libraries and the different facilities in the area to use, and taught them how to run the program. . . I did a step-by-step guide, I just sat down with the Rosetta Stone program and went through it, went through step-by-step to get exactly what they needed to do. . . It helped the people involved, but I can't believe putting that into my resume, I mean they really looked on that, and that really helped me. (Michael, personal communication, November 2, 2011)

Michael's job responsibilities include overseeing the web sites for the car dealer at which he works.

I oversee the web sites; I pay attention to the traffic, the paid views, the balance rates of the websites, and market our product according to the numbers I pull off, so if a page is doing poorly, we work on the page, we call the page off, or we decide what we want to do, and how we want to market it. (Michael, personal communication, November 2, 2011)

Michael is responsible for keeping the inventory current, prices correct, and vehicle information accurate. He also oversees the social media marketing and tracks online advertising sources.

Paul - MIS Director

Paul, like so many support people in small businesses, has a wide variety of responsibilities. He graduated from Midwestern with a degree in network administration, but finds his responsibilities go well beyond what he was trained for in the classroom.

I do pretty much everything, from . . . helping people set up a projector in meetings [to] web conferences to [managing the] 11 servers supporting our operations . . . I do some really basic software development on the web site and just kind of everything that's needed with IT. (Paul, personal communication, November 9, 2011)

Paul doesn't do it completely alone, however. He usually has an intern from Midwestern helping him with many of his duties. He views having an intern as more than just a helping hand. Paul sees hosting interns as a chance to help them learn about on-the-job duties and how to interact with customers. He sees the importance of good customer relations and tries to pass that knowledge on to his interns, making them better employees once they graduate and move into the workforce.

Paul's education at Midwestern actually started before his high school graduation. He was part of a technology academy teaching Midwestern courses but hosted at his high school. Armed with nearly a full year of college credit at high school graduation, Paul enrolled as a full-time student at Midwestern and completed his network training. After graduation, Paul took a job as a systems technician at the local newspaper. Three-and-a-half years later, Paul moved to his current job as MIS

Director at his current place of employment. The adjustment to the new company and position was not without new things to learn.

Coming in here, my predecessor kind of hung around for about a month or so . . . for support things. There were a lots of things we do here with custom software. . . We just do our own supporting, . . . different types of production machines as well as our enterprise software we use here. Having to support that and learning about that, and just, and it's still ongoing. There are still so many things . . . I pick up on, and I need to learn quickly. There are new needs always popping up. That's difficult sometimes, but it keeps it interesting. It's challenging. (Paul, personal communication, November 9, 2011)

Paul is an active member of the information system technology advisory board. He often works with the college and shares practical business-world knowledge with the faculty. And he loves those interns.

Quinn - PC Repair Entrepreneur

After graduating from Midwestern, Quinn had “had enough” of formal education and entered the workforce. He started in radio and during those 17 years, he covered bowling, little league baseball, and demolition derbies on the air. “If you ever heard a demolition derby on the radio, that’s quite exciting” (Quinn, personal communication, November 9, 2011). The job in radio helped Quinn develop many of the skills he uses today as a freelance PC repairman. But his self-education in technology and repair went far back into his youth.

I remember one time [my dad] brought home a lawn fertilizer and said, “I bet you \$10 you can't put this together.” And so I put it together for 10 bucks. The same thing [happened with] a computer. One day in 1980, he brings home a computer and says, “Bet you can't get this working,” and so we did. (Quinn, personal communication, November 9, 2011)

Quinn’s self education was not limited to hardware. He and his father also tinkered in software.

We wrote a computer program to calculate the amount of sand, cold water, hot water, concrete mix, and other chemicals that made a batch of concrete. And so we had a formula and all we did was put it in the computer. It got to be so good the state . . . would just copy the numbers off the computer. (Quinn, personal communication, November 9, 2011)

The experience must have left a lasting impression on Quinn because when he was a student at Midwestern, he continued to learn about computers and programming.

I took a liberal arts program, but I had things like Pascal, COBOL, and BASIC programming. I wanted to learn Fortran, but I had to have math, I didn't really have a lot of math, I didn't care to have a lot of math, so I kind of stopped at that. I went for a lot more communication things, and it helped my radio stuff out. All the computer classes didn't really teach me much except logic and problem solving and I guess that's what they were supposed to teach us. (Quinn, personal communication, November 9, 2011)

Quinn decided, with some encouragement from his boss at the radio station, to repair PCs on the side starting in around 1986. He had been repairing hardware at the radio station and showed a knack for it. He "got tired of reading the weather one day (Quinn, personal communication, November 9, 2011)" and left radio for a job in cellular telephone. He did this for a few years and then opened his own PC repair business.

I guess I started out about 1986 with that. It was just part time here and there fixing this, fixing that, and the boss of the radio station said, "you've got to really do this as a business, get yourself established," and so I did. In 2006, I left my full time job, scared that I was going to watch Dr. Phil and Oprah all day. But I didn't. I kept busy and in 2009 I was so busy that I was actually losing work, so I decide to make the move downtown and hired another employee and a part time employee, so really there were two and half men. (Quinn, personal communication, November 9, 2011)

And to think it all started with a fertilizer spreader.

The Graduate Group

The major export of any school is graduates. Midwestern Community College graduates around 700 students each year, earning a total of over 800 degrees, diplomas, and certificates. Approximately 95% of graduates in career technical programs gain employment or go on to four-year schools. About 91% of all Midwestern Community College graduates remain in Midwestern's home state after they graduate.

The graduates interviewed in this study fit the demographics of the students enrolled in the information systems technology and graphic design programs. One graduate was interviewed from the information technology area and three from graphic design. Like the program demographics described earlier, the graphic design graduates in this study are mostly female and the information systems technology graduate is male. One place where the graduates interviewed here did not match the demographics of the program areas as a whole is age. Only one of the four interviewees, Ashley, was considered of traditional college age, meaning starting college within two years of high school graduation. Alice, the oldest of the graduates in the study, has children in college.

Alice - Graphic Designer

Alice is one of the true community college success stories. She worked in several blue-collar jobs out of high school, including industrial dry cleaning, pinstriping recreational vehicles, and soldering components onto battery boards. Next, she landed a job assembling ice machines.

I started off working [on the line and] eventually worked my way into being a floater, so I moved from one end of the line to the other. . . Then I became a Team Leader. I made sure everyone had what they needed to complete the job and if there were any problems, I had to problem solve them. I had to communicate with the supervisor and engineers. (Alice, personal communication, October 25, 2011)

She worked there for 12 years before the plant shut down. In need of a fresh start, Alice enrolled at Midwestern in the graphic design program.

Like so many non-traditional students, Alice attended college while she was raising a family. She had several sons in school at the same time, with one in college while she was. Between going to class and working on projects, Alice found time to watch her sons wrestle, often competing for state titles.

She now works as a designer for the local daily newspaper. Her day begins at 7:30 in the morning but, rather than sitting right down at the computer and designing, she starts with turning on the printers in the back and filling chemical tanks.

Then I'll grab the online list and the ad list and go through all the lists to see which ads have completed, and which ads are not done, which ads need to be printed to negative for a full page, and which ones just need to be printed for color. . . Then I will get online and get on AdTracker and check out all the ads and see which ones are not done. If I can complete them, I will complete them here. If not, I package them up make sure everything is in there that the studio can build the ad. (Alice, personal communication, October 25, 2011)

Further ad work comes from several sources. Besides new ads coming from the sales department, some ads were not completed the previous day and others are back for rework after the client has seen and reviewed the mock-ups.

Ashley - Graphic Designer

Ashley was born and raised in a neighboring state. She is a farm girl and would rather ride a horse than drive a car. She has always had a knack for video production, the web, and photography.

I actually ended up with two degrees after graduating from college. One was in IT, business information systems technology, and that . . . isn't quite as useful [in my current job] as my graphic communications degree. I liked the digital photography classes, all of the web classes, the animation classes, the video editing. It has really helped me in the job I'm in now. (Ashley, personal communication, November 2, 2011)

While Ashley does not use her information technology degree often, she still recognizes the importance of what she learned in the classroom.

But as far as having the IT side of it, that's also helpful just because if there is a little problem solving issues, usually I can figure it out myself, instead of asking for help. (Ashley, personal communication, November 2, 2011)

Ashley has done freelance design for several organizations but spends most of her professional time working as a designer for a pair of car dealers in Midwestern's home town. She has found that versatility and a wide base of skills are important to her success.

My biggest job responsibility is probably photographing all the vehicles that come in through the two dealerships. I am responsible for site quality assurance as far as pricing, odometer readings, all of the online ads like for specials, I do that, and videos, promotional videos things. (Ashley, personal communication, November 2, 2011)

Leo - Help Desk and Training/Support

Leo was not your typical "new student." He had started college once before coming to Midwestern and had been deployed in the military. In fact, his time at

Midwestern was interrupted by a second deployment. He came to Midwestern with a degree of experience and maturity that is rare amongst college students.

I originally was planning on pursuing a graphic design degree. After my first deployment with the military, I realized that probably was not the best choice for me. I had already invested almost three semesters [at a state regent school] kind of proving that fact. I came back and I started at [Midwestern] pursuing a PC Tech degree, and I already had some of the hard skills to go with that. (Leo, personal communication, November 14, 2011)

Because of his previous life experiences, Leo had many of the skills that are generally taught in the classroom. His work experience taught him much about electronics and working with people. He developed some of his people skills while working in a large retail store. He developed many of his technical skills supporting users and software while in the military. He further fine tuned his technical skills installing, supporting, and repairing consumer electronics for a big box electronics store.

What I gained most out of [my time at Midwestern] was the soft skill set, things like how to interview well and be presentable both in person and on paper, just kind of how to make that impact. But mostly importantly how to learn, be flexible, and constantly adjust just like the field does. (Leo, personal communication, November 14, 2011)

Now Leo works for one of the local banks as a help desk operator and training support person. This job includes, first and foremost, support of employees when computer issues arise. This part of the job is Leo's highest priority and he spends much of his time solving issues with the electronics around the bank and its several branches. The remainder of his job involves administration of the enterprise-wide collaboration software and the training software used by the bank. While his training at Midwestern did not include administration of software or training, Leo did

develop skills at Midwestern, the electronics retailer, and the military that helped him adapt to the demands of his job. He also knows the importance of being able to research additional information.

I lean heavily on Google, TechNet forums, and other knowledge bases. It is not about retaining knowledge in your head because there is simply too much to know. It's also knowing your resources and where you can find good relevant information and workarounds or fixes and things like that. (Leo, personal communication, November 14, 2011)

Sophia - Web and Graphic Designer

If attending Midwestern was a crime, Sophia would be a repeat offender. Her first time at Midwestern Community College was in the mid-1990's, but by her own admission, it didn't go all that well.

I first started [Midwestern] in 1995 . . . and I took classes to 1997, but I didn't do well because I didn't have any goals. So I started working full time as a waitress and I went back I took another semester for choir in 1998. I just never finished my degree until till I came back in 2008. . . I was going to just take a couple graphic design classes. . . I wanted to learn the few things I knew that I was interested in, [but] my counselors talk me into getting a degree.

I was like, "Wow, whatever, okay, I will just do it," and that was the best thing I have done. I started with just graphics communications, and then I added the web design, and finished those in December. (Sophia, personal communication, November 8, 2011)

Sophia started waiting tables at the age of 14 and continued to do so for about 15 years. She also worked for a veterinarian, an office supply store, a recreational vehicle manufacturer, a cellular phone dealer, and a company that cleaned up after natural disasters. While Sophia started her professional career early, she didn't exactly utilize all of her natural talents. Over the years, she has developed and refined several other, more unique skills, including illustrating

children's books; writing, singing, and recording original music; and opening a face-painting business.

She has put her degrees to work and now Sophia is working for a school authoring web pages and designing marketing materials.

I will take on the changes for the website, like updating links or images or changing text, and also do some redesigning. I have redesigned layouts for pages and setup entire sub-websites . . . along with extra IT things, like I put together PowerPoints for the performing arts. I'm working on accessibility PDFs and web pages for disability services. And then in July, I got hired to do graphic design work. I have done a couple of billboards and some other small print materials. (Sophia, personal communication, November 8, 2011)

Sophia says she has learned the importance of branding and marketing themes designing for the school. Hopefully she is done waiting tables.

The Participants by Group

The discussion above described participants as being part of three major groups: faculty, employer, or graduate. However, as noted earlier in the chapter four, thematic analysis will break the participants into five distinct groups: faculty, faculty-graduate, employer, employer-graduate, and graduate. Table 1 below recaps the distribution of the participants in the five-group model.

Table 1

Participants by group using the five-group model

Faculty	Faculty Graduate	Employer	Employer Graduate	Graduate
Edward Joe	Ann Elizabeth	Deb Jenn	Laura Marie Michael Paul Quinn Francis	Alice Ashley Leo Sophia

Thematic analysis revolves around the participants grouped into these five categories. Analysis of the data in Chapter 5 reveals whether having graduated from Midwestern influences the values and directions of interview answers. If graduation has no influence on the results, the participants will be returned to the original three groups of faculty, employers, and graduates.

Time of Study

This study reflects the workings of the faculty and students within the information system technology and graphic design programs at Midwestern Community College and their business partners over roughly the one-year time period that encompasses the 2010-2011 academic school year. Included in this time slice are advisory board meetings, electronic portfolio reviews, program definition meetings, program assessments, and all of the activities that shape and define the content and direction of academia.

Interviews of faculty, business people, and graduates occurred outside of the 2010-2011 school year. Interviews were conducted during the fall term of the

2011-2012 academic year. It is important to note, however, that the questions and associated answers were targeted at the 2010-2011 school-year activities.

Additionally, some hermeneutic investigation of data went back into history beyond the beginning of the fall term of 2010. I examined these data to look at trends in activity and validate decisions made during the time of the study.

Summary

When I began this study, I was certain there were three sets of people I wanted to interview for opinions and direction: the faculty, business partners, and graduates. I knew there would be some members of faculty and the business community that were also Midwestern graduates, but I was surprised to find the number of interviewees that were graduates. I will investigate the impact of being a Midwestern Community College graduate on the interviews once I analyze the thematic breakdown in the next chapter.

I also found that people were very willing to assist in my research. Of all the people I asked for interviews, every one readily agreed. Additionally, several of the interviewees either volunteered co-workers or suggested other individuals they thought might be of interest to the study. This made the research easier because interviews were plentiful and data were easy to find. Simultaneously, it made the research more challenging in the sense that controlling the number of participants was more difficult than originally planned.

In chapter five, interview data is thematically analyzed and triangulated against meeting minutes, web site content, brochures, college catalogs, and other

existing documents. Interviewee responses are grouped by theme. Analysis of the themes and their meanings appears in chapter six.

CHAPTER 5.

THEMATIC ANALYSIS

Thematic analysis of the interview data in this study revealed six distinct themes:

- Defining the critical skill set: Spelling out the skills and competencies needed on the job.
- Determining curricular content: Investigating how to include critical skills and competencies in the classroom curriculum.
- Evaluating success of the graduates and the programs: Reviewing the graduates' electronic portfolios against the expected outcomes within the syllabi and the program areas.
- Assessing graduate preparedness: Determining whether successful completion of program outcomes equates to the graduate being prepared for employment in the workforce.
- Socializing the new employee to the workplace: Examining the process of the new employees moving into their roles in the workplace.
- Appraising the partnership between business and faculty: Establishing partnership theory for this case study.

This chapter will examine these themes in more detail, looking at the interview data and triangulating it with meeting minutes, catalog information, program content, and additional data. Finally, the data from the case study will be compared to data found in the literature.

Theme: Defining the Critical Skill Set

Defining the critical skills and competencies of a new professional is enigmatic. Brumm, Hanneman, and Mickelson (2006) defined competencies as “the application of knowledge, skills, attitudes and values, and behaviors . . . in the workplace” (p. 123). These competencies must be defined by all stakeholders, including faculty, business people, and students (Brumm, Hanneman, & Mickelson). When asked what skills were important for new employees to possess, Jenn, the chamber of commerce executive, put it this way:

Its certainly technical skills, and they need to be able to read and write, and those kinds of things, I mean just kind of the basic expectations. But then, also you can teach a work ethic. And a lot of that is by setting high expectations. (Jenn, personal communication, November 10, 2011)

Simply stated, there is no easy answer. Graduates need to be able to perform the duties of the job. They must be able to communicate and interface with other employees and clients. They must be willing to work hard. And, as we shall see from the responses of other participants, there are additional competencies required for success.

While the positions of graphic designer and information system technology professional are very different, the participants from both careers agreed that having the appropriate technical competencies was a must. In the information system technology area, Paul succinctly defined it as, “I'd like them to have a well-rounded skill set on the technical side” (Paul, personal communication, November 15, 2011), while Quinn was more detailed:

Some of the CISCO certificates would be excellent for people to do because [clients] see computers as being disposable and a lot of things are going to be in the cloud. If you are working at a business,

you may need to have networking skills. (Quinn, personal communication, November 15, 2011)

The graphic design professionals agreed. For designers, however, it was knowing the principles of design and the technology of implementation that were requirements of employment. As Deb put it:

In the creative department, it really is knowing the Adobe Suite - basically Photoshop and InDesign. . . Thorough understanding of the CMYK print process color compared to RGB color. (Deb, personal communication, November 10, 2011)

These responses were in line with data found by doing job searches at monster.com and dice.com, two popular employment-seeking web sites. For information system technology professionals, employers expected knowledge of routing, switching, PC repair, DNS configuration, and other varied skills (TEKsystems, 2011a; Infinity Technology Group, 2011) and preferred their applicants to have certifications (TEKsystems, 2011a). Similarly, employment listings for graphic designers echoed the participant responses in the study, listing the need for solid design skills, understanding of interactive media (Dell, Inc. 2011), and a thorough understanding of Adobe Suite and Microsoft Office (AppleOne Employment Services, 2011). The importance of technical skills was reiterated in advisory board minutes, program definitions, and Midwestern's college catalog.

Faculty and graduates repeated the importance of technical skills. When asked to define the technical competencies and their importance on the job, all replied that technology skills were a very large part of their day-to-day effort.

According to Elizabeth:

I really think that if we can provide a student with that foundation, even though we might be teaching certain languages, and certain software, and certain equipment. But, if we keep working with the student on critical thinking skills and teach them that things are going to change and that they need to be ready for that and to be thinking about that all the time, that will be helpful to them. (Elizabeth, personal communication, October 11, 2011)

The hint in this response that not all knowledge could be transferred within the walls of the classroom was echoed by many participants. In spite of there being no specific question in the survey regarding the need to continue learning, research problems, or think critically, the ability to go beyond classroom learning surfaced frequently. Francis believed it started with research and then moved into continued learning. He described it as follows:

The ability to do their own research as far as knowing what Google is for . . . and knowing that you can find the answer in the manual and the little bit of the chutzpah to decide that they really can learn things on their own. You know, the will for people that have picked up different skill sets without going through a rote class where they learned the A, B, C, and D. (Francis, personal communication, November 29, 2011)

While Francis viewed the need to research from the aspect of an employer, Leo described it through the lens of the recently employed. From his experience, Leo saw this skill as the need to continue learning and perceived this skill to be possibly more important than the technical training. The job Leo was hired for specifically required certifications in technology which he did not have, but he believes he was hired because of this willingness to go beyond what he learned at Midwestern.

Even somebody who wasn't through the formal training that I was could get the job based on willingness to learn or adapt to different positions. They already told me to be prepared to be a very busy, I'll be learning a lot and reading a lot of books here. They are looking for a lot

of growth here relatively soon, so we are researching new technologies and things like that. The fact that I said in my interview I'm not qualified for or I'm not certified for these things, but I have been trained and I'm definitely willing to learn more and seek the education that [they need] me to have, I think that was a huge point for them. (Leo, personal communication, November 14, 2011)

This skill was also a prerequisite of employment for positions listed on monster.com and dice.com (Infinity Technology Group, 2011; TEKsystems, 2011b). The facility to move across disciplines and the ability to research answers beyond what is learned in the classroom are posited in the literature as requirements of the new knowledge-intensive workforce (Hanneman & Gardner, 2010). The importance of the skill was reiterated in electronic portfolio review data and archived meeting minutes.

But the competencies did not end with having solid technical skills and the ability to learn beyond current knowledge. Each respondent professed there were additional skills required that went well beyond technical skills. Employees must display soft skills that help them communicate with co-workers and customers. The need for soft skills was evidenced in advisory board minutes, reviews of student portfolios, and the literature (Saterfiel & McLarty, 1995).

The need for soft skills was evident in all job listings examined on monster.com and dice.com, as well. Terms like strong administrative skills (AppleOne Employment Services, 2011), excellent communication and planning skills (Dell, Inc., 2011; Infinity Technology Group, 2011), and professionalism (TEKsystems, 2011a) were frequently found in listings. Perhaps the most thorough description of soft skills came from a listing for employment at TEKsystems (2011b):

Answer phone calls for assistance with information technology issues from our client employees, freelancers, and contractors and create trouble tickets following established policies and procedures. Troubleshoot, research, and resolve technical and functional issues via phone and in writing using available resources and following established procedures as a level 1 technician. Serve as a technical resource and the central point of contact for technical or functional issues with supported systems to include computer and printer hardware, operating systems, and enterprise applications.

Several additional skills were related during the interview process, but only by a limited number of respondents. Francis listed three additional aspects of the critical skill set he asks about during every applicant interview:

There is something I do in my job interviews. I ask about three questions mainly: Have you had a case where interaction with another employee caused a problem? How they handle it shows me how they interact, how they deal with the problems. We ask them how they deal with several projects at the same time with deciding which one they are going to work on, and how they are going to give up their time to get an idea of their time management skills, and then the other one I mentioned is how you learn something on your own outside the class to accomplish something that you wanted to do with the computer in technology. (Francis, personal communication, November 29, 2011)

Of the additional skills listed, most frequently mentioned was the need to have a wide base of knowledge. This, based on the previous responses listed above, is not a huge surprise. I discovered a lengthy list of technical skills, a discussion of the need to learn, research, and adapt, and a full set of soft skills. Michael was fortunate to have a friend tip him off to the importance of a wide base of knowledge before he began his degree at Midwestern. As he put it:

[My friend] was out in the workforce at the time when I was out of a job and looking to go back in the school. He basically told me that I should dip my hands in everything, into the network side, into the IT side, and into web development and graphic design, basically because in this kind of [rural] area right here where I plan on staying, I should broaden into everything, so I should have my hands in everything which I think

is why I got the job that I did. (Michael, personal communication, November 2, 2011)

Michael received sound advice from his friend. Because of the size of many of the businesses in Midwestern's service area, support personnel are often asked to take on more than one role for the business. Ashley, who studied graphic design at Midwestern, added her own confirmation:

My biggest job responsibility is probably photographing all the vehicles that come in through the two dealerships. Site quality assurance as far as pricing, odometer readings, all of the online ads like for specials, I do that, and videos, promotional videos, things like that. (Ashley, personal communication, November 2, 2011)

Obviously, the respondents felt flexibility and a wide variety of skills were important to their professional success.

Quinn listed one more competency that he felt was extremely important to the hiring decision. When asked about a graduate he had hired to help in his PC repair business, Quinn illuminated the importance of being ethical on the job:

I knew his ethics. He worked at one of the big box stores that has funny cars and he quit because he didn't like their ethics and the way they treat older people. We try to sell the people what they need, not what we want them to buy. I mean we could bring the bill up pretty high on a few people and I only have to do that a couple of times, and nobody starts to buy anymore. (Quinn, personal communication, November 15, 2011)

Theme: Determining Curricular Content

Saterfiel and McLarty (1995) stated that faculty often require assistance in creating the curriculum to teach employability skills, or what is referred to in this study as critical skills and competencies. Advisory boards consisting of members of the business community are commonplace in education and are designed to supply

the faculty with input regarding the current skills and competencies required on the job. According to Jenn, the chamber of commerce executive:

I think business needs to be at the table in terms of articulating what their needs are, and should work more closely with teachers especially in particular subject areas. (Jenn, personal communication, November 10, 2011)

Francis, a member of the business community, agrees:

I think the [advisory board's] influence on the curriculum is a good thing. Whether [graduates] end up [working for us] or they end up someplace else, they are picking up better skills because industry is involved. (Francis, personal communication, November 29, 2011)

Midwestern's information system technology and graphic design faculty meet regularly with their advisory boards to discuss curricular content. Ann, a member of faculty, put it this way:

We have frequent meetings, and we get together and discuss curriculum. A lot of the instructors do a lot of reading and do a lot of research on what other colleges are doing. And just by staying current in your field, you hear a lot and you know a lot of what's going on. But I think that the big thing is just getting together and having program meetings and discussing things. (Ann, personal communication, October 31, 2011)

There were many archived minutes from advisory board meetings to back up the idea of business people contributing to the curricular definition process. But, with further examination of Ann's response, it is evident that she is alluding to a need for more than just the input of the advisory board. Her feelings on the instructors researching, reading, and staying current in their field was restated by other members of faculty. According to Elizabeth:

I think that trying to look at the future directions, technology is much harder to predict than a history class or an English class and what direction we are going to go. So, we can't base all of our curricular

decisions on past data. It doesn't work because we will never change. (Elizabeth, personal communication, October 11, 2011)

Joe was in agreement:

The advisory boards are great, but no matter how they try to help us, members of faculty need to do some of the legwork on our own. The advisory board is a super resource for learning what is being done right now in the business world, but it is up to the instructors to research what is coming next. (Joe, personal communication, October 13, 2011)

There are other factors at play in determining curricular content than just industry needs. Edward and Joe, both members of faculty, mentioned during their interviews how technology played a large role in the change to education. Edward stated:

There has got to be a better way nowadays with technology, and everything we have at our fingertips, to progress people through the education process at a pace that matches their abilities. (Edward, personal communication, October 13, 2011)

Joe relayed this observation on how technology is changing the way we teach and the content of what we teach. He had participated in a workshop day at a middle school in a large midwestern city where iPads were used extensively in the curriculum. As part of the workshop, he sat in on a student-led panel. The panel consisted of five sixth- and seventh-grade students, each relaying how they used iPads in and out of school.

One student on the panel was a young Latina named Guadalupe. She was using her iPad as an ESL tool, which is perfect. In this class, they were creating podcasts and they let her create her's in Spanish because it was just easier for her at the time. The class posted all their finished podcasts on YouTube. Somebody in a school in Mexico happened to stumble across her Spanish podcast, and now they do FaceTime, like Skype, back and forth with the school in Mexico. You know its like, wow, the opportunity, just think about that. (Joe, personal communication, October 13, 2011)

Theme: Evaluating Success of the Graduates and the Programs

Students in the information system technology and graphic design programs at Midwestern Community College are required to start an electronic portfolio in the first term of their freshman year. As they progress through classes, the students add examples of their work to their portfolios. Right before graduation, graduate-elects present their electronic portfolio in a mock interview. The portfolios are reviewed by a panel of faculty, local business people, and student peers. Feedback is immediate to the students. This process is frequently used within education as a means of assessing the success of the student and the outcomes of the program (Saterfiel & McLarty, 1995).

Examination of data collected from electronic portfolio reviews is a valuable predictor to the success of the graduates. Using Likert-scale questions to evaluate fulfillment of outcomes, reviewers enter their feedback into a web page which updates a database. Verbal feedback is given upon completion of the presentation and a recap of all responses is printed for the presenter. Averaging presentation scores across all students in a program shows program outcomes.

Information system technology students presented to a group of faculty and network administration professionals on one Friday and the graphic design students presented to faculty, graphic design professionals, and student peers on a second Friday. At the end of the Likert-scale questions was an open-ended question prompting the reviewer for any comments to the presenter. Table 2 shows the average scores for each Likert-scale question. Based on a scale from one to five, where five is perfection, it is evident that students scored well in all categories.

Table 2

Results of 2011 electronic portfolio review

Question Topic	Average for Info Sys Tech	Average for Graphic Des
Presentation is well organized	3.89	4.33
Teamwork evidenced	3.86	4.05
Leadership demonstrated	3.73	4.09
Portfolio shows professionalism	3.83	4.32
Student looks outside body of knowledge	4.03	4.43
Student demonstrated creative thinking	3.98	4.52
Portfolio shows use of research skills	3.97	4.34
Presentation clear and professional	4.02	4.24
Shows strong knowledge of technology	4.01	4.48
Delivered with enthusiasm and drive	4.04	4.36
Student hireable upon graduation	3.60	4.29

Examining the scores shows the graphic design students consistently scored higher in all categories. Faculty in the program areas discussed this at great length in follow-up meetings and determined that the differences were due at least in part to a different set of reviewers for each group. Additionally, the graphic design students have a distinct advantage in creating and presenting visually. Armed with a certain panache for the visual, their electronic portfolios consistently looked better and read better.

The open-ended comment question gives additional insight into how reviewers reacted to student presentations. The following list contains several comments from reviewers to student-presenters selected randomly from the computer database.

- “Exceptionally well done . . . web site looks professional. Showing examples of how things were done is a great idea. Competence and mastery of skills is obvious, but could show more enthusiasm in his presentation.”
- “I enjoyed seeing your work and hearing about your passion for your work. Work on being succinct in what you share, and limit what you share to strengths and achievements alone, not weaknesses.”
- “Great Job of explaining the challenges and how you overcame the challenge when working with the customer.”
- “Good work, very impressive work background. Remember when using technical terms you flesh out a little so the audience knows how it can benefit them.”

After the presentations were completed, faculty met and grouped the comments by subject areas, including portfolio design, professionalism, and samples of work. Positive comments outnumbered negative comments in every category. For the portfolio-design and samples-of-work categories, positive comments outnumbered negative comments by a factor three to one. For professionalism-of-the-presentation, positive comments outnumbered negative comments by a factor of nearly five to one.

Interview responses echoed the feeling of accomplishment regarding student success. Here Francis described what made the portfolios valuable in assessing student work:

The ability to communicate the efforts they made, and the progress they made, how they documented their projects with the diagrams, and not so much making the web sites pretty, but having a sense about the web site, as far as the logical organization were one thing, and you knew kind of what you were going to get when you clicked on something, and instead of having a complete surprise. (Francis, personal communication, November 29, 2011)

Graduates interviewed from this case also understood the value of the electronic portfolio, but from a slightly different viewpoint. Here Alice describes how she was hired for her design job:

The first interview it was like, "Show me your e-portfolio, do you have an e-portfolio?" I never thought I'd ever have to use that, but -- It was there, and I had it, and they got to see it, and that helped out a lot. I think that brought me to the second interview after they saw my portfolio. (Alice, personal communication, October 25, 2011)

Alice added that she now regularly updates her electronic portfolio and she has helped several coworkers start e-portfolios of their own. Michael had a similar experience during the interview process.

I had 20 versions [of my electronic portfolio] by the time I finished it. [My boss] told me after he hired me that he never looked at anybody else. He said, "I looked at your e-portfolio and I was amazed by it. I hired you on the spot." (Michael, personal communication, November 2, 2011)

Laura, one of the business people in the case, found her own reason for valuing the review of electronic portfolios. She used the portfolio review as a means for seeing what was new in the program and how the competencies have been updated from the previous year.

From helping out with the portfolios, I have gotten a better understanding of what you are offering now compared to what was 10 years ago when I was there. The program has changed as to more of what the students are looking for it to get into jobs. You used to have

your [separate] web program and graphics program, and it's all kind of together now. (Laura, personal communication, November 17, 2011)

Informal advisory board meetings were held both days during the lunch break. Comments made during the advisory board meeting included the importance of a wide base of knowledge, new skills to add to the curriculum, and general comments on the quality of the presentations. These comments were consistent with minutes from other advisory board meetings and responses from participants in this case study.

Once the review of student work was complete and feedback was given, the faculty met to discuss programmatic outcomes. Based on the same numbers used to critique student work, analysis was done to find areas of the program that were consistently low scoring. Table 2 showed faculty that areas with lower scores indicated students were consistently not including samples of projects to support that outcome. For example, the teamwork question scored low in the results in spite of the students having completed projects as part of a team. The faculty knew the projects were completed, so in-class portfolio work needed to be modified to reenforce the insertion of the team-based work.

Theme: Assessing Graduate Preparedness

Hanson (2008) touted application-based learning as a means to mimic the workplace and build real-world knowledge. In application-based learning environments, students are presented actual business problems in the classroom and challenged to solve them. Torracco (2008) agreed, adding that application-based learning is most beneficial toward building the skills students will require in the

workforce. Often, these tasks are submitted by area businesses with two goals in mind. First, the problems are used to assist in the training and assessment of potential employees. Second, for many small businesses and non-profit organizations, it is often a means to have problems solved for little or no investment.

When asked about their own degree of preparedness for the workplace, graduates in this study had various opinions. Ann, a member of faculty and recent graduate, viewed preparedness through the lens of a non-traditional student with limited computer skills.

I would have to say I felt prepared in some areas, in other areas I did not feel prepared. And let me explain that when I went back to school I was a non-traditional student. Some of the key courses I took in my first couple of semesters were kind of a blur to me because I was so busy getting acclimated to just being a student again, and getting used to the homework, and it was really tough for everything to sink in. (Ann, personal communication, October 31, 2011)

Sophia, also a non-traditional student, agreed.

On a scale from one to five with five being "Doing the job, no hiccups, . . . not having to ask a lot of the questions," and one being "Well, what the heck you talking about?" I would have to say I was maybe a three-and-a-half or four. (Sophia, personal communication, November 8, 2011)

However, after about a year on the job, Sophia now considers herself a solid four-and-a-half.

Several graduates enumerated specific areas of their skill set where they felt underprepared. Leo needed to attend seminars and workshops designed to fill in some skill gaps. Sophia felt her communication skills were weak, especially in the area of electronic communications, such as emails. Alice wanted to know more about the specific terminology used at her place of employment.

The graduates were not without ideas on how to overcome their lack of preparedness in these areas. Alice spent time with co-workers, learning how they went about their jobs and listening in on the job-specific jargon. Michael tersely responded “Google” (Michael, personal communication, November 2, 2011). But the business people in the study had another idea; internships or, as they are sometimes called, experiential learning. Experiential learning can be defined as “a philosophy and methodology in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values” (Brumm, Hanneman, and Mickelson, 2006, p. 124). Torracco (2008) validated the need for experiential learning as part of the development of a potential employee, describing internships as a way to bridge the gap between academic and occupational content.

Business and faculty respondents agreed, listing internships as the number one way business people can influence the preparedness of graduates. Paul, a firm believer in the internships, tries to have an intern all the time. He views it as a way to increase learning and, when a position comes open, a way to audition for employment.

We've been having an ongoing intern from [Midwestern] just to help with the basic workstation stuff, and then helping to teach them a little bit about some server things, and daily IT duties. (Paul, personal communication, November 9, 2011)

Paul likes to take interns even if he has no permanent position for them after graduation. He sees it as a way to build a stronger workforce. He had an internship as a student and is now guiding other students to do the same.

Francis, another employer, sees internships as a chance to not only introduce students to the workforce, but as a way to build knowledge in areas that do not specifically relate to the intern's duties.

We made an effort to make sure there was some time for him to learn some things that weren't necessarily required. If he had questions about how things worked, we were always happy to take the time to explain things to him. (Francis, personal communication, November 29, 2011)

Faculty agree. Some of the faculty interviewees, like Ann, had not had the opportunity to intern before graduation and wished she had.

I think if I would have done more of an internship, or worked with the customers, or something like that, I probably would been more confident in my own skills and working on a project by myself. It was just kind of scary when you get out there, and things aren't just like what they were at school, or in the books. (Ann, personal communication, October 31, 2011)

Other members of faculty, like Joe, did have the opportunity to intern and could speak first hand on the experience.

I had an internship when I was in college, and that was the best. That was better than all the classroom experience I had put together. It was huge. (Joe, personal communication, October 13, 2011)

Theme: Socializing the New Employee in the Workplace

No matter how well prepared for employment the graduate may be, there is still the issue of adjusting to the new work environment that first Monday on the job. This "process of moving from 'outsider' to 'insider' within an organization" (Beck, 2011, slide 6) is known as employee socialization and it occurs at several levels. Two forms of employee socialization were described by the graduates in this

research: adjusting to the way business is done and being accepted as a member of the organization.

The graduates that participated in this research were asked about their experiences regarding having the correct skill set for their new jobs. Several of the employers were also asked to describe their experiences if they were graduates of Midwestern Community College and were recent additions to the workforce. Without fail, each respondent agreed that their technical skills and their soft skills were sufficient to handle the expectations of their new employers. As Alice describes the process of becoming a functional part of the organization, “I had the skills that were needed to do the job. It was just getting to up speed to get the right flow to go with production over here” (Alice, personal communication, October 25, 2011).

The socialization process, however, was not complete until the new employee could “learn the employer’s terminology” (Alice, personal communication, October 25, 2011). Alice described her experience like this:

When you come in here, [the processes are] on paper, and they tell you that you have to do this, and do this. But when they start using their short words, and its like, 'Okay, what does it mean?' But now that I've been here over a year, it's easier to understand the way the salespeople talk and what they want, what they are looking for. (Alice, personal communication, October 25, 2011)

Sophia agreed.

When I did an internship, the way they talk to each other and the way they share files and the way they get things done is completely different from the way [my current employer] works. So there was a learning curve every place . . . I have gone. And I suppose that probably is going to be the case anywhere you go. (Sophia, personal communication, November 8, 2011)

For some graduates entering the workforce, this process was relatively painless, as was the case for Ashley:

I think for me, it was pretty easy because Michael had already basically defined what my position would be, and most of the things that I do, I learned how to do at [Midwestern], so it was pretty easy. I was nervous. I'm always nervous the first time I go to a new job, until I figure almost everything out. (Ashley, personal communication, November 2, 2011)

However, when Michael began his employment at the same business a year before Ashley, he found socialization to be more challenging. Michael was the first person employed by the business to do Internet marketing and the expectations of the job were not yet well defined. As Michael put it:

So, when I got here, I was scared, I didn't know what I was doing, and basically it took me about a good six months of getting yelled at to figure out what to do. But, I love it. There were days where I wasn't sure if I was going to have a job, and I didn't know if I was doing it right, but I think that comes in all the jobs. Right off the bat, I didn't know what I was doing, and I was just, I don't know, I wasn't sure if I was good enough. And I wasn't sure my expectations were being met with my boss. (Michael, personal communication, November 2, 2011)

While the expectations employers have of new employees has never been higher (Hanneman & Gardner, 2010), reactions from the employers in the study showed that the time new employees needed to adjust to the working processes of the organization was expected. Marie stated she expected her new employees to take some time to adjust and that was fine as long as they did not have to be a "training ground" (Marie, personal communication, November 2, 2011) for the technical skills. When asked how he saw the abilities of the graduates to perform on the job, Paul put it succinctly, "They all look pretty good. They will do if I spend some time" (Paul, personal communication, November 9, 2011). This connects with Lepak

and Snell's (1999) definition of human capital, that businesses view time spent in training employees as an investment that pays the business back with additional productivity in the future. Alamgir (1979) agreed, adding human capital results in long-term growth of the economy.

As for being accepted by workmates on the job, the graduates agreed that being accepted by peers made the transition easier. Leo told his experience regarding feeling accepted on his first day:

[My place of employment] goes out of its way to make you feel like you belong right away. My first day, I was taken around and introduced to everybody in my branch and that was about 70 people. All the way up to the president of the branch. Usually that's a pretty stressful experience for somebody on the first day, but everybody is very, very approachable, very friendly, and like I said, it's a family-oriented business. (Leo, personal communication, November 14, 2011)

There was one more sub-theme that needs to be discussed. There were several graduates that did not gain employment directly in the fields they studied while at Midwestern. Laura studied to be a network administrator but gained employment as a business application analyst, focusing much of her efforts on the Internet and Intranets. "So my degree is in network administration, and I fortunately don't have to use it too often" (Laura, personal communication, November 17, 2011). Likewise, Michael trained to be a PC technician but works as an interactive marketing manager. "How many people graduate going into exactly what they went to school for? If I would have been fixing computers, and I don't think I would have liked it" (Michael, personal communication, November 2, 2011).

While they were both happy to have the jobs they have, the fact they are in positions for which their training may be slightly lacking most certainly contributed to their employee socialization experiences.

Theme: Appraising the Partnership Between Business and Faculty

Community colleges partner closely with industry and other community and business entities to respond to the needs of local economies (Boggs, 2010; Amey, 2010). As discussed in chapter two, Amey, Eddy, and Campbell (2010) defined a three-step process for the formation and evolution of educational partnerships.

1. The formation of the partnership.
2. Partnership evolution.
3. Creation of partnership capital.

Step one of the partnering process focuses on the reasons the partners are interested in joining the partnership (Amey, Eddy, & Campbell, 2010). While each individual will have their own reasons for becoming a partner, there are several purposes Amey, Eddy, and Campbell offer as typical. Typical reasons for joining include available resources, motivations, policy context, and existing relationships. Regardless of the reason for participating, each partner brings with them social capital and organizational capital to the partnership.

Because of its rural setting, Midwestern Community College has a unique relationship with the community. It feels as though everyone knows everyone. This also holds for the members of the partnerships in this case study. When asked about business partnerships with the community, Ann, a member of faculty, described a working relationship with a local coffee shop. Ann's photography students print and

frame images as part of a class project each year and display them at the coffee shop.

The students showcase their photos in the coffee house. And so we had a really good working relationship with the owner of that place. And it was kind of a win-win situation because we would have our pictures on display, and then we would have a night where we would ask all the parents to come down. And then they buy coffee, and so it brought extra business in for her. (Ann, personal communication, October 31, 2011)

The fact that the coffee shop is owned by a former Midwestern Community College employee made forming this partnership easy.

These types of relationships are not uncommon. When asked to define his partnership with the college, Francis answered with a smirk, “My sister works there” (Francis, personal communication, November 29, 2011). Francis, a business person, and Elizabeth, a member of the faculty, are siblings. Edward, another member of faculty, described a partnership with the local hospital as having started because he went to church with one of the hospital’s administrators. Joe described it this way:

Yeah, the relationships were already there before we started because it’s a small, rural community. Chances are you already know the people. I think it’s a good thing. (Joe, personal communication, October 13, 2011)

Jenn, the chamber of commerce executive, believed the partnerships were effective and positive and added, “We need to keep working together so that both of our pursuits are more relevant” (Jenn, personal communication, November 10, 2011). She further underlined this sentiment by adding, “Our goal is really the same.”

These types of partnering are the norm in this rural community. Because partnerships are frequently formed with graduates, relatives, friends, and former workmates, social capital and organizational capital come built in. The partnerships in this case study follow the findings of Amey, Eddy, and Campbell (2010) in that local business people are interested in partnering with the college because of existing relationships and for the benefit to the community.

In the second step, development and evolution of the partnership, the collaboration between partners goes beyond the personal reasons and purposes for joining the group (Amey, Eddy, & Campbell, 2010). In this step, Amey, Eddy, and Campbell posit that trust begins to be built and the more formal characteristics of partnering are replaced with a more informal, flexible organization.

Marie stated her feelings toward the college by saying, "I know that there is a strong belief in what you guys do" (Marie, personal communication, November 2, 2011). Quinn's trust in the college sounded like this, "I think that if [members of faculty call] me for anything, there is no BS, there is no this, and there is no that" (Quinn, personal communication, November 15, 2011). This theme seemed to hold true throughout the business people in this study. Once again, this follows the themes introduced by Amey, Eddy, and Campbell (2010) but, because of the familiarity between members of the rural community, trust comes much faster and easier.

Finally, in step three of the partnership-building process, Amey, Eddy, and Campbell (2010) introduce the concept of partnership capital.

Partnership capital is evidenced when there is networking, when shared beliefs regarding the focus and processes of the partnership are created, and when time spent working as a team results in a sense of shared norms and an alignment of processes. A synergy is created at this nexus or intersection; the whole is greater than the sum of the parts. (p. 342)

Partnership capital institutionalizes the partnership and sustains the collaboration.

Participants in the study found several ways to express networking, shared beliefs, and investment. First, Jenn:

We were on a business retention and expansion visit yesterday at [a local business]. And they were talking about they have an employee that already has a degree in something, but he wanted to get an accounting degree. Because we have [Midwestern], they're able to retain that employee, and let him work his hours because they run three shifts every day of the year. They're able to get some flexibility. So, I think being able to pursue your dreams and not have to move is a big deal. (Jenn, personal communication, November 10, 2011)

Francis saw Midwestern Community College as more than a means to educate people the first time. Like Jenn, he sees Midwestern as an opportunity to help current employees grow.

[We have] done a lot of work to have [our employees] take classes through [Midwestern], and its been a long standing relationship as far as that's concerned in the industry. . . We make use of the teachers and the programs offering through [Midwestern]. (Francis, personal communication, November 29, 2011)

Quinn said it this way:

I have told more kids to go to [Midwestern] that live out of state because . . . I think they have got a good computer repair program and tech program and networking program, and I said that if I had the time I would go back and get some more networking skills. (Quinn, personal communication, November 15, 2011)

As demonstrated with the first two steps of the partnership model, step three is also evident in the evolution of the case at Midwestern Community College.

Faculty and business partners network beyond the confines of the partnership, prompting other businesses and potential students to make entry into the educational environment. Shared beliefs in the direction of the college push curricular development and graduate success. Partners are willing to invest time in the college and its mission. As evidence to the willingness of partners to invest their time in the college, I was granted interview time with every person I asked to be part of this study.

Cross-sectional Analysis

In chapter four, I questioned whether being a graduate of Midwestern Community College would influence the responses of faculty and employers. My original thought was there were three groups of participants in this research: faculty, employers, and graduates. However, upon further analysis, two potentially new groups surfaced in the interview process: faculty and employers that were also graduates of Midwestern. Upon careful review of the responses from all participants, it was evident that the responses from the faculty-graduates matched very closely the answers from the faculty that had not graduated from Midwestern. Likewise, the employer-graduate participants' responses mapped closely onto the answers from the employers that had not graduated from Midwestern.

There was only one difference in responses between the participants that had graduated from Midwestern and those participants that had not. Several of the employers that had graduated from Midwestern mentioned specifically that if an applicant was a Midwestern graduate, they were held in a slightly better light than

graduates of other schools, giving the Midwestern graduates the favored position in close contests for employment. As Laura stated:

If we had an applicant [that was a Midwestern] graduate, I have that much more of an idea what education they come with, and mentally give them extra points for that, just because I think I really like the way the community colleges focus on what the community needs. (Laura, personal communication, November 17, 2011)

This is consistent with Mentkowski and Loacker (1985) who posited institutional loyalty to an alma mater made a person more willing to assist the college and its graduates.

I feel the faculty-graduate group can safely rejoin the faculty that did not graduate from Midwestern without impact to the research. Likewise, I feel the employer-graduate group can be grouped back in with the employers that are not Midwestern graduates. Even with self-professed loyalty to the institution and its graduates in the employer-graduate group, the responses to the interview questions were so similar across all employers that they can co-exist in the same group without impact to the study. Therefore, all further references to participants will be in three groups: faculty, business people, and graduates. These groups are shown in Figure 6 below.

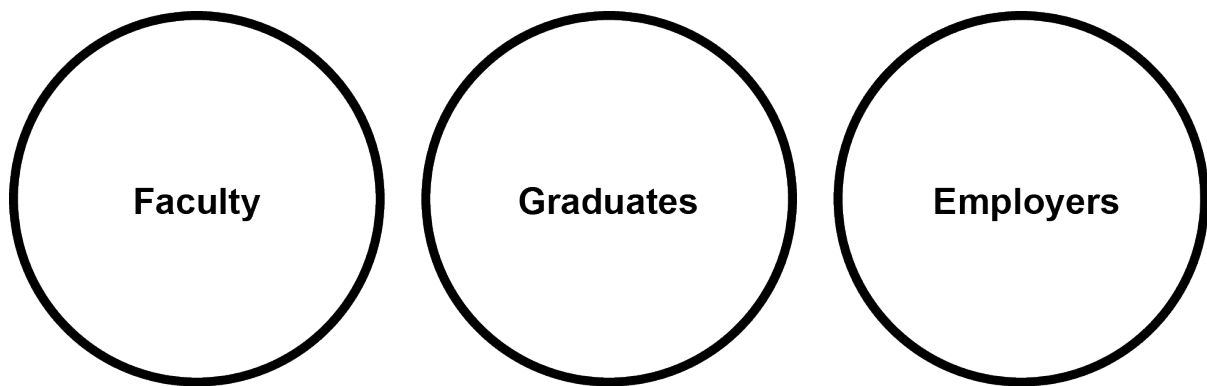


Figure 6. Final grouping of participants into three distinct groups.

Summary

In this chapter, data from participant interviews was divided into six major themes:

- Defining the critical skill set
- Determining curricular content
- Evaluating success of the graduates and the programs
- Assessing employee preparedness
- Socializing the new employee to the workplace
- Appraising the partnership between business and faculty

Each of these main themes was established by examining the transcripts from semi-structured interviews with members of faculty, the business community, and recent graduates that have entered the workforce in their chosen field of study.

Once themes were defined, they were validated by triangulating the interview data against existing documents, web sites, and archival data. This included meeting minutes, emails, college catalogs, syllabi, course outlines, and various other documents. Additionally, trends in skill-set requirements were examined from online

job-search web sites. Finally, the literature supplied evidence of these trends matching with current knowledge.

In chapter 6, these themes will be used to construct knowledge. Relying on the theories of Creswell (1998; 2009), Merriam (2002), and Crotty (1998), knowledge will be constructed using the collected thematic data, hermeneutic data, and personal experience to create my interpretation of the case. Finally, chapter six will include my personal reflections on the study as well as ideas for follow-up studies in the future.

CHAPTER 6.

CONCLUSIONS, IMPLICATIONS FOR PRACTICE AND POLICY, RECOMMENDATIONS FOR FUTURE RESEARCH, AND REFLECTIONS

Introduction

Analysis of the data in this study showed that the participants focused their beliefs and professional views around a handful of very specific themes. In this section, I use these themes to help construct conclusions to the research questions posed at the beginning of the study as well as implications and recommendations regarding practices, policies, and future research. Finally, because qualitative research is a very personal process, this dissertation closes with reflections on my experience.

Conclusions

This study began with three research questions:

- How do faculty and employers describe the critical academic skill set for career development?
- How do faculty and employers evaluate career and technical graduates for job readiness? How well does the curriculum prepare graduates for employment?
- How do graduates of community college career and technical programs describe their experiences in the workforce regarding job readiness and employee socialization?

This chapter contains knowledge constructed from the data collected during the study. These data, coming from interviews, existing documents, and the literature, were reduced to six themes found central to the respondents.

Constructed knowledge will address the three questions listed above. Additionally, discourse will follow that validates and updates Amey, Eddy, and Campbell's (2010) partnership model. Finally, Yin (1994) suggested all research contains study propositions or underlying issues the researcher must address. These propositions will be examined and discussed.

How do faculty and employers describe the critical academic skill set for career development?

Traditionally, career programs like graphic design and information system technology have been perceived as areas of education where students learn the hard skills required to get a job in a chosen field. These hard skills include the specific technical competencies needed to produce the product or service expected of the future employee. For a designer, these competencies include the ability to design and produce pieces professionally and effectively using industry-standard software like the Adobe Creative Suite. For students seeking careers in information system technology, the competency set is very different and includes skills like designing a network, repairing a computer, configuring system nodes, and securing enterprise data.

While learning these hard skills is still the cornerstone of entering their careers, graduates are expected to possess additional competencies beyond designing a logo or adding memory to a lagging personal computer. Universally, all

employees at all jobs require soft skills. Soft skills differ from the hard skills described above in that they do not specifically apply to the employee's chosen career but can be used on the job regardless of career path. These soft skills include the ability to communicate orally with coworkers and clients, organize and prioritize tasks and problems, read and comprehend user documentation, write in a manner that successfully and completely informs, and work as part of a team with coworkers.

But the problem is bigger than just a matter of learning the hard and soft skills for a chosen career. Due to the exploding growth of the knowledge base and the rapid obsolescence of current knowledge for these and many other careers, it has become impossible to instruct the entire body of knowledge in the classroom.

According to Salmi (2002):

In many disciplines, factual knowledge taught in the first year may become obsolete before graduation, so that the learning process needs to be increasingly based on the capacity to find, access and apply knowledge. In this new paradigm, where learning to learn is more important than memorizing specific information, primacy is given to information search and analytical skills and to reasoning and problem-solving skills. Competencies such as learning to work in teams, peer teaching, creativity, resourcefulness and the ability to adjust to change are also among the new skills to which employers seem to put worth in the knowledge economy.

This shift in teaching and learning has uncovered this new set of competencies imperative in the workplace. Today's successful employee must go beyond the traditional hard skills and soft skills and master the ability to research solutions, think critically, and continue to learn throughout their professional careers. Of the three main areas in the academic skill set, hard skills, soft skills, and the ability to go

beyond what is learned in the classroom, this final set of competencies may be the most difficult to teach and learn.

Understanding the need for hard skills, soft skills, and the ability to research, learn, and think critically assists greatly in the design of a curricular skill set, but it does not speak to the detailed content of the in-the-classroom experience. The actual course content requires investigation and communication beyond the general description of the competencies listed above. To fully set the content of the program, the faculty must look to people currently in the field, the students, and their own knowledge and research skills.

Advisory boards are a popular way for faculty to gain insight and direction from local business people. Advisory boards include volunteers from the field and faculty from the school working together to set curriculum that addresses the current and near-future needs of the workplace. It is the work of these members of the advisory boards at colleges across the country and around the world that informs the curricular content on the issues of current requirements of the workplace.

While the advisory board remains an integral part of curriculum definition, it is important to know there is a need to look elsewhere to gain a more complete picture of curricular content. As pointed out in the interviews of faculty in this study, the members of the advisory board are a great resource for discovering current industry trends but they are often too busy conducting the business-at-hand to research the next generation of skills required. Addressing the more far-reaching future of the industry requires faculty research.

Finally, defining classroom content without consulting with the students causes another set of problems. For example, as technology advances, it is often the youth that are the early adopters, taking to the technological advances faster and with less effort than the other generations. It is the responsibility of faculty to investigate the technical needs and expectations of the current and future students to ensure learning in the classroom is not hindered by outdated techniques or practices.

The process of defining academic competencies begins with an understanding of the three main components of the skill set: hard skills, soft skills, and the ability to go beyond the knowledge afforded in the classroom. Once the basics of the academic skill set are defined, it becomes a balancing act between the needs of the business people in the field, the present and future students in the classroom, and the future direction of the career area as uncovered through research by the faculty. It is only once all of these facets are addressed that the competency set will supply graduates with the skills they need to be employable.

How do faculty and employers evaluate career and technical graduates for job readiness? How well does the curriculum prepare graduates for employment?

Students in the program areas in this case are required to begin an electronic portfolio during their first semester at Midwestern Community College. This e-portfolio becomes the repository for samples of their work throughout their college career. Students participate in a formal electronic portfolio course before graduation

and are required to present their finished portfolios before a panel of business people, peers, and faculty before they graduate.

Portfolio presentations are judged on evidence of hard skills, soft skills, and the ability to go beyond what is taught in the classroom as well as the overall effectiveness of the portfolio and the presentation. The results of these formal reviews are used to provide feedback to the students, to furnish an opportunity for each student to have a practice job interview, and to collect data on the completion of programmatic outcomes. Feedback to the student is immediate and is given orally and in writing. Programmatic feedback is calculated by the faculty after all presentations are completed.

The general consensus of participant interviews and results of past electronic portfolio reviews shows that most students are well prepared for graduation. There are some exceptions, including the students that did not deposit their past work in their portfolio/repository, did not complete all of the requirements for the electronic portfolio, or did not excel in all areas of the curriculum. Having said that, most students receive very positive feedback. Additional proof of student preparedness comes in the form of an occasional job offer at the end of a portfolio presentation.

Graduates of the program agreed, stating they found themselves well prepared for the workplace. There were, of course, some employee socialization bridges to cross once on the job, but this is normal with every new job (Kennedy & Lawton, 1990). There is further discourse on job readiness and employee socialization in the following section.

As part of the question of preparedness for the workplace, it is fair to ask if being prepared equates to being hired. Each year, graduates are asked to complete a survey regarding satisfaction and post-graduation employment. Over the past five years of survey data, graduates have seen nearly 100% placement in the workforce, but not always in their chosen career. In fact, the same data suggest 53% of all respondents found jobs in their chosen field. There are several reasons for this, including the economy and job availability, transfer to a four-year institution, or being one of the students who struggled with parts of the curriculum.

Using the commutative property of mathematics, it is also fair to ask if being hired means the student was prepared for the job. In most cases, the answer would be “yes,” but there were examples in this case to the contrary. Leo stated plainly that he was hired for his job without some of the required certifications. Michael took the job of Interactive Marketing Manager without really even knowing what that meant. In general, employee socialization proves that no one is fully prepared for the job upon hiring, even if it is just a matter of learning the language of the employer or socializing to the coworkers (Kennedy & Lawton, 1990).

In summary, employers found graduates to generally be well prepared for the workplace. Graduates in this case agreed, stating that they possessed the competencies required to be successful on the job. However, there is still the universal need for the new employee to socialize to the new job. Employers understood this to be their responsibility and were willing to invest some time and money into the development of human capital, but they stated that they did not want to teach all of the skills to the new employee. That was the job of the college.

How do graduates of community college career and technical programs describe their experiences in the workforce regarding job readiness and employee socialization?

It is impossible for the college to fully prepare the graduate for the workplace and bypass the need for employee socialization. Daniel Feldman proposed Feldman's Model of Organizational Socialization to explain how socialization into any organization, including employment, transpires (Kennedy & Lawton, 1990). In Feldman's model, there are four distinct stages:

- Stage One: Anticipatory Socialization. In this stage, the recruits anticipate their experiences while still being outsiders to the organization. In the case of graduates desiring entry to the workforce, this could happen while still in school.
- Stage Two: Accommodation. This is the stage where the recruit encounters the actual organization for the first time. Initiation to tasks and workgroups cause reshaping of inaccurate expectations.
- Stage Three: Role Management. In stage three, the new employee tries to balance her/his private life and work life.
- Stage Four: Outcomes. There are four outcomes to the model: general satisfaction, mutual influence, internal work motivation, and job involvement (Kennedy & Lawton).

By looking at Feldman's stages of socialization (Kennedy & Lawton, 1990), it becomes apparent that employee socialization cannot occur in the college setting as stage one is the only stage that may be started while still in school. It is stage two

which clearly states that accommodation includes the act of reshaping inaccurate expectations, which can only occur after encountering the actual organization.

While they felt well prepared from the competency standpoint, participants in this case agreed there were socialization hurdles early in their careers, as predicted in Feldman's socialization model (Kennedy & Lawton, 1990). Alice suggested it was a matter of getting to know the language of the new company. Michael had a more complex experience, reporting he struggled to adapt to the new job. Part of his socialization was due to his lack of understanding as to the extent of his new job (a product of Feldman's first stage) while other parts came directly from his role being new and ill-defined by the company. Sophia summed up the employee socialization process by stating she had to socialize anew at each job she had had and assumed this would be the case for every job she would ever have. Kennedy and Lawton validated her hypothesis, stating there was a need for employee socialization at every new job.

According to the respondents in this study, internships were an important way to help students understand the workplace and the intricacies of their chosen career. This was supported by the literature, with Knouse, Tanner, and Harris (1999) adding that internships improved college performance and job opportunities. However, internships do little to ease employee socialization, as interns are generally afforded the opportunity to complete only two stages of the organizational socialization model, leaving the socialization process incomplete (Kennedy & Lawton, 1990).

Validating Amey, Eddy, and Campbell's Partnership Model

Boggs (2010) and Amey (2010) posited that community colleges partner closely with industry and other community/business entities to respond to local economic needs. This holds true for Midwestern Community College and the business entities in the Midwestern service area. Partnerships exist at several levels and for several reasons between the college and local businesses, but they all share the common win-win propositions that bring value to all that participate.

Amey, Eddy, and Campbell (2010) proposed a model for partnerships within education. Within their three-step model, partnerships formed for personal reasons, then evolved to a more informal format as trust was formed, and finally partnership capital was constructed as partners networked and shared their common beliefs. The issue with Amey, Eddy, and Campbell's model was it only documented partnering between K12 schools, community colleges, and four-year universities. See figure 7 below. While partnering between schools to streamline curriculum and ease student transition is a very noble cause, their model ignored the college-to-business partnership.

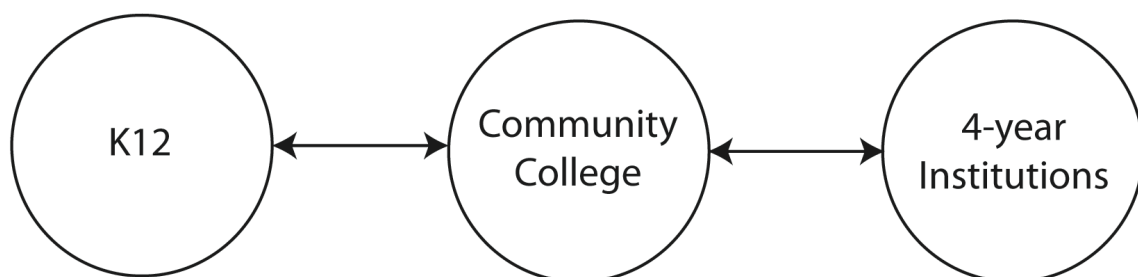


Figure 7. Amey, Eddy, and Campbell (2010) educational partnering model.

In this study, I interviewed members of faculty, business people, and recent graduates from Midwestern. Using Amy, Eddy, and Campbell's (2010) education-only model as a template, I examined the workings of Midwestern's partnerships against the evolutionary track spelled out in their model. What I found was that the education-to-education model proposed by Amey, Eddy, and Campbell also fit the education-to-business model at Midwestern Community College. There were a few notable exceptions in Midwestern's case, however.

In the first step of the model (Amey, Eddy, & Campbell, 2010), partners come together for personal reasons and form a partnership that follows a formal format. This occurred at Midwestern as predicted by the model; participants in this study joined the partnership for the reasons spelled by for Amey, Eddy, and Campbell, including the benefit to the partners and extension to their personal relationships. Partners also brought social capital and organizational capital to the table as described in the model. What made the partnerships in this study different was that many of the business people in the partnerships with the college were friends, family members, or past coworkers of the faculty. Most of the remaining partners of the college were graduates of Midwestern Community College. This made the early socialization easier and the formation of a working partnership smoother.

Step two of the educational partnering model (Amey, Eddy, & Campbell, 2010) describes the change from formal proceedings to more informal proceedings as partners become more familiar with each other and trust is built. As with step one, Midwestern followed this step with its business partners. What differed was similar to

the twists in step one. Because of previous familiarity with nearly all of the business partners, trust and informality came quickly and easily to the working groups.

Finally, in step three, partnership capital is built (Amey, Eddy, & Campbell, 2010). Partnership capital is evidenced through networking, a sharing of beliefs around the foci and processes of the partnerships, and time investment by the participants. Partnership capital institutionalizes the partnership and sustains the collaboration. Again, Midwestern's partnerships followed the step precisely. Business people network amongst themselves and with faculty. Midwestern is recommended as the first choice for an education by local businesses. Business people willingly give of their business and personal time to assist the college. What made the third step different for Midwestern, however, is unlike the first two steps where evolution came easier than predicted, partnership capital took time to build.

What made Midwestern differ from the prescribed model in Amey, Eddy, and Campbell (2010) was the relative ease with which partnerships formed and trust was built. This is in direct response to Midwestern's rural setting, where people know each other, trust each other, and find it easy to work toward a common good. In fact, when prompted for how they saw the partnership between the college and business evolve over time, a large majority of the participants stated they saw no evolution, the partnerships had always worked just as they do today.

While the description of the educational partnering model described by Amey, Eddy, and Campbell (2010) held true for this study, it did not fully address the unit of analysis. Amey (2010) describes advisory committees as a partnering between business and faculty, but does not include the business-faculty partnership in the

model. To fully understand the partnership in this case, additions must be made to the model, as shown in Figure 8 below.

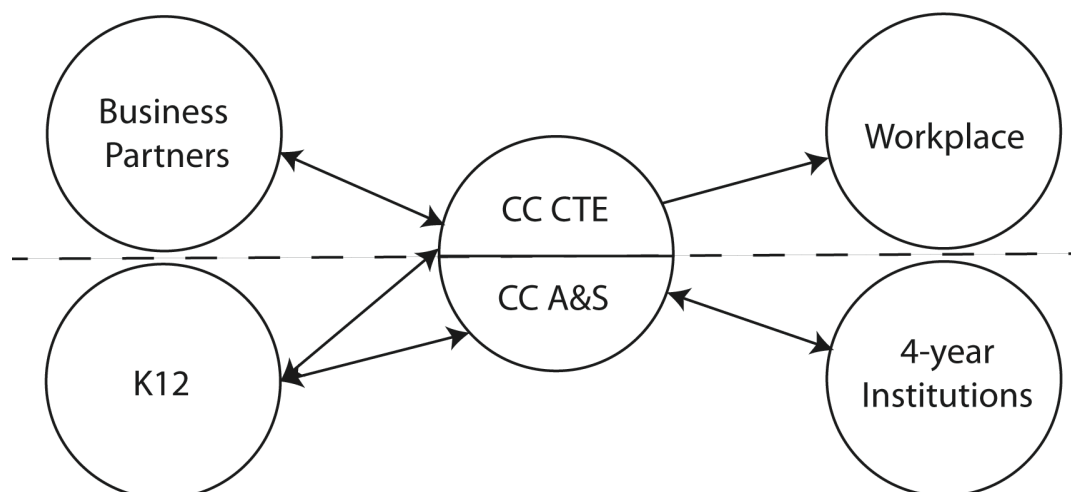


Figure 8. Updated partnering model showing business partners.

Figure 8 includes Amey, Eddy, and Campbell's (2010) partnership between K12 schools, community colleges, and four-year institutions, represented by the pieces below the dashed line. In the updated model, however, the community college bubble is divided into community college career-technical education and community college arts and science. This division was necessary because this case represented only career-technical program areas (generalization to arts and science programs cannot be made without further data collection and analysis). As shown in the diagram, CTE programs still partner with K12 schools to ease students from secondary to post-secondary education, but the career-technical programs also work with business partners to define relevant curriculum. Finally, while some graduates of career-technical programs transfer to four-year institutions to continue their

studies, most move directly into the workforce. The portion of the model above the dashed line represents the case in this study.

Reflecting on Study Propositions

Early in this study, I discussed Yin's (1994) study propositions as a way to direct attention to items that need to be examined beyond the research questions themselves. Yin posited that study propositions point the researcher at additional issues that must be studied that are not covered directly by the research questions. Propositions can cause reflection on theoretical issues and direct the researcher toward relevant evidence (Yin).

There were three propositions listed for this study:

- Members of the partnership collaborate because they derive mutual benefits.
- Partnerships follow prescribed evolutionary steps as they form and mature.
- Successful educational programs and ultimately successful graduates result in economic advances for all members of the partnership.

Data collected in this study clearly address the three propositions originally put forth in the case study. Members of the partnerships do derive mutual benefits from the collaboration: Midwestern Community College benefits from improved reputation, increased enrollment, and easier recruitment and local businesses see more qualified applicants, stronger employees, lowered investment in human capital, and increased revenues. These benefits to the college and to the local businesses lead directly to economic advances for all participants. Because all graduates in

these program areas benefit from the programs, any businesses that hire graduates from Midwestern also see economic benefits similar to the members of the partnership.

As described in the validation of the Amey, Eddy, and Campbell (2010) model above, members of the partnership follow a prescribed formula in the creation and evolution of the partnership. One major difference in the partnership evolution is that, because of the rural nature of the community, many of the steps are streamlined compared to Amey, Eddy, and Campbell. Familiarity is not an issue as many partners are friends, family, former coworkers, and graduates. Trust comes prebuilt in many cases because the partners are already well acquainted.

Implications for Practice

Much of this study focused on the need for the student to acquire and demonstrate correct competencies before searching for employment. There is no denying that having the correct skills is imperative for any graduate seeking a position in their chosen career. It is impossible for faculty to design the curriculum in a vacuum; they need the help of advisory boards, business people beyond the advisory board membership, current students, and future students to fully define a viable curriculum. The advisory board members and business people outside of the advisory board hold the knowledge of what is current and what needs to change in the near future. Current students and future students hold the keys to learning methods, upcoming media, and future trends. The faculty themselves hold knowledge of the hard and soft skills needed to be successful and are responsible for researching what the world will look like in the near to not-so-near future.

Regardless of what happens, faculty must know the world will continue to change. Knowledge will continue to grow. Knowledge will also continue to become obsolete. As Edward put it during his interview:

The skill set [will] migrate all the time. . . and we cannot just all of a sudden say now we're going to make this leap. No, we've always got to be migrating, and we've got to have people that are willing to take a little chance. And every once a while something doesn't work, but you got to take that little chance and keep looking at ways to migrate towards some of the innovate things that are occurring. (Edward, personal communication, November 8, 2011)

One of those “innovative things” (Edward, personal communication, November 8, 2011) that is already here is the need for employees to compete in the global marketplace, and that implies the need for new skills. Many scholars are referring to these as the twenty-first century skills. According to the Metiri Group (2011):

In order to thrive in a digital economy, students will need digital age proficiencies. It is important for the educational system to make parallel changes in order to fulfill its mission in society, namely the preparation of students for the world beyond the classroom. Therefore, the educational system must understand and embrace the . . . 21st century skills within the context of rigorous academic standards.

Continuing to teach the traditional content in the classroom is not serving the students or producing employable graduates. Today's students need to acquire twenty-first century skills to compete globally for twenty-first century jobs (Metiri Group, 2011; The White House, 2011a). These twenty-first century skills are beyond the customary, time-honored competencies. As evidenced in the literature and the interviews conducted for this study, the set of competencies is too large and is changing too rapidly to allow for teaching only the hard skills needed on the job.

According to the Metiri Group (2011) and the White House (2011a), the list of skill required in the twenty-first century workplace include:

- digital-age literacy, including scientific, technological, visual, information, and cultural literacy and global awareness,
- inventive thinking, including managing complexity, self-direction, curiosity, creativity, higher-order thinking, problem solving, critical thinking, entrepreneurship, and sound reasoning,
- interactive communication, including teaming, collaboration, personal and social responsibility, and interactive communication, and
- quality, state-of-the-art results, including prioritizing, planning, effective use of real-world tools, and high-quality results in real-world applications.

Because of the nature of the programs in this study, digital-age literacy is not an issue for Midwestern Community College. Both the information system technology and graphic design programs rely heavily on current technology every day. The only area of digital literacy that could be improved substantially is global awareness, a subject that is more difficult to fit into the everyday lessons in these areas.

Inventive thinking, specifically the thinking, reasoning, and problem-solving skills, are addressed by the use of application-based learning. Giving the students real-world problems to solve promotes complex solutions to exactly the types of problems they will encounter once they join the workforce. Adding challenge-based learning, having the students locate and identify their own real-world problems to solve, adds a layer of self-direction and curiosity to the learning.

The use of application- or challenge-based learning in the curriculum addresses the need for teaming, collaboration, and social responsibility introduced by the interactive-communication component. By including the electronic portfolio with its various presentations to faculty, peers, and business people, personal responsibility and interactive communication are also covered.

Application- or challenge-based learning also addresses portions of state-of-the-art results, including effective use of real-world tools and high-quality results in real-world applications. Prioritizing and planning, clearly project management issues, are equally important tools in the workplace and must also be introduced to the students.

Internships introduce the student to the workplace, introduce potential employers to future applicants, and ease future employee socialization issues for the graduate. Using internships also augments the learning experience in ways that are difficult or impossible to reproduce in the classroom. Employers participating in the research viewed internships as a way to teach additional real-life skills to the student and evaluate potential employees.

The findings of this study are summed up as a set of general recommendations for practice for all community colleges teaching career programs:

- Teach the twenty-first century skill set. Graduates without the twenty-first century competencies will not compete in the global job market.
- Incorporate real-world problems in the classroom. Giving the student real-world issues to solve increases awareness of the career they are seeking and eases employee socialization. Application-based learning is a good

place to start, but challenge-based learning moves the identification of business issues to the student.

- Utilize an electronic portfolio as the repository for student work and as a means to assess student and program outcomes. E-portfolio presentations work toward socializing the future employee by introducing presentations to potential employers and by examining feedback on skill set and competencies.
- Promote good project management skills. Planning and prioritizing are tasks that all employers require.
- Incorporate internships as a means to acclimate students to the working environment. Adding the real-world experience augments classroom learning and eases employee socialization.

Specific areas where changes could be made in the graphic design and/or information system technology programs at Midwestern Community College based on data collected during this research were observed:

- Determine a way to include global awareness in the day-to-day curriculum. Even though graduates may wish to remain in the rural community, the world of business is more global than ever.
- Add challenge-based learning projects to the curriculum to provide students with the opportunity to identify real-world problems on their own and build a sense of ownership around the learning.

Implications for Policy

According to Midwestern Community College's web site, overall college policy is defined by the board of directors. Policy definition covers a wide variety of subjects, including governance, personnel, students, and community involvement. Recommendations to policy change from this study would fall into the Program category within the board policy. Examination of board policy on program reveals few mandates on what happens in the classroom beyond overall instructional methods and grading. Given that board policy at Midwestern allows for latitude in the classroom, referred to as academic freedom, policy change from a study like this must be handled at a different level.

At Midwestern, specific academic policy is set by an academic board consisting of a mix of administrators and faculty. Some members of the academic board are selected automatically because of their position within the college. An example would be the permanent position on the academic board held for the chief academic officer. Persons in other positions on the academic board are rotated and filled by election. The academic board meets regularly to discuss and evaluate changes in academic direction and program content. The content of this study would be of interest to this policy-making organization.

Based on the data in this study, I would recommend the following academic policy changes:

- encourage faculty to teach research in the classroom,
- embrace the 21st-century skill set,
- promote the use of internships in the curriculum,

- foster additional advisory board participation, and
- expand opportunities to collect feedback from business people and graduates.

The results of this study show the importance of graduates possessing the skills that allow them to research answers beyond what is taught in the classroom. This, in combination with the 21st-century skill set, defines an important facet of the abilities graduates need in the workplace and should, by default, be part of all curriculum. Internships should also be promoted as part of the curriculum as they add real-world experience to the education and ease the socialization of first-time employees. Finally, faculty should be encouraged further to grow the cooperation with business people and graduates as sources of quality input into curricular definition and feedback on programmatic success.

Recommendations for Further Research

In this study, I documented the workings of a case at a rural, Midwestern community college. The case in this dissertation demonstrated how two program areas handled the definition of curriculum and program content with the assistance of local business people. However, once completed, new questions surfaced. The following list includes possible research questions for future studies.

- What happened to graduates that did not find employment in their field of study? Did they not find employment because of their skill set or was it for some other reason, such as the economy, continued education, or personal choice? This could be addressed in a new case study with a design very similar to the study documented here. Purposeful sampling

would again be used to select the participants with the difference being selection of graduates that did not find employment in the field of choice.

- Conversely, what are the thoughts of local business people that could not find graduates to satisfactorily fill open employment? What were their reasons for not employing graduates of Midwestern's program areas? This, too, could be addressed in a new case study with a design very much like the study documented here. Purposeful sampling would again be used to select the participants with the difference being selection of business people that did not find graduates suitable to fulfilling their employment needs.
- How does the size of the business influence the skill set proposed by the advisory board member? Since small businesses tend to require employees with wider job responsibilities, does that influence the input to the definition of competencies? Should the business sizes be balanced somehow on the advisory board? A quantitative study of businesses by size would reveal the answers to these questions.
- What are the thoughts of businesses that are not part of the partnership with the school? Do they see the reasons for business being involved? Would they help if they were approached? A case study of businesses that found little reason to assist in education would address this question.
- What are the differences between career technical programs and arts and science in defining skill sets? What are the differences in teaching? This

should be a hermeneutic study of college web sites, catalogs, program definitions, and other documentation.

- The partnership model proposed by Amey, Eddy, and Campbell (2010) held for this case, even though the model is defined for K12-to-college partnering. Can Amey, Eddy, and Campbell's model be generalized to other cases, too, or does it fit just this one? In what ways does the size of the community or the college affect the model? There are a couple possible approaches to answering this: a case study of a different-sized school or a quantitative regional/national study of schools and their business partners would be appropriate.
- How are the schools addressing the need to teach twenty-first century skills? Are the appropriate skills being merged into the curriculum? Are these skills being taught cross-curriculum or centralized within certain programs? This should be addressed as a review of trends across the country and how schools are approaching this need. Quantitative data would be important here, but a mixed methods approach may address the situation more completely.
- Local employers often assume the roles of adjunct instructors at local colleges. How would the attitudes of employers change toward this topic if they were also adjunct instructors at the college? It would be very interesting to repeat this study exactly as is with the addition of three to four employers that teach or have taught adjunct classes for the college.

Personal Reflections

Wow.

I didn't think I would ever get to this section.

I came into this project with a somewhat preconceived notion as to what the final answer was going to be. In some areas, I was pretty close to being right. In others, I missed the mark considerably.

I knew the importance of advisory boards. I understood how electronic portfolios worked and what made them important to the process of assessment and job seeking. I had a grasp of the concept of hard skills and soft skills.

It seems there were some substantial pieces of this case that I did not know. I knew the knowledge base was changing daily, but I did not know business people around me knew it and endorsed research and life-long learning as important skills in the workplace. I knew employee socialization existed, but I had no idea how it affected our graduates. I knew we were blessed with a good group of partners in the business world, but I was shocked to hear how much they loved us and were willing to do what they could to help us out.

Perhaps the biggest thing I learned was the simplest concept of all. It was something I knew deep down all along, but still could not believe when I started this research. It is so easy now.

There are new things to learn everyday, even in areas you think you know.

I began the methodology section of this paper with a reference to Oldfather and West (1994) and their comparison of qualitative research to playing jazz. I really liked that article. I was a trombone player in an earlier time and I always enjoyed jazz, so when I read *Qualitative Research as Jazz*, I related right away.

What I discovered doing this research and writing this dissertation is that the similarities run very deep. Much like a good jazz musician can take a basic melody and a chord progression and make music “on the fly,” a qualitative researcher can take some interview questions, some archived data, and a pile of literature, and turn it into a never-before-heard melody that tells a story.

Quite exciting.

One final thought.

The title of this document is Creating Employable Graduates. A noble cause for teachers at any level.

It turns out that the formula I have used in the past can use some updates. I was rather proud of the work I had done in education, but now I see that I have to make changes. As Edward put it, “we’ve always got to be migrating” (Edward, personal communication, November 8, 2011). It cannot be a leap into the final product, it is a constant flow. An evolution. And even if we could make the changes in one leap, where would we leap to? The target is always migrating, too. Always evolving.

It seems the bottom line is that as I finish this paper, I am just starting the real work. I know some of the answers now and I know some of the directions I need to take. Now I just need to migrate.

Thanks for the opportunity to discover this. I will never be the same.

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APPENDIX A.
INTERVIEW QUESTIONS

Faculty

- Define the critical skill set required of a graduate. Where did this definition come from?
- How well are graduates prepared to enter the workforce?
- How is the direction of curricular and programmatic content defined?
- Describe your partnership with business. How did it evolve?
- Tell me about the college's benefits from this working relationship.

Business people

- Define the critical skill set required of a new employee.
- Thinking back to the last portfolio review in which you participated, describe the degree of preparedness of the candidates for graduation and for employment.
- How can you influence the preparedness of students?
- Describe your partnership with the college. How did it evolve?
- What benefits have come from working with faculty?

Chamber executives

- How are business/education partnerships beneficial? How could they be more beneficial?
- How can you influence the preparedness of students?

Students

- Tell me about what you do on the job.

- From your experience, describe the process of acclimating to the work environment.
- Describe your degree of preparedness for entry into the job market.
- How were you best prepared for entering the workforce? Least prepared?
- How did you overcome any areas of skills in which you were less than completely prepared?

APPENDIX B.

INSTITUTIONAL REVIEW BOARD

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 9/26/2011

To: Norb Thomes
1103 S 3rd St
Clear Lake, IA 50428

CC: Dr. Frankie Santos Laanan
N225A Lagomarcino

From: Office for Responsible Research

Title: Creating Enjoyable Graduates

IRB ID: 11-386

Study Review Date: 9/23/2011

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b).

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

Figure B1. IRB Approval

APPENDIX C.

INTERVIEW AND MEMBER CHECK DATES

Table C1

Dates of participant interviews, submission of interview transcripts for member checking, and submission of draft dissertation for member checking

Participant	Interview Date	Transcript Member Check	Member Check Distribution	Comments Returned
Alice	10/25/2011	11/2/2011	1/21/12	
Ann	10/14/2011 10/31/2011	10/15/2011 11/2/2011	1/21/12	2/26/12
Ashley	11/2/2011	11/3/2011	1/21/12	
Deb	11/10/2011	11/15/2011	1/21/12	
Edward	10/13/2011 11/8/2011	10/14/2011 11/11/2011	1/21/12	
Elizabeth	10/11/2011 11/1/2011	10/14/2011 11/2/2011	1/21/12	
Francis	11/29/2011	12/1/2011	1/21/12	
Jenn	11/10/2011	11/16/2011	1/21/12	
Joe	10/13/2011	10/14/2011	1/21/12	2/1/12
Laura	11/17/2011	11/23/2011	1/21/12	
Leo	11/14/2011	11/18/2011	1/21/12	
Marie	11/2/2011	11/3/2011	1/21/12	1/23/12
Michael	11/2/2011	11/3/2011	1/21/12	
Paul	11/9/2011	11/15/2011	1/21/12	
Quinn	11/15/2011	11/22/2011	1/21/12	1/22/12
Sophia	11/8/2011	11/11/2011	1/21/12	

APPENDIX D.
PEER REVIEWERS

Table D1

Peer reviewers and dates of peer reviews

Peer Reviewer	Distribution Date	Comments Returned
William Backlin	1/4/12	1/21/12
Dr. Lyn Broderson	2/2/12	
Dr. Debra Derr	2/3/12	
Cindy Fleagle	1/21/12	
Seth Gilbert	1/21/12	1/31/12