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Business-School Partnerships in Career and Technical Education

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BUSINESS-SCHOOL PARTNERSHIPS IN CAREER

AND TECHNICAL EDUCATION

by

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ABSTRACT

BUSINESS-SCHOOL PARTNERSHIPS IN CAREER AND
TECHNICAL EDUCATION

by

Michael E. Trimberger Jr.

The University of Wisconsin-Milwaukee, 2019
Under the Supervision of Professor Dr. Elise Frattura

Public education in Wisconsin has come under harsh political scrutiny in recent years. Schools have been asked to reduce budgets and use the tools provided through legislative changes. The reduction of budgets has not come with a reduction of expectations for our schools. Since 2011, high school principals have been forced to implement Academic Career Plans and ensure that every student graduate college and career ready along with their already comprehensive list of requirements. This study aims to research how some business leaders and school leaders have chosen to answer these new pressures by working together to build partnerships. The research has two primary research questions and five subquestions:

1.   What are the organizational impacts of business-school partnerships?

   a.   What are the factors and conditions that contribute to developing business-school partnerships?

   b.   What constitutes an unsuccessful from a successful partnership?

   c.   By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

What are the educational impacts of business-school partnerships?

   a.   How do partnerships influence the teaching and learning process?

   b.   How do partnerships impact students?

The results from this study present opportunities for future practice, future research, and implications on current practice, for both business and educational professionals.

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CHAPTER ONE: INTRODUCTION

Public education in the state of Wisconsin has come under political attack, as can be observed with the reduction of aid to schools by over one billion dollars in 2010 and 2011 (Varra-Orta, 2017). With these cuts, the state of Wisconsin's public school system has also been forced to operate under some of the most stringent school budgets, as funds for public education are siphoned off to pay for other political priorities (Morello, & Mikkelson, 2017). It is because of examples like this that some schools have turned to their communities for assistance. One school reform effort has been the resurgence of the business-school partnership. For the purpose of this research, a partnership was defined as a continued cooperative effort or agreement for collaboration, that generates ideas or a pool of resources that fit a mutually agreed upon purpose. (Kisner, Mazza & Liggett, 1997). These partnerships could be as minimal as a classroom guest speaker or as elaborate as career integrated academies. No matter the intensity of the collaboration, these relationships could be an important ally to public education as it comes under increasingly harsh political scrutiny (Goldstein 2017).

In difficult financial times, some school leaders have found innovative ways to educate students. To accomplish this goal, schools have found ways to work cooperatively to meet the needs of their community. Partnerships can serve to strengthen, support, and even transform individual partners, resulting in improved program quality, more efficient use of resources, and better alignment of goals and curricula (Harvard Family Research Project, 2010).

In light of these recent contexts and events, business-school partnerships may work as a way to bridge a divide between schools and the communities they serve. Partnerships have the potential for many instructional and financial advantages for students and schools (Hoff, 2001). This research aimed to examine some of the most successful partnerships in the Midwest by

interviewing both school and business leaders to discover how existing business-school partnerships have impacted the organizations and the educational process for students, schools, businesses, and their community.

Background of the Problem

The emergence of the business-school partnership is a phenomenon recently regaining momentum in the United States, and thus is not new in American education. Businesses working to help educate their community have been a theme since the earliest of times. In the United States, some of our nation's most influential leaders, including Benjamin Franklin and John Dewey, worked as apprentices in our country's first business-school partnerships (Stone, 2014). Kisner, Mazza, and Liggett (1997) state that business-school partnerships have been around throughout the 20th century. They maintain that during the first half of the 20th century, businesses were concerned with how schools were operated. At this time, business leaders and educators agreed that schools should prepare students for the world of work.

The Manual Labor Movement (MLM) in the 1830s provided a historical example of how community business leaders attempted to bring needed workforce skills and efficiency into an education system that was dominated by liberal arts. During this time period, most educators had little to no interest in preparing students for work (Lull, 1914). The larger context of the Industrial Revolution and the increase in manufacturing led this movement. The pressure of educational reform specific to career development resurfaced again in 1917 with the Smith-Hughes Act, in 1958 with the National Defense Education Act, in the 1980's with A Nation at Risk and with the subsequent Carl D. Perkins Act and Amendments (NCEE, 1983). Each of these national movements tried to answer the question on how to assist schools while better preparing students for a workforce that needed skilled employees. A consistent concept that

surfaced within each of these movements was the goal for education and business to work together for a more strongly trained graduate that would be more productive in the community (Stone, 2014). This theory of business-school partnership allows students to acquire the skills needed in a changing society while they were still in the secondary school setting (Lankard 1995).

In the early 1980s, the focus on preparing for specific groups of students to join the workforce changed when education in the United States was portrayed as in crisis. This was outlined in the 1983 report, *A Nation at Risk: The Imperative for Educational Reform.* This report was commissioned by President Reagan and asserted that the American education system was failing and was therefore in need of a major overhaul. *A Nation at Risk* found that an "incoherent, outdated patchwork quilt" of classroom learning led to an increasing number of students who were subjected to a "cafeteria-style curriculum", that diluted the course material and allowed them to advance through their schooling with minimal effort (Graham, 2013, p. 2). Some of the conditions in the United States in the early 1980s included the low skill level of entry-level workers within the demands of an evolving economy. With the crisis in education and the demands for a better skilled workforce, all parties needed to work together to accelerate the development of these partnerships (Lankard, 1995).

Schlechty (1991) stated that partnerships between business and education could encourage business leaders to be powerful allies in the school reform efforts. The importance of the business-school partnership is critical, not only for the success of current students, but also for industries and businesses who require a motivated and talented pipeline of young people to drive innovation, as well as for communities that depend on a productive citizenry for their sustainability (JBL Associates, 2016).

Partnerships can impact all stakeholders based on benefits such as, but not limited to, financial contributions, curricular scope and sequence, and an overall positive impact on students. Partnerships bring financial and human capital to schools that enhance a school's ability to provide quality education. While partnerships are not focused on the financial component, additional funding to schools is a valuable part of a partnership program. A company's financial support of a school can enable students to have experiences they otherwise would not receive (PIE, 2016).

The business-school partnership is not celebrated by all. Kozol (2005) revealed just how much the role of business has infiltrated American schools, in a discussion of how students are being referred to as investments, assets, or productive units, who—if not developed accordingly—threaten American competitive capacities. Kozol said, "Admittedly, the economic needs of a society are bound to be reflected in some rational degree within the policies and purposes of public schools but one should be cautious" (2005, p. 94).

Business-school partnerships have the potential to impact students. Some researchers believe partnerships can be positive, while other researchers warn about the dangers. Partnerships can change the life experience of a young person in ways that may not always be quantifiable measurable, but in ways that certainly provide an impact (JBL Associates, 2016).

Statement of the Problem

The purpose of this study was to explore and identify the necessary skills, knowledge, and motivational factors that school and business leaders possessed in creating partnerships between schools and the business community. This research added to a limited body of knowledge that exists to investigate the impacts of business-school partnerships. One of the goals of this study was to gather information that could ultimately provide guidelines for others

to follow. Research in the area of business and school partnerships will also assist school districts and postsecondary institutions design professional development programs that can assist the building of partnerships. Additionally, this study can help business and school leaders find diverse ways in which they can positively partner with businesses in their community. The power of partnerships in a 21st century high school can be transformational for the partners (Cavanagh, 2013). This study provided original data and research from experienced business leaders and school administrators on the topic of business-school partnerships.

Purpose of the Study

The purpose of this qualitative cross-case study was to examine collaboration between high schools and employers in the area of manufacturing as it related to career technical education. This research was completed with some of the most successful partnerships that reside within one of the states withing the Midwestern States of America. The researcher conducted interviews with business leaders of manufacturing and their school partners. The cross-case analysis searched for themes and patterns that occured across each of the individual experiences.

The use of cross-case analysis enabled the case study researcher to delineate the combination of factors that may have contributed to the outcomes and enhanced the researchers' capacities to understand how relationships existed among different groups (Ragin, 1997). The initial focus was on full understanding of individual case studies before those unique cases were combined and aggregated thematically (Patton, 2009).

The definition of case study for the purposes of this research was "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2009, p. 13). The case study approach allowed for research focused on discovery, insight, and understanding, from

the perspectives of those offering the greatest promise of making significant improvements to the knowledge base and practice of education (Merriam, 1998). Lastly, Patton's (2009) focus on qualitative research design was a guide to the design of this study.

The phenomenon of interest unfolds naturally in that it has no predetermined course established by and for the researcher such as would occur in a laboratory or other controlled setting. Observations take place in real-world settings and people are interviewed with open-ended questions in places and conditions that are comfortable for and familiar to them (p. 39).

Research questions are the narrowing of the purpose statement to help define the specific questions that the research seeks to answer (Creswell, 2015). For this study, the research questions were the foundation that focused on the perceptions of the individuals that created and sustained the business-school partnerships.

Research Questions

1. What are the organizational impacts of business-school partnerships?

    a. What are the factors and conditions that contribute to developing business-school partnerships?

    b. What constitutes an unsuccessful from a successful partnership?

    c. By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

2. What are the educational impacts of business-school partnerships?

    a. How do partnerships influence the teaching and learning process?

    b. How do partnerships impact students?

To investigate these questions, a qualitative study was used. The qualitative approach was utilized because these designs are naturalistic, to the extent that the research takes place in natural settings and the researcher does not try to manipulate the phenomenon of interest (Patton, 2009). This design was also selected because the researcher was a public school administrator, and was interested in observing how partnerships could influence the teaching and learning process. The National Center for Research Methods (NCRM) in (2016) suggested that dissertation students should choose a setting in which they are already members, know the people, and are familiar with the location (NCRM, 2016).

Significance of the Study

After an examination of available research on business-school partnerships, a gap was noted in the literature with regards to the impact, framework, and implementation of this type of relationship. The purpose of this study was to provide research-based evidence that shared insights between participating schools and their partners in businesses. A successful business-school partnership should impact both institutions in a positive manner. This study looked at the impact both on the organizations and on the educational processes with hope to give insignt to future business and school leaders on how partnerships could be formed.

This study will be beneficial for businesses as the demand for skilled employees in the U.S. exceeds supply by three million workers (Warner, Gates, Christenson, & Kiernan, 2008). As many industries are looking at how to replace their aging workforce, they need to find different ways to produce a highly-skilled workforce that will positively impact their organization. The business-school partnership might be one tool to help fill this skills gap.

Overview of the Literature

The literature review is divided into four sections. Section one addresses the literature regarding the history of career and technical education. Section two focuses on the literature

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regarding lessons abroad and the successful school reforms in both Germany and Finland. The third section presents literature regarding the historical overview of partnerships in education. Section four entertains the literature regarding why business-school partnerships are more important now than at any other time in the history of the United States.

History of Career and Technical Education

Viewing career education through the lens of school reform provided a chronology from the implementation of vocational education to the current incarnation of Career Technical Education (CTE). Throughout history, we found examples of how business strived to sway education to be less focused on liberal arts and more focused on skill preparation. Kisner, Mazza, and Liggett (1997) stated businesses were concerned with how schools were operated, and during the first half of the 20th century, business and education agreed schools should prepare their students for the world of work. The Manual Labor Movement in the 1830s was a time in history where business leaders formally started working with schools. It was their attempt to build partnerships that allowed students to gain work skills and experience as they introduced students to the job site. It was the goal of industry to start shaping the workforce of the future while students were still in high school. This movement surfaced again in 1917 with the Smith & Hughes Act, in 1958 with the National Defense Education Act, and yet again with the 1983 report, *A Nation at Risk* (NCEE, 1983).

International Examples of Successful Business-School Partnerships

With nearly 200 years of national educational movements, politicians and educational policymakers have endlessly attempted to reform the U.S. public school system. The United States is not the only country that has dealt with these pressures. In countries like Germany and Finland, there are examples of school systems that responded to the pressures of workforce

development much differently. In each of these countries, school systems and business are working in conjunction to better prepare their graduates for workforce readiness.

If one looks at U.S. high schools through a comparative lens, we can see other advanced nations take a different approach to career education in their public schools. In Austria, Denmark, Finland, Germany, the Netherlands, Norway, and Switzerland, after grade 9 or 10, between 40 and 70 percent of young people opt for an educational program that typically combines classroom and workplace learning over the next three years (Symonds, Schwartz, & Ferguson, 2011). The shift away from learning predominantly occurring in the classroom to a hybrid system of classroom education applied to occupations is referred to as "work-based learning" (WBL). These WBL opportunities are one of the most significant differences between education practices in the United States as compared to our European counterparts. A high-quality work-based learning program does not place college and career readiness into separate silos, but instead connects rigorous academic classroom learning with vocational coursework that merges in-classroom experiences with industry-related opportunities. (Rogers-Chapman & Darling-Hammond, 2013). In countries that do this well, youth unemployment tends to be lower, it takes less time for young people to get and keep good jobs, and economic competitiveness is higher (OECD, 2011).

In the past ten years, Finland has become the global model for school reform. The Organization for Economic Co-operation and Development (OECD) reported that Finland had the most literate students in the world. In 2000, the students in Finland outscored all other industrialized countries on the Program for International Student Assessment (PISA) given by OECD every three years. Finland had done so through a system of rigorous compulsory education and experiential secondary schooling that connected what they learned to career opportunities (Salhberg, 2007).

Partnerships Outside of Education

To create a school system that integrated career-based experiential learning was difficult. To successfully do this, there needed to be collaboration within the community. There are many examples where public institutions have worked together to build stronger communities. The concept of partnerships was not isolated to education. There are many successful examples of business-school partnerships in the United States. Austin (1998) stated that cities cannot be rescued without business, but business cannot do it alone. Business, government, and civic organizations must work collaboratively to bring about effective community-based change. Resources and commitment must be mobilized from all fronts so that optimal synergies can be captured.

Historically, there has been a call for partnerships in the area of healthcare. Wildridge, Childs, Cawthra, and Madge (2004), stated we live in a global society; it is no longer appropriate for organizations to work in isolation. Within the public, private, and voluntary sectors, the need for partnerships working cross-sectorial or beyond the boundaries of that organization, is vital to success for all. This success is not only important to the partnering organization but important to the people the partnerships serve. Connor, Simcox, and Thomisee, (2007) state that social responsibility and leadership frame the community partnership model. The interdisciplinary team members gain skills that help them work in partnership with communities to deliver health care services in low-resource settings and become stronger health care advocates for at-risk populations. This fact is found in requirements of many of the federal grants, which award money to programs that work best in a collaboration with others. The basis of these partnerships is premised on the theory that increased collaboration with multiple stakeholders will lead to increased care for some of our most underserved population (Lasker, Weiss, & Miller, 2001).

Why Partnerships Now

With the combination of decreased birth rates, expected leaps in technology, and the accompanying shifts in necessary qualifications for workers, there are indications of a serious skill shortage threatening the competitiveness of Western industrialized economies (Nijhof & Brandsma, 1999). To assemble the workforce that a nation needs in order to thrive, policymakers, educators, and businesses will need to collaborate to build more paths for students to climb the ladder to success (Bridgeland, Milano, & Rosenblum, 2011). As can be easily seen, this importance is not just critical for the students, but also critical for businesses to continue to grow in the United States. The education of young people is a project that the entire community needs to address. It is critical for the success of the many students who sit in classrooms today, for industries and businesses who require a motivated and talented pipeline of young people to drive innovation, as well as for communities that depend on a productive citizenry for their sustainability (JBL Associates, 2016)

Assumptions, Limitations, and Delimitations

Limitations are potential weaknesses or problems with the study identified by the researcher. These limitations help readers to judge the extent to which the findings can or cannot be generalized to other people and situations (Creswell, 2008). Researcher bias is defined as "the selection of data that fit the researcher's existing theory or preconceptions and the selection of data that 'stands out' to the researcher" (Maxwell, 2005, p. 108). One important limitation to note for this study was the pro-partnership bais of the researcher. As an archetect of multiple successful business-school partnerships that have been recognized at the local, state, and national level, I have a history with business-school partnership. This will be a potential weakness of the study. While familarirty with this topic allowed access to the seven most successful business-

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school partnerships as assessed by this research, it is important for the reader to know my history is a foundation of this research. This fact shows a high probability bias and is an unavoidable limitation of this study.

As a school administrator that has been personally and professionally recognized and rewarded for work with business-school partnerships, preexisting relationships with others passonate about this topic was also a limitation. Another important note for the reader to consider is that previous realtionships did exist with some of the individuals interviewed for this study. Over the course of building multiple business-school partnerships, many relationships were formed. Some of the partnerships that were identified as successful included leaders that I had a relationship with before the study began. With the extensive work across the studied region on business-school partnerships, the professional relationships with business leaders and other school administrators could have led to predetermined assumptions. To combat bias, the researcher was open and honest with the potential of bias, and conducted the research in a way that consciously reflected on the actions and interactions. This was done with repeated reminders, like notes on the interview material, to continually keep the possibility of bias at the forefront of thought.

Another limitation to this project included the geographic area that was the focus of this research. Located in a Midwest state, the specific area researched was a hub for manufacturing, with a majority of employment located within this area. According to the Bureau of Labor and Statistics Report in 2014, in some of the counties in which a number of individuals were interviewed, over 50% of the area occupations were connected to manufacturing. This was a deciding factor in using manufacturing as the sector to study business-school partnerships.

Conclusion

This study explores and identifies the necessary skills, knowledge, and motivational factors that school administrators and business leaders possessed in creating partnerships between schools and the business community. This research adds to a limited body of knowledge that exists to investigate the impacts of business-school partnerships. Outcomes from this study will provide useful information that may allow others to identify partnerships between schools and the businesses in their community. This research assesses the impact to each organization while also looking at impacts to the educational processes. In the end, both school and business leaders will have more information on how business-school partnerships may impact their schools, businesses, students, and community.

This research study has five chapters. Chapter One provides the problem statement, the purpose of the study, as well as the significance, assumptions, limitations, definition of terms, and theoretical framework used to guide the research. Chapter Two provides a historical perspective of career education in high school, while also providing relevant research in the literature for partnerships in the United States and abroad. Chapter Three discusses the research design, setting and participants, instrumentation, procedure, data processing and analysis, ethical considerations, and limitations of this cross-case analysis. Chapter Four presents the findings, and Chapter Five discusses the results and implications of this research.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

This study explored and identified the necessary skills, knowledge, and motivational factors that school administrators and business leaders possessed in creating partnerships between schools and the business community. This research added to a limited body of knowledge that existed concerning the impacts of business-school partnerships. To thoroughly examine the potential of these partnerships, it was imperative that this review examine the history that informed current-day conditions. For the purpose of this study, this literature review examined the research by looking into the past, to help inform possibilities for the future.

This literature review is divided into four sections. Section one addresses the literature regarding the history of public education, including the beginnings of career and technical education (CTE) in schools today. Section two deals with the literature regarding lessons abroad and the school reforms in both Germany and Finland. The third section presents literature regarding the historical overview of partnerships. Section four includes literature regarding current economic and labor force conditions that might have been of assistance to the business-school partnerships.

History of Career Technical Education

The Awakening (1776-1826)

The idea of educating students for specific careers and positions is something that is not new in public education. Soon after the Revolutionary War, the newly formed states struggled to organize what would soon become the American Public School System. The use of work-based learning was one of the initial modes of education, and apprenticeships are one of the earliest of education models, used generously by ancient nations like Grece and Rome. Apprenticeships in

colonial America was one of the fundamental modes of education for the time period (Barlow, 1976). Since the creation of the American Public School System, educators have used business to educate youth with approaches like on-the-job trained students.

Unfortunately, for the growing demand of the public education system in the newly formed colonies, there were very few educational blueprints to help the new nation expand its public school system. As the country found economic success and prosperity, employers, as well as educators, started to find solutions that addressed the educational and workforce needs in vocational education. In the 1830s, the United States education system had a brief movement focused on vocational education. "Vocational" education was defined as organized educational programs that offered a series of courses, which were directly related to the preparation of individuals for paid or unpaid employment in current or emerging occupations that required a degree other than a baccalaureate or advanced degree (Perkins, 1990).

Skilled Manual Labor Movement (1826-1876)

The period between 1826 and 1876 was referred to as a time of "independent action" (Barlow, 1976). It was referred to this because the manual labor movement in the United States was the first push for organized vocational education. It was distinctly a secondary movement and it was the first trial run that combined classroom instruction with work-based learning in the United States (Lull, 1914). The manual labor movement existed predominantly in the secondary and higher education arenas, but there were few if any instances of successful models. The movement was short-lived, lasting from roughly 1830 through 1845. It failed because of a myriad of reasons; but ultimately, it failed because of funding. At these schools, pay for students' work in the fields or in the trades was expected to cover the cost of their living along with the cost of their tuition (Clarke, 1892). The structural melding of instruction and work-

based learning was born in the United States, but it was not cost effective for the businesses that called for them. The work of students was not viewed as productive enough to be worth the investment of industry.

The Vocational Education Age Emerges (1876-1926)

The social and economic need for a technically trained workforce helped the American school system learn from the manual labor movement. During the period of 1876 and 1926, the United States experienced major industrialization and needed a trained workforce. Fortunately for business the population was transforming, as large numbers of immigrants came to America. This population boom changed public schools and many historians argued that during this time the American high school was transformed into an entirely new educational institution (Angus & Mirel, 1999, p. 53). Enrollments in high school increased dramatically. Aggregate secondary enrollments were estimated in 1900 to be 700,000 students; by 1930 that number had jumped to over 4.8 million. Angus and Mirel believed that this boost in student enrollment provided the opportunity to expand vocational curriculum in the high school and filed the need of a technically trained workforce (Angus & Mirel, 1999). America was in desperate need of an army of technically trained individuals to continue economic growth. The population boom provided the bodies, but curriculum and instruction was still needed.

Initially, the intentions of vocational education were to promote the capacity to earn a living or, expressed in more social terms, the capacity to do one's share of the productive work of the world (Snedden, 1910). The economic need combined with the population boom made the climate right for the country to pass the first legislation on vocational education.

The group that collaborated to pass the Smith-Hughes Act of 1917 included laborers, manufacturers, a professional educator, and two political parties, who put aside their differences

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to build a coalition that created the first ever Federal legislation on vocational education (Hillison, 1995). The work of this eclectic group of professionals helped create the first authorization of federal funding for vocational education in American Public Schools. The intent of the Smith-Hughes Act was to separate vocational students from those in the classical curriculum to prepare them for factories, farms, and homes of the era. It was intended to help students that were not going to college, to prepare for careers that would not require a four-year degree (Wonacott, 2003). The presidents and CEOs of industry supported this interest in vocational education nationally because they desperately needed people in their shops.

Politicians supported the legislation in attempts to assist their constituents and some believe the Smith-Hughes Act was also passed with a close relationship between vocational education and national preparedness, as many of our congressional leaders prepared to enter into World War I (Gordon, 1999, p. 103).

In a position created by the Smith-Hughes Act, Charles Prosser served as the first federal commissioner for Vocational Education. He is commonly referred to as the father of U.S. vocational education (Barlow, 1976). Not surprisingly, Prosser's vocational education was not celebrated by all in education, as supporters of traditional education philosophy did not receive this addition to education positively (Oakes, 1985). As a result, there was much discourse about vocational education in public schools. The proponents of vocational education maintained that the Smith-Hughes Act expedited the process, already begun, toward establishing widespread, quality vocational education in the secondary schools. This resulted in the availability of meaningful, relevant, and practical curricula for non-college bound students (Smith & Hughes, 1917). On the other hand, many of the opponents argued that, "The end result was to segregate

academic teachers and their students from vocational teachers/students to strengthen the social alienation between these two groups" (Hayward & Benson, 1993, p. 39).

Dewey (1859–1952), who would later be remembered as the father of progressive education, was the most eloquent and arguably most influential figure in educational progressivism (Progressive Education, 2018), wrote extensively on the topic of vocational education. Among his concerns, Dewey was concerned that the incorrect establishment of vocational education could create a two-class system of education.

> The question of vocation in education brings to focus the general opposition to recognize the vocational phases of life in education. There is a movement on behalf of vocational training which, if carried into effect, would harden these ideas into a form adapted to the existing industrial regime. This movement would continue the traditional liberal or cultural education for the few economically able to enjoy it, and would give to the masses a narrow technical trade education for specialized callings, carried on under the control of others (Dewey, 1916, p. 373).

Dewey feared that segregated vocational education focused on industrial education might serve the business community who wanted docile workers (Dewey Society, 2018). With his many concerns with vocational education, he seemed to believe that education was always more vocational in fact than in name.

> In the beginning, it was called an apprenticeship rather than education. The schools devoted themselves to go through the forms of reading, writing, and figuring as were common elements in all kinds of labor. Taking part in some special line of work, under the direction of others, was the out-of-school phase of this education. The two supplemented each other; the school work in its narrow and formal character was as

much a part of an apprenticeship as that explicitly so termed education (Dewey, 1916, p. 364).

He seem to believe that vocational education was always a part of formal education but cautioned that the selection of educational materials and the technique of the trades should not be for the sake of producing skilled workers, but for the sake of securing industrial intelligence to allow the individual to make his own choices and adjustments and be in control of his own economic fate (Dewey, 1916).

Although supportive of properly integrated vocational education, Dewey opposed any type of dual school system. He believed that a dual system of education was dangerous for the future of any democracy. The dual system would strengthen class divisions whereas an integrated system would do more to strengthen democratic ways of life (Dewey, 1913). Dewey states,

> Reorganization of existing schools will give pupils a genuine respect for useful work, the ability to render service, and a contempt for social parasites whether they are called tramps or leaders of "society." Instead of assuming that the problem is to add vocational training to an existing cultural education, it will recognize frankly that the traditional education is largely vocational, but that the vocations which it has in mind are too exclusively clerical. It will make much of developing motor and manual skill, but not of a routine or automatic type. It will rather utilize active and manual pursuits as the means of developing a constructive, inventive and creative power of the mind (Dewey, 1916, p. 358).

As a progressive, even in the early 1900s, Dewey was able to see how science was changing education, "industrial life is now so dependent upon science and so intimately affects

all forms of social intercourse, that there is an opportunity to utilize it for development of mind and character" (Dewey, 1916).

Dewey and others, including author Aitchison created much discourse about vocational education. "Educators have long lamented the critical condition of the liberal arts in the United States, arguing that the ever-increasing pressure placed on schools to serve the marketplace has undermined the true meaning and value of liberal education" (Aitchison, 2015, p. 1). Many educational experts accused vocational education of tracking students. Students of poverty would be enrolled in vocational education while privileged students enrolled in liberal arts courses. In the book, *Keeping Track*, Oakes (1985) writes many educational scholars agreed the underlying function of vocational education was to segregate poor and minority students into occupational training programs in order to preserve the academic curriculum for middle- and upper-class students.

Coming of Age (1926-1976)

Progress through the 20th century did not ease scholars' weariness of career education in schools. That all changed on October 4, 1957, when the Soviet Union became the first nation to reach space. *Sputnik I* changed the world's outlook on America's dominance and caught the United States' public off guard. This perceived national failure made the country re-evaluate its educational system. Many policy makers pointed to an educational system that was designed for a nineteenth century economy, where academic subjects are taught separately and little emphasis was placed on vocational skills. The launch of *Sputnik I* ignited a space race between the U.S. and the U.S.S.R. and helped initiate a transformation of American education with the passage of the National Defense Education Act (NDEA) in 1958 (LaFollette, 2011).

In 1958, proponents and supporters of the National Defense Education Act (NDEA) helped perpetuate the idea that all students needed to go to college. The enactment of the NDEA infused large sums of money into the American Public Schools. This encouraged students to study math, science, computer technology, and foreign languages, and thereby allowed the federal government to ever so benignly, create a roadmap for America's Public Education System. This act helped perpetuate the now one-size-fits-all college-readiness agenda. It also began to change the nation's academic landscape and made it tougher to find funding for career education in schools (Stone, 2014).

Even before the National Defense Education Act could be fully implemented, we see another societal movement impacting schools. Large sums of federal money from the NDEA caught the attention of the Civil Rights movement. To ensure all students were equally funded, the Vocational Education Act of 1963 was passed and the federal government again increased their influence on schools by setting regulations that ensured students of poverty and students with disabilities were properly educated. Amendments to the original Vocational Education Act in 1968 and 1972 reinforced this paradigm shift, wherein the federal government ensured students who were disadvantaged were served in regular vocational education programs (Lynch, 2000).

By the 1970s, we start to see vocational education evolve and branch into two separate definitions. Marland (1971) helped to define the two distinct paths of the once myopic view of vocational education. In his definition, career education was for all students; vocational education was for students who wished to acquire skills for a particular job or job cluster. He stated that career education spanned early childhood and adulthood; vocational education usually begins no sooner than grade 10 (Clements, 1977). This definition continued with, "Career

education emphasizes unpaid and paid employment; vocational education emphasizes paid employment in jobs that require training at less than the baccalaureate degree" (p. 1). At the time, both educational experts and vocational teachers seemed to agree with the principles that career education works with representatives from a wide spectrum of occupations and at all skill and professional levels; and tht vocational education works with people who represent the trade area being taught (Clements, 1977). This distinction is important since it was the first time career education starts to evolve from the traditional vocational education into what is now known in most high schools as career technical education in the American Public School System.

Modern Era of Career Technical Education (1977-Present)

The National Defense Education Act and Vocational Education Act had not impacted public education in the manner that was hoped by its proponents. The stigma that vocational training was only for disadvantaged students continued. In 1950, the proportion of fulltime vocational students was 24.2 percent of all secondary students; by 1965 the portion had dropped to 19.2 and in 1975 less than 17 percent of high school students were considered fulltime vocational students (Benavot, 1983).

This marked a time in educational history where society as a whole started to look at post-secondary college as the primary path for student career learning. According to Carneval, director of Georgetown University's Center on Education and the Workforce, by the 1980s the increase in need for skilled workers in the workplace outpaced the skills of most high school graduates. Business viewed high school vocational education programs as obsolete. Employers began looking for a more educated workforce and started looking at higher education for the solutions to their workforce need. This shift, in theory, can be viewed in the 1983 report, *A*

Nation at Risk: The Imperative for Educational Reform. This report, commissioned by President Reagan, asserted that the American education system was failing and needed a major overhaul.

A Nation at Risk found that an incoherent, outdated patchwork quilt of classroom learning led to an increasing number of students who were subjected to a cafeteria-style curriculum that diluted the course material and allowed them to advance through their schooling with minimal effort (Graham, 2015, p. 2).

This focus on public education helped highlight the need for a vocational education overhaul. In 1984, Congress passed the Carl D. Perkins Vocational Education and Applied Technology Act (Lynch, 2000), setting in motion the largest overhaul of vocational and career education since the Smith-Hughes Act. Perkins addressed the need for technology in the classroom with an overall retraining of America's workforce (LaFollette, 2011). This law had eight priorities:

- coordination of development of national goals and priorities on the basis of national needs;

- promotion of research, development, and demonstration activities and the dissemination of information for the improvement of all education;

- promotion of equality, equity, and accessibility to education for all;

- provision of financial support for the services designed to serve special populations;

- provisions of financial assistance to the needy postsecondary students for their education;

- provisions of assistance to reduce the impact upon local and State educational agencies of the results of Federal policies or actions (such as energy boom-towns, refugees, and undocumented workers)

- encouragement of educational programs which develop our human resources to meet economic, defense, and other national needs; and

- implementation of an effective Federal role in education through a Department of Education, acting as a center for the interpretation of laws, for meeting national needs, for setting priorities, and for distributing Federal support for education (98th US Congress, 1983).

The Perkins Act helped combine the goals of the National Defense Education Act and the Vocational Education Act with a major focus on vocational education. This Act also further protected the needs of students with disabilities. In Perkins, there was added attention to a group of students referred as "special populations." The definition of special populations referred to students in the area of: handicapped, single parents, displaced homemakers, economically-disadvantaged students (including foster children), academically disadvantaged, English-language learners, and gender equity (Perkins, 1984).

Subsequent acts took the goals of Perkins I further. Perkins II called for programs to develop "the academic and occupational skills of all segments of the population. The purpose will principally be achieved through concentrating resources on improving educational programs leading to academic and occupational skills competencies needed to work in a technologically advanced society" (Perkins, 1990, p. 7). Perkins II also introduced the concept of Tech Prep. Tech Prep was intended to be used as a tool for educational reform to link vocational education with academic instruction at the postsecondary level. Tech Prep was a series of diverse

educational pathways that provided students with focus, foundation, and contextual learning experiences. The goal of Perkins II was to engage students with career-focused programs that allowed them to achieve their career goals while still in high school. This theory was guided by the principle that core academics and technical skills are the foundation of success in all occupational fields. The contextual teaching environments of Tech prep would enhance the student's ability to discover meaningful relationships between abstract ideas and practical application (Perkins, 1990, p. 7).

Perkins III (1998) continued the goals of Perkins II and the program improvement expectations of Perkins I. The federal government continued their focus on academics, vocational, and technical skills of students. Much of the funds for special population had been removed by Perkins III and pushed to the States to provide those services. Perkins III required that each state provide data on the four core indicators of performance: (1) attainment of academic and vocational technical proficiencies; (2) attainment of a secondary degree, diploma, or General Education Development Certificate; (3) placement in, retention in, and completion of postsecondary education or advanced training placement in military service, or placement in employment; and (4) participation in and completion of programs that lead to nontraditional training and employment (Lynch, 2000).

Statistics show that the goals of Perkins I and of all of the amendments were overlooked in public education. As some laws were passed to increase career education, other laws rated schools increasingly by standardized test scores in reading and math. Even as legislation was being passed for career and technical education, school officials diverted funding from career education classes to increase the focus on preparation for standardized assessments (Stone, 2011). According to Stone (2011), the Director of the National Research Center for Career and

Technical Education (NRCCTE) at Southern Regional Education Board (SREB), by the late

1990s vocational education had a major image problem. Vocational programs had become a kind

of dumping ground for kids who weren't succeeding in the traditional academic environment.

Vocational education programs included students with behavior challenges and students with

learning disabilities. In many school districts, vocational education was not much more than a

secondary placement for students with special education needs (Hanford, 2014). For those

reasons and others, students stopped enrolling in vocational education. According to the

National Center for Education Statistics From 1982 to 1994, there was a general decline in the

participation of high school students in vocational education. The average number of vocational

credits public high school graduates earned decreased over the period studied, as did the

percentage of graduates completing a sequence of related occupational courses (Levesque &

Nelson, 2000).

By 2001, the standards and accountability movement had solidly taken hold in public

education. In 2001, Congress passed the No Child Left Behind Act (NCLB). In exchange for

federal education funding, this law required states to test their students every year, with the goal

of proficiency in the areas of math and reading for all students. No Child Left Behind also

applied to students that were enrolled in career education classes. Since students in these courses

consistently scored low in the areas of math and reading, the expectation was clear that career

education courses must incorporate and increase the rigor in the area of core academics, or be

dismantled (Hanford, 2014).

In response to the pressures of NCLB, education policymakers adjusted vocational

education. In the fall of 2006, the Carl D. Perkins Career and Technical Education Improvement

Act IV was signed into law. The intention of Perkins IV was to strengthen the focus on

responsiveness to the economy, while tightening up the accountability statement in regards to the integration of academics and technical standards (Perkins, 2006). The Act helped define the role of career education. This Act's first edict was to retitle vocational education to "Career and Technical Education (CTE)", and was given a new definition. Perkins IV promoted the development of courses and activities, integrating core academics with career and technical instruction. The education policymakers who wrote and developed Perkins IV intended to prepare more students for high-skill jobs in high-wage occupations, while bringing academics into these course areas (Perkins, 2006).

Implementation of Perkins IV changed the vernacular of vocational education. Congress replaced the term "vocational education" with "career and technical education" (CTE). Other terms which shaped CTE were incorporated as well, including the terms—career cluster, pathway and program of study (Perkins, 2006).

By 2009, public schools started to produce a different type of graduate. The college and career ready graduate was a well-rounded student that graduated from high school possessing both training in a specific profession as well as academic, college preparatory coursework (Sullivan, 2012). The president of the United States mentioned this focus on career and academic preparation in his 2009 State of the Union Address:

> I ask every American to commit to at least one year or more of higher education or career training. This can be community college or a four-year school; vocational training or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma" (Obama, 2009).

As the president of the United States of America, this comment again pressured schools to change their definition of a successful graduate.

One of the most profound statements on changing the American public school landscape came out of Harvard and is an impetus for this research project. "Developing a system that provides every young person with high-quality pathways to adulthood will require that we make a leap forward in the collective responsibility we assume for the education and training of our young people" (Symonds et al., 2011, p. 34). With this white paper, the push for career pathways gained steam. Career pathways are defined as a series of connected education and training programs that enable individuals to secure employment within a specific industry or occupational sector, and to advance over time to successively higher levels of education and employment in that sector (Jenkins & Spence, 2006). The elements of quality career pathways include the following:

- An introduction to career opportunities in a region's high-wage, high-demand employment sectors,
- The basic skills needed to succeed in postsecondary education and training,
- A transition to entry-level skills training internships and employment, and
- Continuing upgrade training Social supports throughout as necessary (Alssid et al., 2002, p.10)

According to Symonds (2011), this ideology of education would send students a strong message that our society has a real stake in their success, and that they have a real choice about how to shape their future. Career pathways would connect the needs for rigorous academics along with career training in secondary schools. Some of the challenges cited for this shift included: the resources needed to meet all the demands of implementing pathways; overcoming the cultural differences that exist between secondary and postsecondary institutions; navigating the relationships and priorities between core academic and CTE teachers with the business world (Stone, 2011).

In Wisconsin, this push for a college and career ready student was found in the Sullivan Report, commissioned by Governor Walker in 2012. Sullivan states, "As a country, we cannot continue to educate students for opportunities that do not exist. We need to provide pathways for students to lead productive lives if we are to keep the American Dream alive" (Sullivan, 2012, p. 27).

The laws and amendments of the Carl Perkins Acts and the proliferation of career pathways changed how educators thought about CTE courses but the problem with student enrollment in these areas continues today. Hurst and Hudson published data stating that, between the years of 1982 and 1998, students enrolled in a vocational track had declined from 34 percent to 25 percent. During this same time, students enrolled in a college preparatory track increased from nine percent to 39 percent (Hurst & Hudson, 2001). More recently, we see this continued downward trend with the 2010 National Center for Educational Statistics report showing a substantial decline in student participation in CTE classes over the past two decades (from 41% in 1990 to 19.1% in 2009) (USDOE, 2010).

Levesque and Hudson (2003) found that although CTE attempts to appeal to a wide range of academic performers, those students from the highest academic achievement groups were less likely to be in a CTE concentration. As we look at the students that enroll in CTE classes we see that students with lower GPAs generally complete more vocational credits (USDOE, 2000). In reference to income level, Campbell (1986) found that a higher proportion of low socioeconomic students are enrolled in CTE. "The typical CTE student performs somewhat lower academically, lives less often with both parents while more commonly residing without either parent present, and is more economically disadvantaged" (Palmer, 2007).

CTE is often referred to as the poster-child of tracking (Noddings, 2011). Some of the stigmas of tracking in CTE courses can be traced back to the beginning, when Prosser argued that separate ability tracks are beneficial for lower achieving students because they provide relevant skill training and better preparation for students facing blue- collar employment (Prosser, 1925). Critics maintain that CTE classes encourage tracking students into vocational classes, which lead to lower-paying vocational careers and less interest in a college education (Tozer, 2013). This perceived tracking of students is blamed with perpetuating the differences between the haves (business owners, executives, etc.) and the have-nots (vocational workers, factory workers, etc.) (Crawford, 2009).

The concerns of lower rigor in CTE classes have become a self-fulfilling prophecy, resulting in a system that tracks students based on ability into higher or lower rigor programs (Sciacca, 2017). According to Sciacca, the belief among students, parents, teachers and school counselors is that CTE classes could have a negative effect on higher achieving students. His perception stemmed from a variety of factors including the pre-existing stigma of vocational education, lower levels of rigor with CTE classes, and the belief that CTE class enrollment would have a negative impact of admissions into highly selective colleges and universities (Sciacca, 2017)

Although tracking most often puts lower achieving students at a disadvantage, tracking higher achieving students away from CTE classes creates a skill deficit for these students in the areas of hard skill development, practical experience and knowledge application (Castellano, 2012). Today, college-bound high school students are separated into advanced placement, international baccalaureate (IB) and honors classes (Gamoran, 1992). Situated learning theory suggests that steering higher achieving students away from CTE classes is disadvantageous

because it deprives them of exposure to situated cognition that takes place frequently in CTE classes (Taylor, 2004).

This concentration on bringing lower performing students up to a minimum proficiency standard has created significant disadvantages for higher achieving students (Loertscher, 2010). The perceived rigor and relevance of CTE classes have a significant effect on course enrollment patterns on both higher and lower achieving students. CTE courses still hold the stigma of vocational education and are considered irrelevant by a majority of higher achieving students and parents.

Career and technical education (CTE) has gone through many changes. With over 100 years of laws, research, and commentary on vocational/CTE courses, there are areas of successes and areas in need of improvement. These courses need an effective rebranding effort that alters student enrollment patterns. Rebranding a traditional CTE class into an International Bachelorette (IB), CTE or pathway class validates the curriculum and removes many of the perceived enrollment barriers of higher achieving students (Sciacca, 2015). The new narrative for education and business is that schools need to work in unison with their community to increase the skills of our country's workforce. "This time around, educators and employers need to collaborate with the job market in mind, so that we do not produce students that are ill-suited to enter the workforce" (Sullivan, 2012, p. 38). Though the concept and ideas are logical, the introduction of career pathways is transforming the way administrators, parents, and students view career and technical education. This will only be accomplished by promoting stronger relationships between business and vocational education (LaFollette, 2011). Fortunately, there are models that can be examined. Career development in public education is not a new

phenomenon. For decades European countries, such as Germany and Finland, have used this concept of education to graduate college- and career-ready students.

Lessons Abroad

The review of the literature found how other developed nations prepared their youth in the secondary setting. In some of the countries reviewed, there was a wealth of empirical data that showed how their students were doing better academically when compared to the United States. According to an international assessment of 15-year-olds, PISA ranks the United States of America within the 34 OECD countries. The United States performed below average in mathematics in 2012 and was ranked 27th. Performance in reading and science were both close to the OECD average. The United States ranked 17th in reading and 20th in science (OECD, 2011). If one looked at the United States' high schools through a comparative lens, there was a noticeable difference: most advanced nations placed far more emphasis on vocational education than the United States. In Austria, Denmark, Finland, Germany, the Netherlands, Norway, and Switzerland, after grade 9 or 10, between 40 and 70 percent of young people opt for an educational program that typically combined classroom and work-based learning over their final three years (Symonds et al., 2011).

> Work-based learning consists of integrated academic and vocational courses that focus on a career area or industry with links to postsecondary education. Partnerships are created with business to develop opportunities for students to take part in worksite learning; these work-based activities coordinate with students' school-based learning (Imel, 1999. p. 1).

In countries that do work-based learning well, youth unemployment tended to be lower, it took less time for young people to get and keep good jobs, and economic competitiveness was higher. There were strong reasons for a country to pay attention not just to the development of

young people's academic skills and knowledge but to make sure it had a strong school-to-work transition system (OECD, 2011). Although each country has its own name for this type of education, the European career preparation model of learning is widely referred to as the Vocational Education and Training System (VET).

German Education System

The country that has gained much notoriety in preparing their youth for careers in their VET is Germany. The German education system incorporates a strong and long-established vocational route through a system of apprenticeships commonly referred to as the dual system (Brochmann, 2008). In Germany, students are placed in career tracks that are correlated to their academic success in a system called the Duad. The Duad, upon which the dual System is based, refers to a partnership between the school sector and the business sector. The trainee serves an apprenticeship in a firm (Betrieb) and is taught vocational and general subjects in a vocationally oriented school (Berufsschule) (Pritchard, 1992). German secondary schools look very different than their American counterparts. In Germany, this style of education is completed by a majority of students. Germany's dual system, in which two-thirds of students who enroll in the vocational tracks alternate between a few days in school and a few days at the workplace, is famous for its success. Young people from widely varying social backgrounds are enabled to integrate the learning of academic skills with the mastery of job-specific skills, so that they understand the theory behind the practice as they perform their generic work skills (OECD, 2011).

The German model of education has evolved over time. It was developed on the principles of authenitic learning on the jobsite and theoretical education in schools. Using both of these principles, the student acquires knowledge and skills directly related to required job experiences. The dual system started as a way for industry leaders to have voice in the

preparation of their future workforce. The emergence of the dual study programs started in the 1960s and was largely a response by employers to the perceived academic drift, politically planned, to upgrade former vocational and engineering schools to universities of applied sciences. That is, influential large firms secured their hold on high-end vocational education and training, to prevent becoming ineffective in the face of greater academic autonomy in the new universities of applied sciences (Graf, 2015). In Germany, the industry leaders knew if they left education to its own vices students would end up with skills not useful in their workforce.

This model of secondary education does not come without critics. In the review of the literature about the German dual system and all of its accomplishments, there were areas for growth. Some of the issues included the problem with rigid tracking of students by their academic abilities. Ertl and Sloan (2004) found areas of concern in the German dual system. According to the authors, this model has been increasingly criticized in recent years for inflexibility and inability to adapt to socio-economic change. There was also found to be an imbalance of men receiving jobs after their apprenticeships compared to women. In the past, it was alleged that the dual system served women much less than it served men (Kloss, 1985).

Kloss also noted that there is a declining number of work-based learning opportunities offered by companies and fewer students participating today when compared to the two decades before. Thelen (2007) notes that another major concern was the question of whether employers are able to produce sufficient opportunities for in-plant training to sustain the model in its traditional form.

Most alarming of the concerns outlined in this review of the literature was from Pritchard (1992). His review of the German dual system found that as students entered adulthood doing both work and school, they started to feel alienated and disconnected from the school

environment. Pupils in vocational schools are slow to develop a group ethos and a feeling of belonging, and their lack of commitment can result in these secondary institutions becoming soulless places. With the successes of the German dual system, disenfranchised students in school lead to a plethora of issues that would not be acceptable in today's high schools in the United States.

When reflecting on the cautions outlined by Dewey about a dual system of vocational training, Germany's strict tracking seems to exhibit all his concerns. A system of strict tracking would not be desirable in the United States, but there is much that can be learned from this model. The foundation of the German dual system is built on business-education partnerships. For all European VET systems to work, students need to have quality education in the classroom. They also need a quality environment to apply their newly attained skills. It is with employer input and assistance that vocational classes in Germany are created. According to Hyslop (2012), there is a critical need for businesses to feel invested in the education of the future workforce. According to the author, it is evident that employers saw their roles very clearly and purposefully in the German dual system. In Germany, there is a commitment from employers to help train their future workforce, but there are limitations to this system. Other European countries are doing vocational education that looks very different from the German model.

Finnish Education System

According to the literature review, Finland has experienced the successful school reform many are looking for in the United States. Although the reform in Finland was a K-16 initiative, it was the work they accomplished in the secondary level that was examined. In 2001, Finland students had outperformed all other nations on an international assessment of reading, mathematics, and science skills. The Organization for Economic Co-Operation and

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Development (OECD) study reported that Finland had the most literate students in the world. This study was a culmination of fifty years of work to transform their education system from an agrarian economy to one that supports a technologically advanced economy. Finland was not always a top-performing country. Finland is an example of a nation that has developed from a remote agrarian/industrial state in the 1950s to a model knowledge economy, using education as the key to economic and social development (Sahlberg, 2007).

The secondary level in Finland changed when their department of education started to look for ways to have their high school graduates leave with more than a diploma. The Finnish vocational education and training system underwent remarkable transformations at the turn of the century. One of the most important changes included the introduction of compulsory and guided on-the-job learning periods in all study programs (Virtanen & Tynjälä, 2008). The Finnish education system wanted to ensure that their students were doing more than learning, they were preparing for their future. A main objective of the secondary school reform was to offer all graduates from basic school and upper-secondary general school higher education that would lead to a certified profession (Aho, Pitkänen, & Sahlberg, 2006). The way that students attain their credits vary. The Finnish system offers certification in over one hundred professions. The route of the secondary student is flexible and adjustable to the interests and skills of the student. Vocational education and training typically last three years and spans seven sectors of education and 52 vocational qualifications, including 113 different study programs. Of the 120 credits necessary to graduate, 90 are vocational studies, including at least 20 credits of on-the-job learning in a real work environment, and 20 credits of core studies in general subjects (Aho et al., 2006).

The transformation of the Finnish school system was rooted in the six principles of education. According to Sahlberg, a senior advisor forFinland's Ministry of Education, the characteristics of the Finnish School started in the 1970s with a focus on six core beliefs:

- Same nine-year basic school for all,
- Good teachers,
- Sustainable leadership,
- Recognition and appreciation of existing innovations,
- Flexible accountability, and
- The culture of trust

The reform for secondary education took hold in 1990 with a white paper published for their parliament. The white paper called for a new structural organization for post-comprehensive education consisting of:

1. Secondary education combining the practical and theoretical approach and intended for the entire age group,
2. College level education forming the basis for vocational high education,
3. University system focusing more clearly on scientific education, and
4. A more general system of adult education providing a greater range of instruction (Osmo, 2001, p. 312).

Finland's current education system differs from many other national models like Germany; most notably is the absence of ability tracking or other structures that separate students into academic or vocational education, as well as in its flexible accountability structures that place an emphasis on trusting schools (Aho et al., 2006). This flexible tracking is the foundation of the Finnish model. As can be viewed in the illustration below, students are not permanently placed, they are given flexible options at all levels of the secondary education process and can

change their track as experiences help them refine their interests and they change their ideology

about best fit careers. As is evidenced by the illustration in Figure 1, students are given flexible

opportunities to build on their vocational skills.

Figure 1

The Finnish Education System Model

The Finnish education system
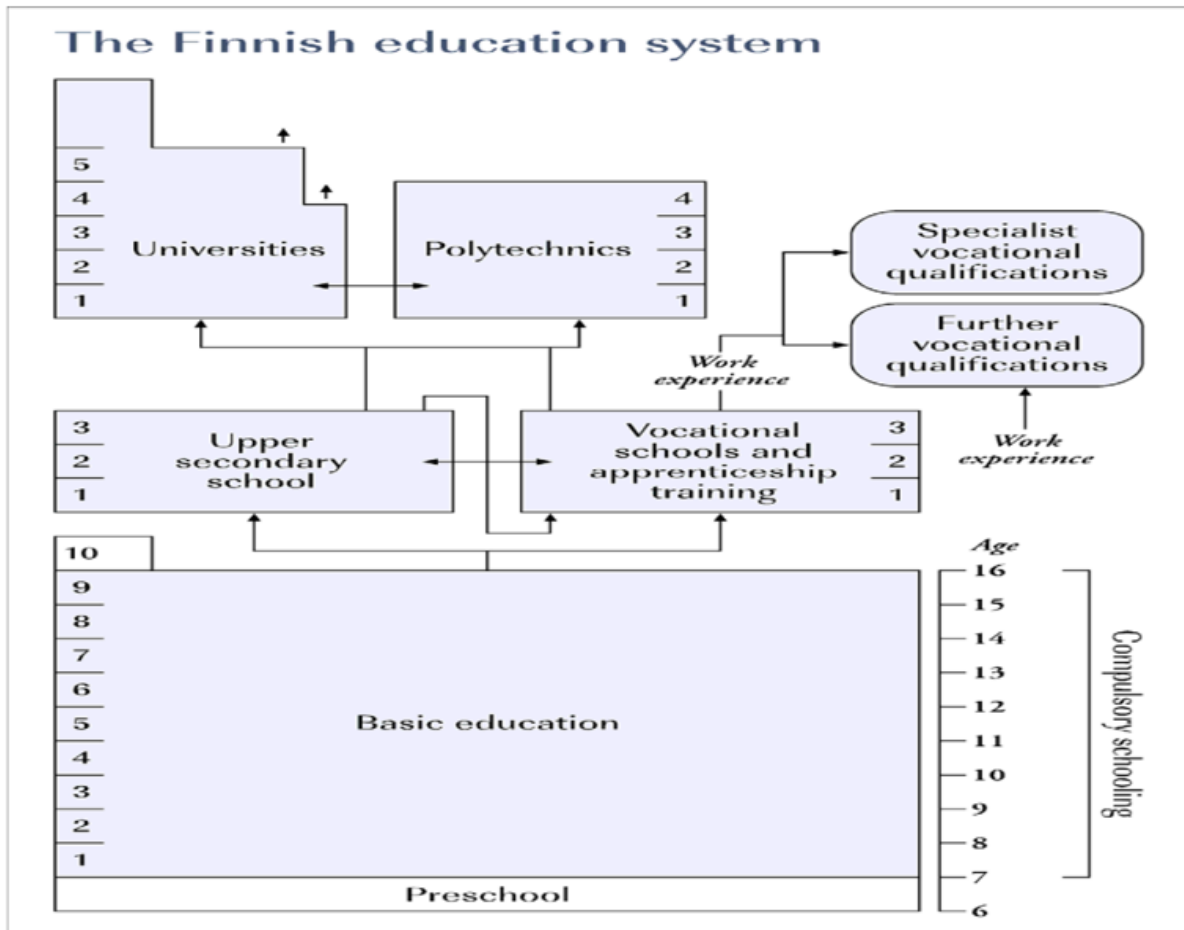
The authors Virtanen and Tynjälä (2008) can best describe the Finnish model. According

to them, the ideal connective model of organizing workplace learning for students emphasizes

connecting formal education and workplace practice. This means that workplace learning is a

central part of the curriculum and it is connected with vocational and core subjects, such as

languages and mathematics. The connective model also emphasizes the connection between people, favoring collaboration. Implementing the model requires that schools and workplaces together create learning environments where all parties can learn.

With the many accolades that Finland receives, there are advantages in having a seemingly homogeneous country with only four percent of the students speaking a non-native language (PISA, 2012). Finland also does not have expensive elite private schools. In fact, it's a country where charging fees for compulsory education is illegal (Sissi, 2017). Even with advantages, Finland was given a wakeup call with the 2015 PISA scores. Finland continued a slide that was first evident in the 2012 results, when their scores dropped in all three categories. PISA 2015 revealed a relatively wide gap between non-Finland born and other students in all three measured domains. Although the number of immigrant-background students in the PISA sample is not large (approximately four percent) this achievement gap is a growing issue in Finland. Finland is now ranked twelfth in math, fifth in science and fourth in reading (PISA, 2015). Most notably, there has been a visible and alarming downward trend in Finnish schoolboys' educational performance during the past decade. This inconvenient phenomenon is stronger in Finland than in any other OECD country. As a result, Finland is a country where girls significantly outperform boys not only in reading but also in mathematics and science (Hein, 2016).

Some believe that Finland is on a downward slope, not an upwards one. In some cases, people have been misled by the stories told by people who have looked at Finland through their own, restricted lens (Oates, 2015). With the successes and opportunities, the Finnish educational model took education policymakers and leaders over 50 years to design. As with any education system, the Finnish model is not perfect. What can be observed is their vision and dedication in

preparing their students for the careers of their country's future. In accomplishing this, the Finnish school system created a foundation of learning at the secondary level that was based on creating partnerships with employers.

History of Partnerships

Partnerships in Education

As the examples presented from Germany and Finland illustrated, some countries have strong connection between schools and businesses. Assessments such as PISA seem to shown how these systems helped students score higher but there is much more that still needs to be studied to find correlation.

The idea of a business-school partnership is a phenomenon that has recently regained momentum in the United States. The resurgence of this recent phenomenon is not new in American education. Businesses and schools have been involved with each other since the late 1800s, and their relationship formalized into partnerships since the late 1970s. However, the conditions in the United States public school in the early 1980s changed this. The education crisis in public schools, the low skill level of entry-level workers, and the demands of an evolving economy accelerated the development of these partnerships (Lankard, 1994). Additionally, Kisner, Mazza, and Liggett (1997) state school business partnerships have been around throughout the 20th century. They maintain that during the first half of the 20th century, businesses were concerned with how schools were operated, and that business and education agreed that schools should prepare their students for the world of work.

The power of business and school partnerships is difficult to deny. Schlechty (1991), the founder of Schlechty Center for Leadership in School Reform, relates the following about the partnership between business and education:

In my own experience, I have found that business leaders can be powerful allies in the

school restructuring effort. Among other things, such leaders, once they are fully enlisted

in the school reform movement, can help serious reformers convince impatient

newspaper editors and politicians who want instant results with little investment of time

or dollars that the kind of reform that is needed takes time and requires considerable

investment (p. 14).

Based on definitions from Kisner, Mazza and Liggett (1997), a partnership between

businesses and schools is a continued cooperative effort or agreement to collaborate to generate

ideas or to pool resources for a mutually acceptable set of purposes. The partnership effort may

attack a specific problem or support an ongoing project of wider scope. Today's contemporary

concept of school-business partnership had its beginnings in the 19th century with the founding

of the National Association of Manufacturers (NAM) in 1895. The standards of NAM were

elevated to prominence in the 20th century at the end of World War II. In conjunction with

NAM, the National Chamber of Commerce helped to establish what became known as "business

education days" (Turnbull, 2015).

The Smith-Hughes Act was an example of how leaders from business and schools

partnered together for a cooperative effort to create vocational education. Lynn and Wills (1994)

indicate that businesses have been working with secondary schools since World War I in the

form of cooperative education programs (co-ops). These co-ops date back to 1917, with the

Smith-Hughes Act, which directed states to make co-ops accessible to students in

vocational/agricultural programs. The program administrators of these co-ops coupled classroom

instruction with salaried work opportunities in line with student career interests. Timpane (1983)

noted that during much of the 19th century, business was often involved in the planning and

decision-making of public schools. Business and education agreed that the main purpose of a public education was to prepare young people for jobs. However, we see this relationship deteriorating in the 1960s to late 1970s. The business-school partnership became less acceptable, as organized community and parent groups became more organized and grew concerned about the pressures brought on by outside forces (Rigden, 1991). Businesses lost touch with the happenings in public education on a day-to-day basis, as they were forced out by political views and a decreasing need, due to the availability of workers and the scarcity of jobs.

The change in the relationship between business and schools started a long-standing attitude of mistrust between the two institutions. Business partners started to change the expectations of how they would benefit from these school relationships. Concurrently, schools started to see potential dangers of exposing students to the real world pressures and influence. By the late 1970s and early 1980s, there was an atmosphere of mistrust between schools and business. Businesses issued expectations for schools, while educators feared business support of any kind might grow into inappropriate influence. Many educators suggested that limits be placed on business involvement in schools (Rigden, 1991).

In 1985, the Committee for Economic Development released *Investing in Our Children: Business and the Public Schools*. In 1988, Congress enacted the Educational Partnerships Act with the objective of stimulating the creation of educational partnerships. Cobb and Quaglia (1994) believe that Congress hoped these newly formed partnerships would demonstrate their impact on educational reform. Due to these two Acts, the resurgence of partnerships soared. In fact, over 100,000 school business partnerships were established between 1983 and 1990 (Dumaine, 1990).

President Bush enacted America 2000 in an effort to set education policy that prepared American students for the 21st century. The America 2000 Act assisted in the implementation of education program policies around partnerships. The president, congress, state governors, representatives from the business community, and parents were given varying responsibilities. Referring to the business community, the report said:

> It will jump start the R&D Teams that will design the New American Schools. The business community will use the American Achievement tests in hiring decisions, develop and use its own skill standards and, perhaps most important, will provide people and resources to help catalyze needed change in local schools, communities, and state policies (U.S. Department of Education, 1991).

The Department of Education defines R&D Teams as research and development teams that consist of business leaders, management consultants, universities, and others to consider policies needed for schools to aspire to the next level.

The practice of building relationships between businesses and schools has existed throughout early American history as communities called for proper training for their children. Hoff (2001), in her report "School-Business Partnerships: It's the Schools' Turn to Raise the Grade," wrote the following:

> Partnerships took hold for many reasons. Schools faced new and complex problems including urban decay, public calls for reform and accountability, and significantly higher per-pupil costs. Compounding the problem was the poor quality of entry-level applicants, many of whom had dropped out of school. When these factors combine with the schools' need for additional funding and solutions to tough issues, it is easy to see that the climate was perfect for the development of school-business collaboration (Hoff, 2002, p. 63).

This idea of the business-school partnership is not celebrated by all. Kozol (2005) revealed how business has infiltrated American schools. He validated assertions that one of the school's main goals was to educate students to be able to enter the workforce, but discussed how business referred to students as investments, assets, or productive units. Viewing students as business investments has dangers. Kozol believed the economic needs of a society are bound to be reflected in some rational degree within the policies and purposes of public schools. But, even so, there must be something more for our students than successful global competition. (Kozol, 2005)

Some have argued that the goal of schools should be to turn out skilled employees who will help business triumph over their competitors outside the United States; others vehemently disagree. In this way, education is not seen as something valuable in its own right but as an investment, something "important primarily because of its capacity to rescue, perpetuate, or enhance U.S. business profitability" (Ray & Mickelson, 1990, p. 123). Some schools have assumed a corporate purpose and ideology. This dominant corporate focus on schools' ability to produce competent workers detracts from teaching that promotes critical thinking and democratic values. Corporate leaders that advocate running schools like businesses threaten to define narrow academic standards, measure them in standardized tests, and reward or punish schools based on results (Hann, 2008).

Author and advocate Alfie Kohn is implicit in his perspective of students as potential workers and has given four points to think about before entering into any business-school partnership.

- Workers are adults while students are children. Age differences not only inform what and how we teach but also affect our response to inappropriate behavior.

When a worker acts in such a way as to cause a problem, the reaction is altogether different than when a child misbehaves.

- If workers are helped to acquire skills, this is generally intended as a way to build an effective organization. By contrast, helping students to acquire skills, to become good learners and good people, is the very point of school.

- While it is undesirable for many reasons to manipulate workers with incentives, they still have to be paid; money is needed to survive. Nothing, including grades, is analogous in a school setting.

- Most importantly, workers spend their days producing goods like automobiles and houses; they are hired to make things. The only thing students should be making is meaning. To turn the classroom into a workplace is to put at risk the intellectual exploration and development that ought to be taking place there. (Kohn, 1993, p. 3).

In conclusion, MacDowell states that if businesses want to target an aspect of the instruction which impacts their business, they are implementing efficiency, and they are investing in a variety of ways, into the future potential of the business (1989). Critics of business-school partnerships warn of potential dangers. When schools invite businesses to be their partners, they tacitly give them decision-making power. With rare exceptions, no business CEO is going to encourage educating the poorest children in America to the virtues of the labor union movement. "Very few are going to be keen on teaching poor, black, inner-city kids the critical skills with which to judge the ethics of the ruling class" (Kozol, 2009, p. 1).

The concept of business-school partnership has the potential to impact schools. Some authors tell us of the successes while others warn of the dangers. With the many successes and

dangers of public-private partnerships, we can see how these relationships have impacted other aspects of the American culture such as healthcare.

Partnerships Outside of Education

The concept of partnerships and collaboration between industries is not isolated to education. There are many successful examples of Public-Private Partnerships (PPP) in the United States. In the Turnaround Project of Cleveland, Ohio, the community banded together around a vision of prosperity. Austin (1998) makes the case that:

> Cities cannot be rescued without business, but business can't do it alone. Business, government and civic organizations must join together to bring about effective community building. Resources and commitment must be mobilized from all fronts so that the synergies can be captured. To be effective, they have to build consensus (p. 97).

There has been an increased call for partnerships in the area of healthcare. Many people continue to lack access to adequate healthcare. With rising costs, many remain without basic healthcare services. Foundations and government agencies in the United States have invested hundreds of millions of dollars in promoting and increasing collaboration around health issues (Butterfoss, Goodman, & Wandersman, 1993). Recent examples of this requirement for collaboration include the federal Community Access Program, which is funding community-based partnerships to improve access to health care for vulnerable populations, the Turning Point initiative, sponsored by the W.K. Kellogg Foundation and the Robert Wood Johnson Foundation, which is funding partnerships to strengthen and transform public health systems in 21 states around the country (Lasker et al., 2001).

Partnerships in health care increase the number of collaborations to improve care for some of our most underserved populations. Social responsibility and leadership frame the

community partnership model. The interdisciplinary team members gain skills that help them work in partnership with communities to deliver health care services in low-resource settings and become stronger health care advocates for at-risk populations (Connor, Rainer, Simcox, & Thomisee, 2007). Healthcare has recognized that by working together they can better serve their community while still maintaining the individual needs of their organization. The Health Information and Libraries Journal article, "How to Create Successful Partnership—a Review of the Literature" stated:

> We live in a global society. It is no longer effective for organizations to work alone. Within the public, private and voluntary sectors, the need for partnership working, often cross-sectoral working or working beyond the boundaries, is recognized as a vital component of success for all involved (Wildridge, Childs, Cawthra, & Madge, 2004, p. 1).

The proliferation of partnerships in health care can best be viewed in the World Health Organization. Many kinds of public-private partnerships for health have emerged. The Initiative on Public-Private Partnerships for Health Care created an inventory of partnerships, using ten different categories. Its list includes over sixty different public-private partnerships for health as of October 2000. These partnerships included many major efforts such as the Global Alliance for TB Drug Development, the Global Alliance to Eliminate Lymphatic Filariasis, the Global Elimination of Blinding Trachoma, and Global Partnerships for Healthy Aging (Reich, 2002).

Much as it is in education, there is a need in health care to start working together for the vision of a stronger community. Stated most clearly by Suchman, Botelho, and Walker (1998):

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If there is a single most important skill in healthcare, it must be the ability to form and

sustain partnerships. A healthcare system cannot function well at any level without a

commitment to partnerships and the knowledge and skills to make it happen (p. 13).

Health care is one example of how partnerships have transcended the American

landscape. The benefits of building partnerships to serve the need for public health have been

illustrated in the review of the literature. The literature also helped us understand that public-

private partnerships could help build stronger communities and could be an answer for students

in our schools. Partnerships are a concept that has taken hold in a large institution like health

care but reservations exist for this type of relationship in schools. Next, a review of economic

outlook and review will help to inform how business-school partnerships can be an answer to a

pressing issue.

Partnerships Today

The Skills Gap

The skills gap is a highly contested topic but one that is important for this research. One

group of politicians, activist, and researchers believe that warnings of the skills gap are less

widespread than many pundits and industry representatives claim (Weaver, 2018). Some blame

this narrative on obsolete hiring practices where employers raise and lower their requirements

arbitrarily as the job market changes (Boston, 2014). They believe the consequence of

attributing unemployment to a skills gap allows policymakers and employers to sidestep thornier

questions about sluggish wage growth, persistent labor market discrimination, declining

unionization, and runaway corporate power (Hanks, 2018). While employers say they can't

afford to train new workers, they also say they can't pay higher wages or find the money for

sophisticated recruiting. That alone may be enough to explain why hiring is difficult for U.S. businesses (Cappelli, 2017).

Although the threat of this gap has been widely debated, many organizations are starting to see the skills gap as a reality. "A great divide has emerged in the United States between the education and skills of the American workforce and the needs of the nation's employers" (Bridgeland et al., 2011, para. 1). The cause of this skills gap has to do with the shifting economy and the needs of companies in this new economy. In 1900, the ten largest American companies were either agrarian or tied to an industrial base. In 1998, the ten largest companies were industrial, retail, or based in information technology (Daggett, 2002). In the 21st century, we need to deal with postmodern realities. With flatter organizations, workers will no longer be polarized in blue-and white-collar enclaves. They will belong to teams, irrespective of occupational rank. They will have access to the same shop floor computers, and the same pool of information. All work will be knowledge work. Machinists would need access to information, as would engineers (Lewis, 1998).

According to the Bureau of Labor and Statistics (BLS), the U.S. realized the greatest number of job openings in 2015 as compared to others in recent history, which may be a factor connected to the skills gap. The number of job openings increased to 5.6 million on the last business day of December 2015 (BLS, 2016). All of this happened despite unemployment close to ten percent and millions of Americans seeking jobs (Bridgeland et al., 2011).

There is an alarming trend when looking at the issue of a possible skills gap from the perspective of the employer. Every year, the Manpower Group, a human resources consultancy, conducts a worldwide Talent Shortage Survey. Last year, 35% of 38,000 employers reported difficulty filling jobs due to lack of available talent (Bessen, 2014). Other polls and studies

report similar concerns. A recent survey found that one in four companies trying to hire workers in late 2009 and 2010 had difficulties finding qualified job applicants (Warner et al., 2011).

The shifting U.S. economy might explain one reason, but another cause for the skills gap could be related to simple demographics. In the next eight years, there will be a decline of 1.7 million people between the ages of 25 and 34. This baby bust, combined with retiring baby boomers, will greatly impact the American economy (Daggett, 2002). "The combination of decreased birth rates, expected leaps in technology and the accompanying qualifications demands, led many to forecast serious skill shortages" (Nijhof & Brandsma, 1999, p. 1). It is expected that the retirement of baby boomers alone will cause 33.7 million job openings and result in the need to replace workers who leave an occupation permanently (Lockard & Wolf, 2012).

Experts estimate that as many as 25 million, or 47%, of all new job openings from 2010-2020 will fall into the middle-skills range. Shortages of workers for these types of jobs are already undermining U.S. competitiveness and causing firms to shift their operations abroad (Kochan et al., 2012). With an increase of high tech jobs and a decrease in the number of able-bodied workers, "by 2018, demand for students in the U.S. with an associate's degree or higher will exceed supply by three million workers" (Warner et al., 2011, p. 2).

Educators, representatives from industry, and local workforce development agencies need to address the shortage of labor if industry in the United States wants to stay competitive in the world market. "The nation is replete with an excess of workers prepared only to fill the remaining one-third of the job market namely low-skill and low-wage positions" (Bridgeland, Milano, & Rosenblum, 2011, p. 6). Although this adult population is not in the scope of this

research, it is important to note that a majority of this group was educated in the public K-12 system.

We can look at career and technical education as one possible solution for this skills gap. As a nation, we are have historically struggled to make these courses relevant or rigorous.

From 1982 to 1994, there was a general decline in the participation of high school students in vocational education. The average number of vocational credits public high school graduates earned decreased over the period studied, as did the percentage of graduates completing a sequence of related occupational courses (Levesque & Nelson, 2000, p. 10).

Not surprisingly, the decline in enrollment in career technical education course also led to a decline in the number of students participating in work-based learning opportunities. The number of apprenticeship programs in the U.S. shrunk by 36% since 1998, and enrollments have dropped by 16% since a peak in 2003 (Kochan et al., 2012). The political pressures put on education with Acts like the National Defense of Education Act and the narrative brought on by A Nation at Risk have forced schools to focus primarily on getting their students good at reading, writing, and arithmetic. As schools create more time for core classes, they have been forced to reduce teaching the skills needed for job attainment. "The problem is that our graduates 'do school.' The skills needed to do school do not necessarily connect well with the skill requirements of the 21st-century workplace" (Daggett, 2002, p. 2). Although schools have been criticized for failing to produce employable graduates, in recent years, U.S. secondary school students have been performing slightly better on standardized tests than in past decades (Cappelli, 2017).

Even with the highly debated nature of the skills gap, there seems to be one place that the two groups can agree. Instead of fretting about a skills gap, we should be focused on the real challenge of knitting together mechanisms necessary to make apprenticeships and other work based learnings more productive (Weaver, 2018).

Post-Secondary Success

This issue is not just a K-12 issue. Nationwide, 70% of students that graduate from high school matriculate to a postsecondary institution such as a technical college or four-year university. Unfortunately, the United States public school system realizes fewer young adults that complete college with a degree. The national spotlight on access to college has shrouded another priority: ensuring that individuals that enter college programs graduate with the skills and credentials needed to succeed in the workforce (Bridgeland et al., 2011). Although some theorize that the lack of college completion is a public school issue, there is a real threat to our nation with the number of students that acquire a post high school accreditation. While the U.S. leads the world in educational attainment among 55 to 64 year-olds, it is currently in fourth place among 35 to 44 year-olds and tenth place among 25 to 34 year-olds. For the first time in U.S. history, today's cohort of young adults risks having lower educational attainment rates on average, than their parents, threatening both America's economic future and a fundamental tenet of American democracy (Bridgeland et al., 2011).

Although much publicity has gone into this crisis, there is no clear answer to address the skills gap. "Business does not necessarily know what or how schools should be teaching tomorrow's workers, but it does know that it is not getting what it needs in terms of entry-level worker skills" (Daggett, 2002, p. 1). Although no one answer can solve a complex problem like the skills gap, some steps could be taken. To assemble the workforce the nation needs to thrive,

policymakers, educators, and businesses will need to collaborate to build more paths for students to climb the ladder to success (Bridgeland et al., 2011). Stakeholders can work together to solve the lack of alignment between what is being taught in school versus what is needed in the workforce. Rowe, an advocate of workforce development and TV personality that has worked to change the perceptions of hard work, has often spoken about how quality jobs can be found in the trades.

> Is it really a surprise that vocational education has pretty much evaporated from high schools? ... I'm no economist, but the skills gap doesn't seem all that mysterious – it seems like a reflection of what we value. Five and half million unfilled jobs is clearly a terrible drag on the economy and a sad commentary of what many people consider to be a "good job" (Rowe, 2016).

In much of the literature on the skills gap, there are two overarching themes. Daggett tells us that the first theme is that the United States will fall sorely short on the number of middle-skilled workers in the very near future. Secondly, Bridgeland, Milano, and Rosenblum tells us there needs to be something done in education to reverse this alarming trend. In many of the articles reviewed, one way to reverse the trend is to have business and education work together to build the workforce of the future.

Successful Business-School Partnerships

The literature has illustrated the importance of connecting what is learned in the classroom to situations that students see pertinent to their lives. Hullemann and Harackiewicz (2009) demonstrated that students that make connections between what is taught, to situations in their own lives had both improved interest and performance. As students move into high school, the best educational programs do not place college and career readiness into separate silos but

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instead connect rigorous academic classroom learning with vocational coursework that merges in-classroom experiences with industry-related opportunities. (Rogers-Chapman & Darling-Hammond, 2013).

One established program that has made a successful school-to-work transition without compromising academic goals or the preparation for college are Career Academies.

Established more than 30 years ago, Career Academies have become a widely used high school reform initiative that aims to keep students engaged in school while preparing them for successful transitions to postsecondary education and employment typically serving between 150 and 200 students from grades 9 or 10 through grade 12. Career Academies are organized as small learning communities, combine academic and technical curricula around a career theme, and establish partnerships with local employers to provide work-based learning opportunities. There are estimated to be more than 2,500 Career Academies operating around the country (Kemple, 2012, p. 1).

Career academies have realized both increased student engagement as well as academic successes with students (Quint 2008). Compared to students in the general academic programs of the same schools, career academy students had higher 1st-year grade point averages, higher 1st-year attendance, and higher rates of 4-year graduation (Elliot, Hanser, & Gilroy, 2016). The state of California has nearly 300 schools that are listed as Partnership Academies. Research has shown the positive effects of academy high schools on increasing both academic scores on English and math while also increasing engagement by showing improved attendance and decreased discipline (ConnectEd California, 2007).

An essential component of the career academy is the connection to business. Wohlstetter and Smith (2006) found that there were many benefits of partnering academy schools with

community stakeholders in the non-profit, for-profit, and the general public. Their finding suggested that these partnerships were most helpful in "enriching curriculum offerings," "broadening teaching expertise," and "helping at-risk students stay in school" (p. 465-466).

The benefits of the career academy go much farther than just the classrooms. Investments in career-related experiences during high school can produce substantial and sustained improvements in the labor market prospects and transitions to adulthood of youth. The career academies produced sustained earnings gains that averaged 11 percent (or $2,088) more per year for Academy group members than for individuals in the non-academy group—a $16,704 boost in total earnings over the eight years of follow-up (Kemple, 2012).

As one iteration of a successful business-school partnership, we can see that connecting students to careers can be successful. Quint (2008) maintains that of the many initiatives proposed for revamping high schools, the career academy model appears to be the most oriented toward guaranteeing students' long-term success. Students take a variety of academic and technical education classes that are related to the academy's theme, such as health care or finance. These academies also establish business partnerships within the community that allow students to acquire part-time jobs and internships (Quint, 2008).

Ethical Principles of Successful Business-School Partnerships

Although career academies are not the only way to connect business to schools, if we are to increase programs such as these, there needs to be an understanding between both organizations. As business-education partnerships increase, there is a greater need for both parties to understand the nature of the partnership relationship.

Educational leaders and researchers have suggested that it is not appropriate to accept participation from the community without a thorough examination of how that participation

complements district and/or school goals. This requires coordinated and consolidated planning with a focus on learning and/or teaching (Resnick, 1999; Rigden, 1994). The National Association of Partners in Education (NAPE) presents characteristics of successful partnerships. NAPE suggests that evaluation, planning, and management should be linked to learning. The looser the linkage, the more difficult it is for the organization to learn, causing inaction or ineffective action. The stronger the linkage, the easier and quicker it is for the partnership to actively learn and adopt strategies and practices that improve its effectiveness (NAPE, 1997).

Keys to Successful Business-School Partnerships

Looking deeper into what it takes for successful partnerships, the literature finds keys to a successful partnership. In 2007, Flynn discussed the ten principles for effective partnerships. These principles are:

- Vision: Develop a clear vision of what you expect to accomplish through the partnership.

- Tech Support: Ensure your school can support and sustain the hardware, software, and staff development to implement the technology acquired through a partnership.

- Curriculum: Ensure that the technology acquired aligns to the curricular goals of your school.

- Collaboration and Communication: Identify the point people within the school and the corporation who will be liaisons for the partnership to ensure consistent communication.

- Capacity: Build internal capacity to sustain and improve the use of acquired technology.

- Commitment: Develop a strong commitment to the school and the company.

- Obligations: Document any and all expectations on the part of both parties, so that everyone is clear about expectations.

- Product Promotion: Define what constitutes appropriate promotion in advance and the level each is willing to provide.

- Assessment: Outline evaluation and assessment procedures, including determining strengths, weaknesses, and future directions.

- Longevity: Define the terms of the partnership, how long it should last, and the expected benefits and costs (Flynn, 2007, p. 20).

Having the principles of effective partnerships is just one part of assessing the success of partnerships. Through a review of the literature, one project helped delineate how to assess the effectiveness of a partnership and has guided the building of interview questions for this research. Alba (2000), a high school principal who was working on his doctoral dissertation at the time, created an assessment to assist business and educational leaders to plan, direct, and control their collaborative efforts with a focus on learning and teaching outcomes. The Partners Affecting Learning (PAL) evaluation model and assessment tool is a tool designed to guide the partnership process. A deliberate effort was made throughout the development of the assessment guide, to respect the time constraints of business and educational leaders. The following tables help to illustrate the five partnerships priorities in building effective partnerships. Across from each of the partnerships, priorities are the corresponding questions that should be asked. It will be these principles and evaluation questions that will be used in the interviews for this research project. When current educational administrators and business leaders are interviewed, this will be the basis on which they will be asked about the effectiveness of their partnership.

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Table 1

Effective Partnerships

Partnership Priorities	Evaluation Questions
1. Learning Outcomes - The educational leader has documented the preferred learning outcomes with a timeline and rational.	Is there a concise statement of the broad purpose for the existence of the partnership? Does the partnership mission statement complement the district/school mission?
2. Needs Assessment - The educational leader has conducted a needs assessment and has identified and communicated resource gaps.	Have the partners collaborated to address gaps in resources to meet educational goals? Is there a system in place to carefully document and report the flow of resources between/among the partners?
3. Goals and Objectives-The partnership team has developed and documented broad statements of desired, measurable, teaching/learning and business outcomes to be facilitated.	Has the partnership collaborated to express and document clear and measurable educational goals and corresponding business goals? Has the partnership team clearly defined the roles and participation guidelines for all business personnel who will be working with students?
4. Partnership Management -The partnership team has developed management procedures that ensure compliance with applicable laws and regulations and continuity of efforts.	Has the partnership team established a schedule for the review and revision of management and administrative procedures to facilitate productive changes in meeting educational needs and personnel changes?
5. Documentation and Evaluation - The educational leader has compared the actual learning outcomes to the planned objectives. The partnership team collaborates on the evaluation and communication of results.	Is a member of the partnership team directly responsible for documenting and reporting on all activities? Is an appropriate evaluation procedure included in each partnership activity plan?

Note: Source: Alba, 2000

Motivation to Build Partnership

To successfully discuss partnerships, an understanding of why people take time from their hectic work day to build these relationships is essential. "Motivation refers to the desire for

self-fulfillment... This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming" (Maslow, 1943, p. 383). The specific motivation will vary greatly from person to person. It is not necessarily a creative urge, although in people who have capacities for creation it will take this form (Maslow, 1943). Pink (2011) has done extensive research on workplace motivation. In his book *Drive*, he describes motivation as the deeply human need to direct our own lives, to learn and create new things, and to do better by our world. This definition can easily be applied to businesses-school partnerships. Mitchell (1982) suggests that motivation is the psychological process that causes the arousal, direction, and the persistence of the behavior. Naudieda adds to this concept of motivation with the belief that motivation is a key component of successful partnerships. "The motivation to partner, social capital, and communication all play a part in the formation of successful partnerships" (Nausieda, 2014, p. 1).

Businesses and schools engage in partnerships for various reasons. Partners have many different motivations when developing a partnership (Russell & Flynn, 2000). These motivations can be either intrinsic, extrinsic, or a bit of both. Whatever the reason, the drive to partner is deeply complex. Motivations are in fact complex, involving consideration not just of each stakeholder's immediate organizational needs or those of the community they serve, but also for the long-term interests of society itself (Shaffett, 2002).

As complex as motivation can be to assess, the motives of both schools and businesses can be broken down into distinct categories. Using the work of Thompson (2015), the partnership motives fit into three themes: students, personal reasons, and organizational benefits. A further look into the work of Naudieda will help guide the classification of the different motivation and is illustrated below in Table 2.

Table 2

Motivation

Code	Motivation Related to:
Student learning	Students' learning
Organizational benefit	Supporting organizations mission
Personal benefits	Professional Development within organization
Relationship Building	The benefits community gains within the partnership
Social Justice	The responsibility of the community as a whole

Note: Sourece: Nausieda, 2014

Motivation is not just important to start working together to build partnerships. It is also the continued motivation of all stakeholders to maintain the collaboration. The people in these organizations are motivated to begin, develop, and sustain partnerships. These motivations need to remain aligned to the goals of each organization for the partnership to continue. The partners have various motivations, such as resources, training, the outlook for the industry, and personal relationships (Nausieda, 2014). Successful partnerships have mutual understandings between each organization. The partnership needs to be a symbiotic relationship for all organizations involved. Researchers found that the businesses associated with school-business partnership benefitted from the academic and vocational skills of students. A plausible explanation for these findings may consist of business leaders that understand intellectual capital is an important commodity in which a company must invest in if it is going to stay competitive not only in America but also on the global stage (Turnbull, 2015).

Why Partnership Today

Business-school partnerships could be as important today as at any other time in the history of public education in the United States. It is not just critical for the students, but also critical for businesses to continue to grow in the United States. The education of young people is

an entire community project that needs to be addressed. Partnerships are critical for the success

of the students who sit in classrooms today, for industries who require a motivated and talented

pipeline of young people to drive innovation, and for the communities that depend on a

productive citizenry for their sustainability (JBL Associates, 2016). When schools and

community organizations work together to support learning, everyone benefits. Partnerships can

serve to strengthen, support, and even transform individual partners, resulting in improved

program quality, more efficient use of resources, and better alignment of goals and curricula

(Harvard Family Research Project, 2010).

> The reward of collaboration has many stakeholders, all of whom can benefit from the investment.

> Partnerships bring financial and human resources to schools that enhance the school's
> ability to provide quality education. While partnerships are not focused on the financial
> component, additional funding is a valuable part of a partnership program. A company's
> financial support of a school can enable students to have experiences they otherwise
> would not receive (PIE, 2016, p. 2).

> It is imperative that school officials, especially the school administrator, use partnership

as a key leveraging component of their school. Any school leader not taking advantage of

business partnerships in their community is missing a tremendous opportunity to improve their

school (Anderson, 2016).

> We have come to understand that historical and political pressures have made repeated

calls for collaboration. In recent years, partnerships have floundered as school administrators are

asked to do more with fewer resources. Partnerships between businesses and schools are

neglected economic and educational tools, pairings that have the potential to raise student

achievement and more closely align the work of educators with workforce demands (Cavanagh, 2013).

The concept of business-school partnership can be a vital component to the success of any high school. Family and community engagement is a vital part of a truly successful school. But it rarely just happens—it must be intentionally designed. When it is present, we should take the time to celebrate it and learn from it (O'Brien, 2012).

It is also just as important for the businesses. If education reform is to work, then business leaders need to do more than just get involved. They need to take a leading role in helping their communities address the management issues of urban education (Smoley, 2016). An educational business partnership has the potential to change the life experience of a young person in ways that may not always be measurable, but certainly provide an impact (JBL Associates, 2016).

Summary

In the review of the literature, we have extensively looked at four distinct areas. Section one addressed the literature regarding the history of career and technical education. Section two dealt with the literature regarding lessons abroad and the school reforms in both Germany and Finland. The third section presented literature regarding partnerships in education. Section four entertained the literature regarding the importance of school-business partnerships.

The synthesis of the above sections will be the foundation upon which this research will be built. Reviewed in the literature, career technical education courses have been around in the high schools for over 100 years. In that time, many argued that their inclusion in the traditional school was not always welcomed. The teachers that viewed education as college preparatory did

not accept these courses. They were also not supported by the politicians that wanted to assess schools through the lens of test scores only.

In the second section, we were able to see that there were countries that had a system that could be better suited for preparing their students for their future. In both systems, the schools and the employers worked together to train the workforce of the future. They were able to see that learning does not take place in a vacuum only at school but that learning outside the bricks and mortar of a school could be just as important as whart is learned inside of it.

Section three made the case that the U.S. public education system has models of partnerships like the career academy that has shown success. In the different models highlighted, there was data on how schools worked together with business to make a difference. This difference could be viewed through the economic advantages of the students in the academy as well as the business that took part in the partnership.

The final section made a case for why partnerships are as important today as in any other time in history. Both school and business leaders need to start thinking differently about what a college and career graduate should look like. The U.S. economy is at a point in history with the potential for great opportunities. It will be up to the school and business leaders to work together to find what those opportunities might be.

CHAPTER 3: METHODOLOGY

Purpose Statement

This qualitative cross-case analysis examined collaboration between high schools and employers as it related to career technical education with the CEOs and school leaders in the Midwest. The cross-case analysis was a search for patterns and themes that cut across individual experiences. The cross-case analysis enabled the case study researcher to delineate the combination of factors that may have contributed to the outcomes by enhancing the researcher's capacities to understand how relationships may have existed among different groups (Ragin, 1997). The initial focus was a full understanding of individual case studies before those unique cases were combined or aggregated thematically (Patton, 2009).

This cross-case analysis will illustrate the necessary skills, knowledge, and motivational factors needed for business leaders and school administrators to collaborate. The methodology of the case study was employed for the two groups on which the cross-case analysis was based. The cross-case analysis was conducted to determine patterns and themes linking the interviews given to business and school leaders. Once themes and patterns were identified in the individual case studies, the findings from the analysis were used to compare how leaders in businesses and schools had common experiences, themes, and goals. The cross-case analysis extended the investigator's expertise beyond the single case. It provoked the researcher's imagination, prompted new questions, revealed new dimensions, produced alternatives, generated models, and constructed ideals and utopias (Stretton, 1969).

This study defined a case study as, "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 1994, p. 13). The case study approach

allowed for "research focused on discovery, insight, and understanding from the perspectives of those being studied [offering] the greatest promise of making significant contributions to the knowledge base and practice of education" (Merriam, 1998, p. 1). Lastly, Patton's (2002) focus on qualitative research design helped guide the design of this study.

The phenomenon of interest unfolds naturally in that it has no predetermined course established by and for the researcher such as would occur in a laboratory or other controlled setting. Observations take place in real-world settings, and people are interviewed with open-ended questions in places and conditions that are comfortable for and familiar to them (p. 39).

The research questions narrowed the purpose statement to help define what specific questions the research sought to answer (Creswell, 2008). The research questions were the foundation upon which this project was built and a focus on the perceptions of the individuals that built school-business partnerships.

Research Questions

1. What are the organizational impacts of business-school partnerships?

    a. What are the factors and conditions that contribute to developing business-school partnerships?

    b. What constitutes an unsuccessful from a successful partnership?

    c. By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

2. What are the educational impacts of business-school partnerships?

    a. How do partnerships influence the teaching and learning process?

b. How do partnerships impact students?

The design of this qualitative study investigated the research questions by using up to two rounds of interviews. The qualitative approach was utilized because these designs were naturalistic to the extent that the research took place in real-world settings and the researcher did not try to manipulate the phenomenon of interest (Patton, 2009). The purpose of the in-person interviews allowed the researcher to enter into the other person's perspective, with the quality of the information obtained based largely on the interviewer (Patton, 2009). This design was also selected because the researcher is currently a school administrator interested in observing how successful partnerships can influence schools. The National Center for Research Methods (2016) suggested that dissertation students should choose a setting of which they are already members, know the people, and possess familiarity with the setting.

Setting and Participants

Decisions about where to conduct research and who to include were important factors when the design of a research project was planned (Maxwell, 2005). Participants were purposefully selected in this project. Using purposeful sampling, the researcher selected participants because of their peer recognition as having a successful business-school partnership. Patton (2009) defined purposeful sampling as:

Cases for study (e.g. people, organizations, communities, cultures, events, critical incidents) are selected because they are 'information rich' and illuminative, that is, they offer useful manifestations of the phenomenon of interest; sampling, then, is aimed at the insight about the phenomenon, not the empirical generalization from a sample of populations (p. 40).

With the use of purposeful sampling, it was necessary to identify schools and businesses that were willing and accessible, but were also recognized as an exemplar in the area of business-school partnership. To identify these model partnerships, the research used award ceremonies.

The Midwest is known for its rich history in manufacturing. Many states and regions within the Midwest have Economic Development Organizations (EDO)s and Manufacturing Alliances to assist in workforce development and other lobbying type activities. According to one of the manufacturing alliances utilized in the sampling process, they were a group of manufacturers working with educators, workforce development, chambers of commerce and state organizations, to promote manufacturing in the region. The vision of the alliance was to ensure every Midwestern manufacturer would find the talent it needed (NMA, 2018).

The sample group initially included in this research were nominated school or business leaders that had engaged in successful partnerships as evaluated by peers in an award ceremony. Each year, many alliances and EDOs host Excellence in Manufacturing/K-12 Partnership Awards. In one particular Alliance, 2018 served as the 11th anniversary, giving the research up to 220 different partnership programs from which to choose. Extrapolated over the Midwest, this gave a potential sample size of over 1000 possible partnerships to examine.

For this study nearly seventy-five (75) partnerships were initially identified for potential research. With the knowledge that the larger number of cases can become unwielding and result in superficial perspectives (Creswell, 2008), the number of partnerships studied narrowed to seven (7). To narrow the oringinal sample of seventy-five partnerships down to seven, each partnership was given a monetary value. This value was calculated by researching local and state articles, websites, or award ceremonies that documented the total value of donations and in-kind work. The seven partnerships ultimately selected were collectively valued in excess of $9

million dollars with countless in-kind hours. This research was fortunate to gain access to the seven most lucrative partnerships of the original 75 potential sites.

Setting

The business-school partnerships studied resided within one of the 12 Midwestern states within the United States. They were selected with the help of Economic Development Corporations, Manufacturing Alliances, local Chamber of Commerce, web searches, and selective inquiry. Each partnership needed at least a $100,000 valuation to be considered. Given the setting and participants for this project, the careers related to manufacturing and science/technology were the only partnerships studied.

Population and SampleA

The participants for this project were business and school leaders that had been recognized as members of successful partnerships through peer award ceremonies within one of Midwestern states of the United States. The selected partnerships were publicly recognized and generated a minimum of $100,000 in cash or in-kind services with some approaching a $5.0 million valuation. In-kind donations consisted of the many different methods used by businesses that aided schools which included equipment, materials, or allocation of employee time. The allocation of employee time to work within schools was the most frequent in-kind donation.

To determine the number of participants included in the study, Bertaux (1981) referred to "Saturation of Knowledge" to describe when the researcher starts to recognize patterns in the interviewers' responses and find patterns. Guest et al. (2006) found that 12 interviews of a homogenous group is all that is needed to reach saturation. The NCRM (2016) agreed with Guest and others when they suggested that researchers should aim for a sample of twelve (12) interviews. This number provides researchers the experience of planning and structuring

interviews, conducting and transcribing interview responses, and generating quotes for their research findings and analysis. More than this number seemed to be impractical within research projects that have time and budget constraints, such as dissertation research projects.   Given this information as well as consideration to the sampling pool available for this research topic, the researcher concluded that fourteen (14) interviews or seven (7) partnerships would be sufficient for this project.

In sampling, it was important to ensure that everyone within the frame of the research had an equal opportunity for selection as a subject (Creswell, 2008). For the purpose of this study, the school leader was identified as a school official responsible for the duties of their partnership in a public school district that had been recognized by their peers for their work in building partnerships. The business leader was an individual who had been recognized by their peers for their work in building partnerships while having a title of CEO/President or other administrative position in their organization.

The research utilized a number of sources to identify the seven business leaders and seven school leaders. These sources included individuals that were nominated for awards and/or award winners of business-school partnerships at local recognition ceremonies. Examples of these area ceremonies include organizations like Manufacturers Alliance, Chamber of Commerce, Economic Development Organizations, and not-for-profit events such as Golden Apple Awards and Educators of the Year ceremonies.

Once the partnerships were selected and participants were identified, an encrypted and secure email was sent asking them to participate in the research. This email is found in Appendix C. This communication included information about the researcher, the proposed research, time commitment, and assured anonymity. With some of the participants

presidents/CEO of large manufacturing organizations, recruitment depended on personal connections and networking to gain access.

Participation in the study was voluntary. Since all participants were adults, there was little risk of harm. To assure each participant as little discomfort as possible, an Informed Consent for Research Participation Form was signed by each individual and can be found in Appendix D. The individuals interviewed were also informed of their rights to stop the interview at any time or to opt out of the video recorded portion of the interview. All participants agreed to be recorded.

Instrumentation

Open-ended interview questions are essential data collection tools in qualitative research (Creswell. 2008). For this research, the two different interview protocols consisted of ten open ended questions and can be found in Appendix A and B. The protocol was given to both school and business leaders with subtle changes to reflect differences between the business and school setting. The interview protocol used included ten (10) open-ended questions with a focus on the following areas: (1) motivation to engage in a partnership; (2) current conditions and forces in making business partnerships; (3) perception of the role of the business partner in education; and (4) components of a successful partnership. Follow-up probing questions were identified for each question and used to help ensure thick and rich answers.

Procedure

This qualitative cross-case study focused on perceptions and knowledge of business and school leaders involved in a partnership and was collected in late 2018 and early 2019. Each leader was given up to two interviews for data collection. Interviews allowed the researcher to enter into the other person's perspective. Qualitative interviewing began with the assumptions

that the perspective of others is meaningful, knowable, and able to be made explicit. "The interview helped to find out what is in and on someone else's mind, to gather their stories" (Patton, 2009, p. 341).

Reliability for qualitative research is viewed as a correlation between the data that is recorded and what actually occurred in the setting. In-depth interviewing in research is oftentimes referred to as open-ended, unstructured, or nondirective. The research tried to understand in detail how the partners think and how they came to an understanding of the values that they hold (Bogdan & Biklen, 1998). To ensure that in-depth interviews occurred, each participant took part in up to two interviews. The first was a 45-minute formal face-to-face interview that used either the school or business protocol in Appendix A or B. The interviews were video recorded to ensure that all data stated was captured.

During the intitial interview, each participant was told about a possible 30-minute follow-up interview. The follow-up interview was necessary for nine of the fourteen interviews and consisted of gathering clarifying questions as well of reactions to the themes from the initial round of interviews. This type of qualitative interview allowed for the collection of data in a setting where the interviewer was the key element of the research. Since qualitative research is not dependent on numbers, it recognized that findings are constructed through an analysis of words and themes (Creswell, 2008)

Ethical Considerations and Confidentiality

In the process of this research, ethical concerns were considered and confidentiality was most important. This study was approved by the IRB on October 16, 2018.

Qualitative methods are highly personal and interpersonal and because naturalistic inquiry takes the researcher in the real world where people live and work where this in-

depth interviewing opens up what is inside people—qualitative inquiry may be more intrusive and involve greater reactivity than surveys, tests, and other quantitative approaches (Patton, 2002, p. 407).

Ethical consideration was an important factor for how this project was planned, conducted, and how it was evaluated. In each of the interactions, the researcher assured the participant that their identity would remain confidential. The human participants were protected, and anonymity was thoroughly assured. All physical papers and signatures were locked in a personal safe while all video content was stored on a password protected personal computer. Any email communications were encrypted, secured, and protected with confidentiality statements. No participant was put in any physical or psychological harm. Each individual interviewed was fully briefed on the process of this research to ensure they understood of the nature of this study. Identification of participants was not available before, during, or after the study.

Before interviews were conducted, pre-interview conversations were performed with each participant. These discussions occurred by encrypted and secure email, telephone, or in person. In these pre-interview discussions, background information was presented about the research and the goals of this work were clearly defined.

The participants were assured both verbally and in writing via email in the form of a letter (Appendix C and D) that all information gathered during the interview would be protected under the strictest of confidence. Each participant was assured that no person or persons would be linked to any specific information provided and that the data would be reported in aggregate form. Pseudonyms were used for all participants.

The actual interview process could be intrusive for the participants who are busy professionals. The initial interviews were conducted in the participant's work area or office to

help alleviate pressures on time. Each interview consisted of ten questions and took approximately forty-five (45) minutes. The optional second interview was either a phone interview or e-mail communication and took no more than 30-minutes. When used, the follow-up interviews helped clarify the initial interview while it also gathered reactions to themes that emerged from research as appropriate. The participants were e-mailed the protocol and follow-up questions one week prior to the sessions to ensure that each interviewer had sufficient time to prepare.

Since this research included human subjects, it was important to state that this research was compliant with the U.S. Department of Health and Human Services Code of Federal Regulations, 45 CFR § 46.102 (2009). Furthermore, this study was one of minimal risk to the participants. The probability and magnitude of harm or discomfort anticipated in the research was not greater than any ordinarily encountered in daily life.

Data Processing and Analysis

The process of data analysis consisted of taking the data apart to determine individual responses, find commonalities and outliers across all interviewed, and then putting back together a summarization of the findings (Creswell, 2008). Through a coding procedure, which allowed for data reduction, the researcher took nearly fourteen hours of transcribed video and took it apart. This was done to find patterns, categories, themes, and agreements within the data collected. The coding process included desegregating words or groups of words from individual interviewed transcripts and placing them into categories until there were developed themes (Creswell, 2008). The interpreted information was then correlated to the research questions and later placed in themes to identify the findings.

The validation process utilized the triangulation method for acquisition and analysis of data. Triangulation, borrowed from the social sciences, referred to the idea that to establish a fact, one needs more than one source of information (Bogdan & Biklen, 1998). For the purpose of this research, much of the taking apart and putting back together was done with the *Atlas.ti* software. According to their website, the *Atlas.ti* software is the software for qualitative data analysis to reveal meanings and relationships and to ground the findings in the data (atlasti.com, 2017). The software assisted in managing the volumes of data while it also provided an organizational tool for transcripts, codes, and coding.

The goal of the data analysis was to find themes that related to the two main research questions and five subquestions. Each of the leaders interviewed were video recorded and transcriptions were made to ensure that all information provided in the interview was uploaded correctly into the statistical software. The analysis of data followed six steps. First, reflection on the notes taken during the interview (analytic memos) throughout the data collection phase of the study. Second, videos were transcripted and uploaded into the statistical software. Third, a review of the transcripts generated over five hundred codes related to the research questions for analysis. Fourth, each code was assigned a research question or research questions and assessed for development of the most frequently occurring codes into themes. Fifth, an evaluation of the data using the research questions was tabulated and transformed into four findings.

Internal and External Validity

This study was designed in a way to minimize compromises and to obtain quality conclusions from the scores of information gathered. A threat to validity can be in the design and could corrupt the study in a way that the conclusions reached could cause false data (Creswell, 2008). There are two types of threats: internal validity threats and external validity

threats. To build internal validity, each participant was asked the same set of questions to allow for cross interview comparisons. In addition to internal validity, the trustworthiness of the data was considered. According to Lincoln & Guba (1985) qualitative researchers speak of trustworthiness, which simply poses the question 'Can the findings to be trusted?' and where credibility is the equivalent of internal validity in quantitative research and is concerned with the aspect of truth-value. To enhance trustworthiness, the researcher has strived to be transparent with the positive neoliberal-capital stance taken as it pertains to the partnerships. This was a study of successful partnerships competed by an individual that has found recognition in the area. This study does not contain any information about partnerships that fail, because that was not a part of this study.

Selection bias was another important variant to combat external validity threats. For this reason, the participants were chosen using peer recognition for their work in the area of building business-school partnerships in one state of the Midwestern United States with only the top seven most lucrative partnerships selected. Although the fourteen individuals that were interviewed cannot be guaranteed as a true sample size, the facilitation of a consistent interview process helped to make this information transferable.

Data Analysis

Analyzing and interpreting data involved drawing conclusions about it; representing it in tables, figures, and pictures to summarize it; and explaining the conclusions in a narrative to provide answers to your research questions (Creswell, 2008). The qualitative data analysis was the process where the data collected in the interviews was collected into some form of explanation or narrative using the interpretive philosophy (Onlineqda, 2018). The process of data analysis consisted of taking the data apart to determine individual responses, find commonalities

and outliers across all interviewed, and then putting back together a summarization of the findings (Creswell, 2008). The data gathered from the interviews guided the data analysis. The goal of the data analysis was to use the words and advice collected from the fourteen interviews and nine follow-up interviews to create a guide and framework that other leaders could use to assist in building relationships with outside organizations. The researcher used nearly fourteen (14) hours of transcribed video and took it apart. This was done to find patterns, categories, themes, and agreements within the data collected and was assisted with a combination of the use of atlas.ti and traditional hand coding as can be viewed below in illustration one (1).

Illustration 1
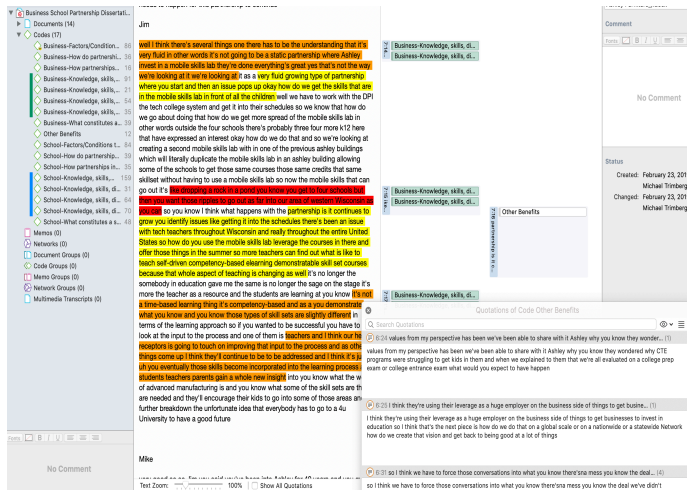
Atlas.ti   Hand Coded
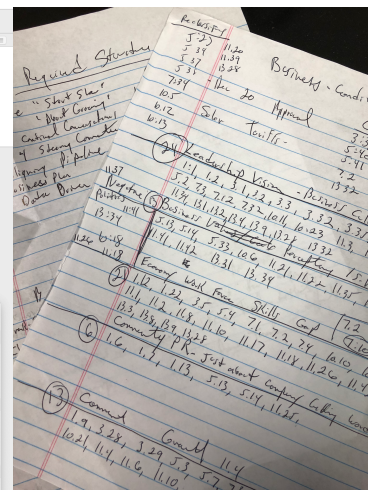
The interpreted information was then correlated to the research questions and later placed in themes that lead to the findings. The data analysis found themes related to the two main research questions and five subquestions. The analysis of data followed six steps:

1. Reflection on the notes

2. Transcription and upload of video

3. Coding of transcripts

4. Codes assigned to research question(s)

5. Evaluation of the data to produce themes related to each of the research questions

6. Themes combined across research questions to produce four findings

Areas of special attention were factors of motivation, unique coincidence and occurrences, the impact on students, as well as any information that other leaders could use to build on the experiences of the interviewed group. Each of the interviews were transcribed using a closed caption software used in video production. The analysis was processed where patterns were identified in three separate ways to find relationships in this cross-case study. The coding software *Atlas.ti* was used to identify data categories, codes, and themes to assist in the research.

Limitations and Bias

Limitations are potential weaknesses or problems with the study identified by the researcher. These limitations help readers to judge the extent to which the findings can or cannot be generalized to other people and situations (Creswell, 2008). Researcher bias is defined as "the selection of data that fit the researcher's existing theory or preconceptions and the selection of data that 'stands out' to the researcher" (Maxwell, 2005, p. 108). The concept of positionality bias in this type of research extends from an understanding that not all knowledge is structured in the same ways. As a researcher, our orientation comes from different worldviews, and as such, tend to construct meaning through our personal experiences. This makes the researcher susceptible to positionality bias when evaluating qualitative source data for this study. With an understanding that with regard to qualitative inquiry, a researcher cannot be totally neutral and objective, procedures were put in place to minimize researcher positionality bias (Maxwell, 2005).

One important limitation to note for this study is the pro-partnership bais of the researcher. As a school administrator that has testified at congressional briefings on business-school partnerships, has won multiple awards for work with business-school partnerships, and was the lead architect of one the largest business-school partnership in the Midwest, the potential of bias was high. While this recognition and relationships created with this topic allowed access to some of the most successful business-school partnerships in the region, this limitation is one that is important to note. Another important note for the reader to consider is that previous realtionships did exist with some of the individuals interviewed for this study. Over the course of building multiple business-school partnerships, many relationship were formed. Some of the partnerships that were identified as successful partnerships, consisted of leaders that the researcher had a relationship with before this study began.

The reputation and professional relationships the researcher had with this topic made bias a high concern. To combat the concern of bias, the research was conducted in a way that repeatedly reminded the researcher of possible bias actions. These reminders were done with notes on the researcher's interview material and continually reminders of bias. Researcher bias was defined as "the selection of data that fit the researcher's existing theory or preconceptions and the selection of data that 'stands out' to the researcher" (Maxwell, 2005, p. 108).

The researcher's close connection and educational philosophy alignment to this topic meant that extra care was taken to minimize any influence the researcher's presence might have played in the interviews. The potential for bias and the personal connection concern was explained before the researcher began each interview and was explicitly presented to study participants with whom the researcher had any level of professional relationships.

The final limitation of this project included the geographic area in which this research took place. The area that many of the interviews were conducted was rich in manufacturing with a majority of employment contained within this sector. According to the Bureau of Labor and Statistics report in 2014, the counties in which a number of individuals were interviewed has over 50% of the area occupations connected to manufacturing. Due to this fact, business-school partnerships focused on the manufacturing and technology fields.

Summary

Chapter Three discussed the research design, setting and participants, instrumentation, procedure, data processing and analysis, ethical considerations, and limitations. Based on the purpose of this study and the research design, the methods described in this chapter allowed for others interested in creating business-school partnerships an insight on the motivations and conditions that existed to build the selected partnerships. It also helped to define what constituted a successful partnership by identifying traits that led to successful partnerships as selected by their peers.

The qualitative interviews used in this research assisted in obtaining the data for the selected business-school partnerships. In the next chapter, key themes and findings from the fourteen (14) participants interviewed will be analyzed.

CHAPTER 4: FINDINGS

Introduction

The purpose of this study was to discover and describe the relationships between high schools and partnering employers as it related to career technical education in the area of manufacturing. Specifically, the questions that guided this research were:

1. What are the organizational impacts of business-school partnerships?

    a. What are the factors and conditions that contribute to developing business-school partnerships?

    b. What constitutes an unsuccessful from a successful partnership?

    c. By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

2. What are the educational impacts of business-school partnerships?

    a. How do partnerships influence the teaching and learning process?

    b. How do partnerships impact students?

The design of this qualitative cross-case analysis was to investigate these questions by the use of face-to-face interviews. The interviews allowed for the research to enter into other people's perspectives (Patton, 2009) and were selected because the researcher was interested in observing how business-school partnerships could influence organizational leadership. Through an analysis of these types of partnerships within the Midwestern states, seven schools and their partnering manufacturing business were identified for this study. The schools and their partnering company ranged from small rural school with enrollments under 900 students to large urban districts with enrollments over 20,000 students. The partnering business varied in

products and size with the smallest company earning $14 million annually and the largest grossing over $4.7 billion annually. In total, there were fourteen interviews for this study, seven school leaders and seven business leaders.

Individual face-to-face interviews were the primary means used to acquire data for this study. Each participant was interviewed in a location of their choice with most interviews requiring approximately forty-five minutes to complete. Nine follow-up phone interviews were needed to clarify questions about partnership information, position titles, and background. Pseudonyms replaced all identifying information including participants name, district/school name, business name, the location of partnership, and all other identifying information had been changed to ensure anonymity. The pseudonyms used for the partnerships and participants purposely used a combination of the phonetic alphabet and arabic numeral system in an effort to assist the reader to differentiate the numerious partnerships and multiple individuals within the partnerships. The partnerships were labeled Alpha-One and included participant Aaron and Adam, Bravo-Two included Betty and Barry, Charlie-Three included Clint and Chad, Delta-Four included Donna and Dan, Echo-Five included Eric and Edward, Foxtrot-Six included Fiona and Frank, and Golf-Seven included Greg and George.

Partnership Profiles

The participants in this study varied significantly from large urban districts of 20,000 plus students to small rural districts with an enrollment of under 900. The partnering manufacturing companies also varied in size from small manufacturers with 63 employees and $14 million earned annually to large manufacturers with 23,000 employees worldwide and annual gross income over $4.7 billion. The classification of interviewed schools followed the State Public Enrollment Master (PEM, 2016) district type classification. The classification of the

manufacturing business as small, medium, or large employer followed the Organization for

Economic Co-operation and development, (OECD, 2019) classification and used the total

number of employees for each interviewed company.

Table 3

Partnership Profiles

SCHOOL DISTRICT	BUSINESS
School District Alpha (Adam-Teacher) • ~ 900 Students • 91% White, 26% Free/Reduced	Business Number One (Aaron-President) • ~ 1600 Employees • $607.6 Million Annually
School District Bravo (Betty-District Admin) • ~ 22,000 students • 49% White, 18% Hispanic, 13% Black, 11% Asian, 100% Free/Reduced	Business Number Two (Barry-President) • ~ 90 Employees • $13.8 Million Annually
School District Charlie (Clint-Principal) • ~ 1600 Students • 92% White, 16% Free/Reduced	Business Number Three (Chad-Manager) • ~ 3000 Employees • $700 Million Annually
School District Delta (Donna-Superintendent) • ~ 2300 Students • 92% White, 19% Free/Reduced	Business Number Four (Dan-President) • ~1800 Employees • $1.3 Billion Annually
Echo School District (Eric-Superintendent) • ~ 10000 Students • 63% White, 19% Asian, 12% Hispanic, 3% Black, 28% Free/Reduced	Business Number Five (Edward-President) • ~180 Employees • $58 Million Annually
School District Foxtrot (Fiona-Superintendent) • ~ 1700 Students • 92% White, 30% Free/Reduced	Business Number Six (Frank-HR Manager) • ~ 3000 Employees • $300 Million Annually
School District Golf (Greg-Superintendent) • ~800 Students • 90% White, 40% Free/Reduced	Business Number Seven (George-Ed Liason) • ~27000 Employees • $5 Billion Annually

The seven school leaders included four superintendents, one community partnership

coordinator, and one technical education teacher as the primary partnership facilitator. The

seven businesses leaders interviewed included four presidents/CEOs, two human resource specialists, and one plant manager as the primary business partnership organizer.

Each of the seven business-school partnerships involved in this study were selected based upon the significance of the partnership in which it was involved. This significance was calculated with a combination of actual and in-kind dollars exchanged between the business and the partnering school. In-kind donations consisted of the many different methods used by business that aided schools that included equipment, materials, or allocation of employee time. The allocation of employee time to work with in schools was the most frequent in-kind donation. A brief profile of each business-school partnership with the primary research study participants is below. Each profile includes pertinent information about the interviewed and the organization they lead as part of the partnership.

Partnership Alpha-One

Table 4

Partnership Alpha-One

School District		Business
School District Alpha (Adam-Teacher) • ~ 900 Students • 91% White, 26% Free/Reduced		Business Number One (Aaron-President) • ~ 1600 Employees • $607.6 Million Annually

Partnership Alpha-One was a collaboration between School District Alpha and Business Number One. According to the State Public Enrollment Master, the school district was classified as a town, fringe cluster territory because it was an urban cluster that was less than or equal to ten miles from an urbanized area. This district had an enrollment of under 900 students with one high school of approximately 300 students. Socioeconomically, this district had 26% of students

eligible for free or reduced lunch with 91% of their students classified as White. School District Alpha had an annual budget of approximately $9 million.

Business Number One was considered a large business according to the Organization for Economic Co-operation and Development with a approximately 1,600 employees (OECD, 2019). It had an annual gross income of over $600 million. Business Number One was considered a privately held company since it does not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Adam.

Adam was the Career and Technology Educator (CTE) for the high school. He reported that his initial program, "was a very stereotypical area where the type of person that took those classes was males who liked to crank wrenches and to get their hands dirty." He was the primary force in his school to partner with the large manufacturing company. He reported, "within a matter of approximately two years, we went from sixty of the same type of students to approximately 230 students out of a total of 330 students taking elective classes with approximately 30% females."

Aaron.

Aaron was the president of this family-owned manufacturing company that was started in this community around the year 1893. According to Aaron, "in a small town, we always had kind of a standard of ethics with our work… my grandfather's quote was always, 'we do business one way, on the right side of the street and our word is our bond.'" Business Number One posted five Core Values: Be Honest, Be Fair, Keep our Commitments, Respect the Individual, and Encourage Intellectual Curiosity. Aaron believed that his company's last core value was a major influencer in their business-school partnership.

The partnership between School District Alpha and Business Number One was a multi-faceted relationship including large donations of money (Over $1 million), equipment, materials, and staff time. The largest manifestation of this relationship was the STEM Center that was donated to the district from Business Number One, but both Adam and Aaron agreed that the bricks and mortar were just a fraction of what the partnership meant to both organizations when considering curriculum and collaboration. This business-school partnership had been established since 2006, the year that Adam was hired in School District Alpha.

Partnership Bravo-Two

Table 5

Partnership Bravo-Two

School District		Business
School District Bravo (Betty-District Admin) • ~ 22,000 students • 49% White, 18% Hispanic, 13% Black, 11% Asian, 100% Free/Reduced		Business Number Two (Barry-President) • ~ 90 Employees • $13.8 Million Annually

Partnership Bravo-Two was a collaboration between School District Bravo and Business Number Two. According to the State Public Enrollment Master, the school district was classified as a city, mid-sized because it had a territory inside an urbanized area and inside a principle city with a population less than 250,000 and greater than or equal to 100,000. The school district had an enrollment of over 22,000 students with five high schools. The high school that hosts this partnership had an enrollment of approximately 800 students. Socioeconomically, 99% of students were eligible for free or reduced lunch with a diversity breakdown of 49% White, 18% Hispanic, 13% Black, and 11% Asian students. School District Bravo had an annual budget of approximately $260 million.

Business Number Two was considered a small business according to the Organization for Economic Co-operation and Development with 90 employees (OECD, 2019). It had an annual gross income of over $13 million. Business Number Two was considered a privately held company since it does not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Betty.

Betty was the Career and Technology Education (CTE) Director for School District Bravo. She reported, "we are a White minority school district so we have a lot of diversity in our school district." She was the primary driver in this partnership and believed that there was a formula to the implementation: "you need a couple of things, you need a business partner, you need a post-secondary partner, and you have to raise a certain percentage of the money in order to be able to do this." She had many manufacturers from which to choose in her district but started the partnership after,

> … the manufacturing alliance K-12 committee and I had been talking with Barry about what we could do. He said to me, you know I understand that you have a passion but you don't know what you're asking for. When you know what you're asking for come back and talk to me.

Betty internalized those words and partnership Bravo-Two was a result of her research around the topic of job shops. She went back to Barry with her idea and after a little work with others, the vision was realized. For her interview, Betty asked to include the primary instructor of the program. His valuable comments and answers were added to Betty's data.

Barry.

Barry was the president of Business Number Two that, according to its website, started in 1946. He was the main proponent on the business side of this partnership and a lead voice for others to follow. As president, Barry believed that "businesses have an obligation, not just an opportunity, but an obligation to help develop the community. I think it's morally the right thing to do." Barry continued,

> The whole issue with the partnerships quite frankly is driven by pretty much one thing, and that is a lack of availability of people for workforce development... given the very low unemployment rates we have particularly in our area, we are at a severe disadvantage in trying to grow our manufacturing businesses.

Barry had also been part of a team that created a manufacturing alliance to collectively address the issues in the business sector. For Barry's interview, he asked to include the executive director of the manufacturing alliance that assisted in the partnership. Her valuable comments and answers were added to Barry's data.

The relationship between School District Bravo and Business Number Two was the primary driving force in a business-school partnership that included many others. With the many different business partners included in the Bravo-Two partnership, this relationship was multifaceted. A large initial combined donation of approximately $400,000 for equipment and in-kind donations allowed this job-shop program to start. According to the journal Market Business News, a job shop was defined as a small company or business that makes specific products or a manufacturing unit that specializes in small quantities of custom-built parts (MBM, 2019). In schools, a job shop is supervised by a teacher, where the employees are the students. Ongoing relationships were required with local metalwork businesses to send invoiced

work for the students to accomplish as part of their job. This relationship, in partnership Bravo-Two had been established since 2012.

Partnership Charlie-Three

Table 6

Partnership Charlie-Three

School District		Business	
School District Charlie (Clint-Principal) • ~ 1600 Students • 92% White, 16% Free/Reduced		Business Number Three (Chad-Manager) • ~ 3000 Employees • $700 Million Annually	

Partnership Charlie-Three was a collaboration between School District Charlie and Business Number Three. According to the State Public Enrollment Master, the school district was classified as rural, distant because it is a territory that was more than five miles but less than or equal to 25 miles from an urbanized area. The school district had a total enrollment of approximately 1600 students with one high school of approximately 500 students. Socioeconomically, the district had 16% of students eligible for free or reduced lunch with 92% of their students classified as White. School District Charlie had an annual budget of approximately $16 million.

Business Number Three was considered a large business according to the Organization for Economic Co-operation and Development with approximately 3000 employees (OECD, 2019). It had an annual gross income of over $700 million. Business Number Three was incorporated in 1941 and in 2004 was converted into an employee-owned business. Business Number Three endorsed its employees to give back and published their guiding principles as "Listening to our customers, serving their needs, supporting our community, and protecting our

environment." Business Number Three was considered a privately held company since it does not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Clint.

Clint was the high school principal in the School District Charlie. He reported that he was looking for new ways to help his students become real-world problem solvers when he read an article outlining how some businesses nationally post problems on the internet. He thought, "why can't we do that in high school? I have four hundred and sixty brains sitting here." Clint went out to find a business that would give his students a problem to solve; he found one.

Chad.

Chad was the engineering and production manager for this employee-owned business. He has been part of the company for over 25 years with many different roles of increasing responsibilities within the organization. When asked about the partnership, Chad reported, "we want them to experience exactly what we experience here in business." He felt strongly that the problem-solving experience needed to be authentic, "on the first day we set up a continuous improvement plan which outlines all the milestone dates and activities that have to be done to complete it on time."

The partnership between School District Charlie and Business Number Three was a relationship based on the continuous improvement cycle. It consisted of solvable problems in Business Number Three that did not have time constraints. Business Number Three provided the problem, the context, the materials, and the employee technical time to assist the class. This business-school partnership had no documented donations of money but was the most intensive with the use of Business Number Three's employee time and donated materials. This relationship had been established since 2013, the year that Clint contacted the local

manufacturing alliance and asked if there was a business that had any problems for his students to solve.

Partnership Delta-Four

Table 7

Partnership Delta-Four

School District		Business
School District Delta (Donna-Superintendent) • ~ 2300 Students • 92% White, 19% Free/Reduced		Business Number Four (Dan-President) • ~1800 Employees • $1.3 Billion Annually

Partnership Delta-Four was a collaboration between School District Delta and Business Number Four. According to the State Public Enrollment Master, the school district was classified as a town, fringe because it was an urban cluster territory that was less than or equal to ten miles from an urbanized area. The school district had an enrollment of around 2300 students with one high school of approximately 600 students. Socioeconomically, 19% of students were eligible for free or reduced lunch with 92% of their students identified as White. School District Delta had an annual budget of approximately $24 million.

Business Number Four was considered a large business according to the Organization for Economic Co-operation and Development with approximately 1800 employees (OECD, 2019). It had an annual gross income of over $1.3 billion. Business Number Four was a family-owned business and considered a privately held company since it does not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Donna.

Donna was the superintendent of School District Delta. She reported, "we have four pillars to our strategic plan: an academic pillar, community engagement pillar, financial pillar,

and an extracurricular pillar; so business partnerships are actually embedded into three of the different pillars." The district leadership had lofty goals for their students but needed help to reach them: "with the Science and Technology Center, what we noticed is that we had dreams for a curriculum that couldn't be followed through because of the limitations of our facilities." Donna desired to give students greater access to career development that helped deepen a long-standing relationship with her district and their community's largest employer.

Dan.

Dan was the president of this family-owned manufacturing company that was started in this community around 1949. Dan described his company as, "focused on hiring good people and treated them like family. We know that our work family and employees are going to be critical." Business Number Four characterized its corporate culture as "people, pride and progress" and used its stakeholder philosophy as the foundation on how it made decisions as a company. "We believe that when all stakeholders are aligned we can truly create long-term stakeholder value. The stakeholders are our employees, our general family, our customers, the consumer, our suppliers, our community, and then lastly the stockholders."

The partnership between School District Delta and Business Number Four was a multifaceted, long established relationship that comprised of many elements that included: large donations of money, equipment, materials, and staff time. The maturity of this relationship has established too many touch points between the teachers and the business to count. This business-school partnership had been established since before both Donna and Dan could remember.

Partnership Echo-Five

Table 8

Partnership Echo-Five

School District		Business
Echo School District (Eric-Superintendent) • ~ 10000 Students • 63% White, 19% Asian, 12% Hispanic, 3% Black, 28% Free/Reduced		Business Number Five (Edward-President) • ~180 Employees • $58 Million Annually

Partnership Echo-Five was a collaboration between the Echo School District and Business Number Five. According to the State Public Enrollment Master, the school district was classified as a city, small because it was a territory inside an urbanized area and inside a principal city with a population less than 100,000. The school district had an enrollment of over 10,000 students with four high schools. The two high schools that hosted this partnership had an average enrollment of approximately 1300 students. Socioeconomically, 28% of students were eligible for free or reduced lunch with a diversity breakdown of 63% White, 19% Asian, 12% Hispanic, and 3% Black. Echo School District had an annual budget of approximately $117 million.

Business Number Five was considered a medium/large business according to the Organization for Economic Co-operation and Development with approximately 178 employees (OECD, 2019). It had an annual gross income of over $58 million. Business Number Five was a family-owned business and considered a privately held company since it did not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Eric.

Eric was the superintendent of Echo School District. He reported, "we are a district of choice and we need to make sure that we have good choices for our students." As a district leadership team, they discovered that they were not preparing students for their future: "we realized a good chunk of our kids needed something more than a four-year (degree)." He was concerned with how well his district prepared students for life after graduation. "Bottom line, how well are we preparing our students when a lot of our employers were saying they don't have skilled labor." Eric desired to answer the call of his community to provide students with the skills of the future.

Edward.

Edward was the president of this family-owned manufacturing company that started in this community around 1874. Edward described,

> We very much have a commitment to the community that we live and work in, yet we
>
> want to be able to produce high-quality goods for our customers. We want to employ
>
> people in the community but we also have to get a reasonable economic return for our
>
> shareholders or else it doesn't work. The company's website promoted the company as
>
> built upon a strong foundation of family values, history, and innovation that comes alive
>
> through our loyal and dedicated people.

Business Number Five was one of nearly a dozen organizations that partnered with Echo School District to provide the district's two high schools with the buildings and equipment needed to teach advanced manufacturing. With the many different business partners in the Echo-Five partnership, the relationship is multifaceted. The co-op between the many businesses and the school district raised an initial combined donation of approximately $4.2 million for

equipment and construction. The ongoing advisory committee met monthly and enabled

stakeholders from the businesses and schools to continue to evolve the relationship. This

advisory committee had conversations that range from buildings/equipment needs to curriculum

and work-based learning opportunities for the students. This relationship had been established

since 2015.

Partnership Foxtrot-Six

Table 9

Partnership Foxtrot-Six

School District		Business
School District Foxtrot (Fiona-Superintendent) • ~ 1700 Students • 92% White, 30% Free/Reduced		Business Number Six (Frank-HR Manager) • ~ 3000 Employees • $300 Million Annually

Partnership Foxtrot-Six was a collaboration between School District Foxtrot and Business

Number Six. According to the State Public Enrollment Master, the school district was classified

as a suburb, small because it was a territory outside a principal city and inside an urbanized area

with a population less than 100,000. The school district had an enrollment of around 1700

students with one high school of approximately 500 students. Socioeconomically, 30% of

students were eligible for free or reduced lunch with 92% of their students identified as White.

School District Foxtrot had an annual budget of approximately $20 million.

Business Number Six was considered a large business according to the Organization for

Economic Co-operation and Development with approximately 3000 employees (OECD, 2019).

It had an annual gross income of over $300 million. Business Number Six was a family-owned

business and considered a privately held company since it did not have many stockholders and

was not publicly traded on any stock exchange (Chen, 2018).

Fiona.

Fiona was the superintendent of School District Foxtrot. She reported "several years ago we started looking at how do we improve or enhance our kids' experiential learning." As a district leadership, they had many goals but found that they needed help: "we were looking to get kids more work kind of experiences." To get to this vision, she stated, " we needed to define what does experiential learning even look like and how do we define it." She reported that they heard about the Alpha-One partnership: "they were kind of a catalyst for this, so we started talking with Company Number Six."

Frank.

Frank had been recently promoted to the human resource department when this partnership began. Having over two decades of experience in the company made him a fit for the business-to-school liaison. When asked about the partnership, Frank reported,

> I think it really was bred out of the culture that [Business Number Six] had defined, you know a culture of working together, you can't survive without good partnerships no matter how good you think you are, you still need partnerships.

When speaking about the partnership, Frank believed,

> It was extremely important to start with the teachers and education because if the teachers and educators don't know who [Business Number Six] is or what they do, how in the world are the students going to know what we do.

The partnership between School District Foxtrot and Business Number Six was a relationship based on improving teacher knowledge by using experiential learning through teacher externships. When Frank reflected on his partnership, he measured success as,

When I first took the position, I did a lot of phone calls. I did a lot of presenting, I was going to a variety of different schools and Chamber events. About four years into the last five years I was getting those phone calls, I was getting emails, and text messages from students wanting to do co-ops, wanting to take a look at youth apprenticeships here. This was when he knew his work was worthwhile.

Partnership Golf-Seven

Table 10

Partnership Golf-Seven

School District		Business
School District Golf (Greg-Superintendent) • ~800 Students • 90% White, 40% Free/Reduced		Business Number Seven (George-Ed Liason) • ~27000 Employees • $5 Billion Annually

Partnership Golf-Seven was a collaboration between School District Golf and Business Number Seven. According to the State Public Enrollment Master, the school district was classified as rural, remote because it is a territory that is more than 25 miles from an urbanized area and is also more than ten miles from an urban cluster. The school district had an enrollment of around 800 students with one high school of approximately 200 students. Socioeconomically, 41% of students were eligible for free or reduced lunch with 90% of their students identified as White. School District Golf had an annual budget of approximately $10 million.

Business Number Seven was considered a large business according to Organization for Economic Co-operation and Development with approximately 27,000 employees (OECD, 2019). It had an annual gross income of nearly $5 billion. Business Number Seven was a family-owned business and considered a privately held company since it did not have many stockholders and was not publicly traded on any stock exchange (Chen, 2018).

Greg.

Greg was the superintendent of School District Golf. He reported, "during the course of rethinking what we do in this area of CTE we came up with an idea of partnering." He continued by stating, "this is my 16th year here, for the first 12, I had no communication whatsoever with Business Number Seven. A lot of misconceptions, a lot of misunderstanding. a lot of lack of anything on my part." That changed when Business Number Seven needed an auditorium for a large corporate gathering and asked Greg if the district would host the event. That single event started a new relationship for his district and three other surrounding districts as they worked to answer the skills gap question.

George.

George was the education liaison for Business Number Seven. He had worked for this company for over 40 years and had traveled the world researching best educational practices in some of the most well-known settings. George reported, "part of Business Seven's culture is to be involved in the community, and the owners have been, over the years, very involved in all aspects of the community." When speaking about the partnership, George believed that "drivers behind starting an education partnership, were quite frankly, the company was not getting enough applicants for design and engineering technology type fields."

The partnership between School District Golf and Business Number Seven was a relationship based on a shared vision of improved education for their entire community. School District Golf was one of four schools in a co-op where George believed,

> The ongoing relationship between Business Seven and the four co-op schools will go
> through a process of identifying what is going on in education, what is going on in
> industries, and then matching those things up and saying how do we improve the

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opportunities for our kids, our adults, our communities in terms of improving economics through jobs.

The relationship between School District Golf and Business Number Seven was a partnership that included four school districts. This partnership provided the surrounding schools with the curriculum and equipment needed to teach STEM education inside a mobile laboratory that rotated between schools. With four different district partners in the Golf-Seven partnership, this relationship was multifaceted. A large multi-million dollar donation for tractor, trailer, equipment, and staff, along with the endless number of in-kind hours donated, made this an impressive partnership. An ongoing advisory committee enabled the relationship between Businesses Seven, post-secondary, vendors, and the four school districts to continue to grow the programs and curriculum This relationship had been established since about 2015.

Cross-Case Analysis

The cross-case analysis illustrated the necessary skills, knowledge, and motivational factors needed for business leaders and school administrators to collaborate. The methodology of the cross-case study was a three-part analysis where themes were defined for the 561 total data points (274 Business & 287 School). The codes were analyzed in three distinct groups:

Table 11

Interview Groups

INTERVIEW GROUPS		
Group A	Analysis of Business Leaders	Seven Interviews
Group B	Analysis of School Leaders	Seven Interviews
Group C	Analysis of All Leaders	Fourteen Interviews

This cross-case analysis was conducted to determine patterns and themes between the interviews given to business leaders and interviews given to school administrators. To

accomplish this, it was necessary to first identify the themes and patterns for the business leaders (Group A) and school leaders (Group B) in individual case studies. The findings from the analysis of the two individual case studies were then used to build the cross-case analysis to compare how the leaders in both organizations have common experiences, motivations, themes, and goals (Group C).

The cross-case analysis extended the investigator's expertise beyond the single case. It provoked the researcher's imagination, prompted new questions, revealed new dimensions, produced alternatives, generated models, and constructed ideals and utopias (Stretton, 1969). The definition of a case study for the purpose of this research was, "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 1994, p. 13). The research questions were the narrowing of the purpose statement that helped to define what specific questions the research seeked to answer (Creswell, 2008). The following analysis was divided into fifteen parts (five research questions and three groups) to allow Group A, Group B, and Group C's responses to be analyzed using the foundation of this research, which was the questions. Table 12 illustrates the research questions and the relating themes.

Table 12

Business-School Partnerships

What are the organizational impacts of business-school partnerships?

What are the factors and conditions that contribute to developing business-school partnerships?

> Theme A- Initial Perceptions

> Theme B- Pressure-Economic, Political, & Community

> Theme C- Leadership and Culture

> Theme D- Community/School Improvement

What constitutes an unsuccessful from a successful partnership?

> Theme A- Tangible/Student Results

> Theme B- Lasting Relationship

> Theme C- Changed Perceptions

By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

> Theme A- The Right People

> Theme B- Shared Mission

> Theme C- Required Structure

What are the educational impacts of business-school partnerships?

How do partnerships influence the teaching and Learning Process?

> Theme A- Impact on Classroom Teacher

> Theme B- Authentic Learning Experiences

> Theme C- Pride & Engagement

How do partnerships impact students?

> Theme A- Improved Student Experiences

> Theme B- Preparing Students for Life

Organizational Impacts of Business-School Partnerships

Factors and Conditions that Contribute

Table 13

Organizational Impacts of Business-School Partnerships

Research Question 1: What are the factors and conditions that contribute to developing business-school partnerships?
Theme A - Initial Perceptions
Theme B - Economic Pressure
Theme C - Leadership and Culture
Theme D - Community Improvement

To facilitate deeper analysis of the factors and conditions that contributed to the development of the business-school partnership, the data supported breaking this question into four themes to help illustrate the main commonalities of our business leaders. The four themes included Initial Perceptions, Economic Pressures, Leadership & Culture, and Community Good. One unintended theme gathered with research question one was the fact that each of the businesses selected for this research were a privately held company and not publicly traded on any stock market. This fact was only identified after the seven business interviews were completed.

Initial Perceptions

The theme Initial Perceptions was one of the themes under the research question, "what are the factors and conditions that contribute to developing business-school partnerships". The working definition of this theme was data gathered in the interviews about any thoughts or misconceptions the business leaders had before getting involved with the partnership. The initial perceptions were best explained by Frank in his first meeting with the school, "it was interesting

because originally it felt like you were sitting in a room that was full of icicles." The data showed a significant number of business leaders who identified apprehension between business and schools. According to Barry, "I'd say the biggest barrier is how highly politicized the education process is in the state"; he felt that, "if that could be dealt with, that would be the single biggest positive impact you would have on the ability for our collaboration."

A reported political issue this group identified as part of the conditions and factors of partnership was the School Report Card. As Barry stated, "you get what you measure, and if you pick poor measurements you do not get the results" he continued, "report cards don't get measured for this kind of stuff [Partnerships], they get measured on stuff that quite frankly is not very relevant to business."

Aaron's comments on why his business moved past some of the initial perceptions was another common theme for all business leaders in this research. "Let's all be on the same side, even if the teachers are voting Democratic and the business leaders voting Republican. Let's not worry about that. Let's just work on our kids and our business will benefit."

Not all of the business leaders held initial misperceptions. Dan from the Delta-Four partnership and member of the most mature partnership interviewed, explained how working with the community and all stakeholders was a philosophy handed down from his father. He said, "we believe that when all stakeholders are aligned we can truly create long-term stakeholder value. The stakeholders are our general family and employees, our customers, our community, and then lastly the stockholders. In all of those first four cases, he knew that if we were aligned in all working together that each and every one of those stakeholders would benefit from our success."

Economic Pressure

The theme Economic Pressure was one of the themes under the research question, "what are the factors and conditions that contribute to developing business-school partnerships." The working definition of this theme was based on the data gathered in the interviews about any economic pressures felt by our business leaders that helped to encourage the partnership. Every one of the business leaders interviewed made a comment similar to George, "we were struggling to find technicians and engineers for manufacturing as well as production employees that had current skill sets that match what industry now coins as industry 4.0." Edward concurred by saying, "a problem for the company involves access to the properly trained and qualified labor." To put this economic pressure into context, George stated, "I relate this to when I was a kid. We all, for the most part, grew up on farms and we knew what pneumatics were and we knew what hydraulics were... For a lot of reasons kids go through the school systems now and they don't have those fundamental skills." The words of Chad helped to give insight on why business started to take interest in high schools, "fields such as machinist and electromechanical technicians, when you try to get them in an internship while they're in college, they're all spoken for. You have to reach a little deeper into the high schools."

Leadership and Culture

The theme Leadership & Culture was one of the themes under the research question, "what are the factors and conditions that contribute to developing business-school partnerships." The working definition of this theme was based on the data gathered in the interviews about missions, visions, or cultures in their organizations that helped to inform their partnership. This theme was mentioned by every business leader and was the most mentioned theme in the research questions about the factors and conditions that contributed to the partnership.

Frank believed that their partnership, "was bred out of [Business Number Six] president's culture of working together and teamwork. You can't survive without good partnerships no matter how good you think you are, you still need partnerships." Aaron supported these comments with, "you can't force culture you have to hold an expectation for how we behave together with our constituents." The preponderance of evidence identified Leadership and Culture as a factor and condition for partnership by those interviewed. Three of the leaders mentioned the importance to look to the future with partnerships. Dan said, "you form these partnerships really for the long term. If you're waiting to form these partnerships when you're in kind of crisis mode, I don't think you're going to get a good end product."

Community Improvement

The theme Community Improvement was one of the themes under the research question, "what are the factors and conditions that contribute to developing business-school partnerships". The working definition of this theme was based on the data gathered in the interviews about the conditions and factors that concerned the accomplishment of community improvement that informed their partnership. This theme was mentioned by six of the seven business leaders and demonstrated how each of the businesses had a commitment to the communities in which they resided.

Barry statements about his beliefs in community commitment was in line with that of the majority of the group, "I do think businesses have an obligation, not just an opportunity but an obligation to help develop the community, I think it's morally the right thing to do so." George went on to say, "Business Number Seven's culture is to be involved and the owners have been very involved in all aspects of the community." Dan's comments summed up what nearly all the business leaders mentioned, "the main driver of why I have a strong partnership is that you can

help shape and influence where things are headed. This is going to be better for the broader community, not necessarily how can I make this great for my business."

An Unsuccessful vs. Successful Partnership

Table 14

Unsuccessful vs. Successful Partnerships (Business)

Research Question 2: What constitutes an unsuccessful from a successful partnership?
Theme A - Tangible Results
Theme B - Lasting Relationship
Theme C - Changed Perceptions

To facilitate a deeper analysis of what distinguishes an unsuccessful from a successful partnership, this question was further broken down into the three themes that illustrated the main commonalities of our business leaders: Tangible Results, Lasting Relationship, and Changed Perception.

Tangible Results

The theme Tangible Results was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this subgroup was based on the data gathered in interviews by our business leaders that referred to tangible results that constituted a successful from an unsuccessful partnership. This theme was mentioned by every business leader and was the most mentioned topic under the research question, what constitutes an unsuccessful from a successful partnership.

According to the data, the indicator of success each of the business leaders used was an increase in available skilled labor. George gave the best synopsis, "the serious part of this partnership is about jobs. That's what creates economic opportunity in a community and improves economics. You know one of the main drivers of economic improvement is

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manufacturing." In each of the interviews, the business leaders mentioned a Return on Investment (ROI) consideration. Edward mentioned, "fifty thousand bucks a year, given turnover rate, recruiting costs, and everything else, make that back just like that." Economically he felt, "I think it was a no-brainer... what we spend on advertisement, recruiting, turnover, quality related issues, it was absolutely no brainer."

A number of the business-partnerships had posted metrics and annual goals. According to Barry in partnership Bravo-Two, "we chose to measure enrollments in certain disciplines... so those enrollments we picked to measure are machine electromechanical assembly or welding." Their steering committee then tracked those numbers and reported back to all participating companies, "if those enrollments are going up then we believe the mission is on the right path. If you look at the numbers in those three areas they've tripled or quadrupled over the course of the last ten years." Not all leaders were solely worried about the return. When Aaron from the Alpha-One partnership was asked about ROI, he responded, "part of me doesn't really care."

Lasting Relationship

The theme Lasting Relationship was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by our business leaders that referred to how their partnership built structures to ensure a lasting relationship between the school and their business. In every business-school partnerships except one, there was a regular team of people that periodically reviewed the partnership. Although some "steering committees" were more formal than others, the data showed a strong commitment to continued relationships.

Dan made the case for the lasting relationships and continued collaboration when he stated, "you're not going to see the benefit, I don't believe, in year one." When Edward described

his partnership, he made it clear that it was a lasting commitment, "I'm pretty deliberate when I use the word 'partnership' and when I don't use the word partnership because you can give money to things but that doesn't necessarily mean a partnership." Frank's commitment matches that of all the business leaders,

> I see there's a lot of momentum but it's never really going to end. I'm truly a continuous improvement kind of thinker and we've got to continue to improve because after the millennial generation you know what's going to be the next generation.

Changed Perception

The theme Changed Perception was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by our business leaders that referred to how their partnership had impacted the changing of perceptions. Although it was not one of the prevailing themes, it was mentioned by four of the business leaders and an important consideration for business-school partnerships in the area of manufacturing.

Edward's company came to an understanding that being located in the Midwest had its challenges, "we realized that we have to recruit talent from the kind of people that grew up in Minnesota, Michigan, Wisconsin, or they are not going to stick around for the 50-below wind chills." Beyond the heartiness of the people who had changed perceptions, there was a desire to change peoples' minds about jobs in manufacturing. Dan said, "I would hope that there would be a growing interest of people desiring to get into the food industry both from a manufacturing standpoint to a development standpoint as well."

Table 15

Studying Business-School Partnerships to Improve Future Endeavors (Business)

What are the organizational impacts of business-school partnerships?
Research Question 3: By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?
Theme A - The Right People
Theme B - Shared Mission
Theme C - Required Structure

The research question that referred to the knowledge, skills, disposition, and resources that can inform future business-school partnership gathered nearly one-third of the total data points from our business leaders. To facilitate a deeper analysis, this question was further broken down into three themes to illustrate the main commonalities of our business leaders: The Right People, Shared Mission, and Required Structure.

The Right People

The theme The Right People was one of the themes under the research question, "how the knowledge, skills, disposition, and resources can inform future business-school partnership endeavors". The working definition of this theme was based on data gathered in the interviews about the group make-up, mentality, or information about having the right people to help build and guide the partnership. This theme was mentioned by every business leader except one.

Frank helped define the "right person", "you've got to just put your egos in a box at the door and come in with an open mind. Determine, between education and industry, what is going to work best for both of us." When selecting members to help build the partnership, Frank went on to say, " I would pick players both on the educational side and on the business side that are

looking at things with blinders wide open." Chad shared that, "I think the key component is going to be to find the right person, I think it's going to be a little bit tricky but you got to find the right person that sees the value."

In each of the interviews, there was a reference to the superintendent. "It is easier to get an alignment when it starts from the top," believed Edward, "understanding the power structure of school districts, of the superintendent and the board, and if the people at the top of the pyramid are truly all in or not." Lastly, Dan felt it important to get people that see this as leverage. "Get actively engaged in the process and work together to leverage the resources that you have in your community. The school is a great opportunity."

Shared Mission

The theme Shared Mission was one of the themes under the research question on, "how the knowledge, skills, disposition, and resources can inform future business-school partnership endeavors". The working definition of this theme was based on the data gathered in the interviews about the process and need to find a common purpose, agreed upon goals, or a shared mission. This theme was mentioned by every business leader. The importance of a shared mission between the schools and the business was the single most common theme to emerge from all of the business leaders.

Our business leaders agreed that there needed to be a shared mission between the school and the business. One interesting fact was how much their advice agreed with each other. Edward's thoughts helped to set the stage. "A real partnership in the case of industry and education is between two very different entities with very different missions; one could argue maybe they shouldn't be." In all of the data, there was a sense that creating a shared mission was

taking the first step much like Chad stated, "We didn't have any great epiphanies the first day, but we kept the communication."

The mechanics of those discussions had much agreement. George's statements helped define how a shared mission might come to be: "go through a process of identifying what was going on in education, what was going on in industries, and then matching those things up and saying how do we improve the opportunities for our kids, our adults, our communities." The operation of how exactly to do this was best stated by Dan:

"I would set up an opportunity for the business to tour the school to understand the school's capabilities. Where their focus is and understands the broad range of programming that school may or may not offer. Then I would reciprocate that offer and have the administration or members of the administration come and learn about who you are, tour your facilities and understand where you're headed from a strategic standpoint. Talk about both sides at both places, what are your challenges, what are your opportunities, where do you see the biggest opportunities. Allow those meetings or visits to really be the enabler to starting a conversation about the ideas that come through.

Required Structure

The theme Required Structure was one of the themes under the research question on, "how the knowledge, skills, disposition, and resources can inform future business-school partnership endeavors". The working definition of this theme was based on the data gathered in the interviews about the structure of the partnerships. This theme was mentioned by every business leader except one.

When looking at business-school partnerships through the eyes of experienced businessmen this data can be extremely important for future partnerships. A major agreement

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from our business leaders was shared best by George, "start slow and really know why you want to do it." He went on to explain,

> We're looking at it as a very fluid growing type of partnership... you work on one thing and get it going in the right direction and then start on the next one to get it going in the right direction.

In five of the seven partnerships, the ongoing conversation came during regularly scheduled business-school partnership meetings. Four of the partnerships had formal steering committees. In the discussion about what the steering committee should talk about, Edward stated,

> Relatively simple things like we should have the same welding equipment, are the easy things. The tougher things are, let's make sure the curriculum is aligned between the technical college and the high schools, and then let's make sure that the curriculum at the high school is aligned with what the employers in the area need for kids coming out of high school.

Barry agreed, "let's keep building that pipeline at the high schools, the middle schools, the tech college, and four-year college levels." George shared that the pipeline should be competency-based, "it's not a time-based learning thing, it's competency-based learning."

There were several mentions of how the partnership should be run. Many of the leaders agreed it should be treated like a business. Aaron thought it was important for the partnership to have a plan, "don't just come with a vision; be prepared with a plan that you know a business leader can look at like a business person does and say, 'this is a good plan or this is a plan that needs a little work, but I like it.'" The importance of a steering committee was supported with Edwards advice. "It's got to produce results and it has to be financially sound." For each of the

leaders, there was an agreement on the speed of the partnership. That was best expressed by Chad,

> It's not going to be at the speed of business, you have a one-hour class that meets once a
> day. They have a lot of other things they have to get done in the class aside from your
> project so we have to be realistic when building that timeline. You have to be realistic
> and it has to be a low priority project.

Educational Impacts of Business-School Partnerships

How Partnerships Influence Teaching and Learning

Table 16

The Influence of Partnerships on the Teaching and Learning Process (Business)

What are the educational impacts of business-school partnerships?
Research Question 4: How do partnerships influence the teaching and learning process?
Theme A - Impact on Classroom Teacher
Theme B - Authentic Learning Experiences

To facilitate a deeper analysis of how partnerships influence the teaching and learning process, this question was broken down into two themes to help illustrate the main commonalities of the business leaders: Impact on Classroom Teachers and Authentic Learning Experiences for students. This topic was addressed by every one of the business leaders but had the lowest frequency of comments when compared to all other codes in this project.

Impact on Classroom Teacher

The theme Impact on Classroom Teacher was one of the themes under the research question, "how partnerships influence the teaching and learning process". The working definition of this theme was based on the data gathered in the interviews about how the

partnership impacted the teacher or what they taught. This theme was mentioned by every business leader.

The business leaders agreed that their partnerships impacted the teaching and learning process but disagreed about how. Frank focused on teachers to ensure the partnership would be successful, "I thought it was extremely important to start with the teachers." Dan added, "our interactions with those teachers are much stronger because it's an easier thing for us now." George's comment reflected his belief that building relationships with the adults will continue to evolve curriculum over time, "eventually those skills become incorporated into the learning process." Frank had experienced the change much quicker, "two and a half months later, where they were literally changing their curriculum in the classroom."

Authentic Learning Experiences

The theme Authentic Learning Experiences was one of the themes under the research question, "how partnerships influence the teaching and learning process". The working definition of this theme was based on the data gathered in the interviews about how the partnership allowed students to experience the curriculum and learning with real-world examples. This theme was mentioned by every business leader.

Chad believed his partnership helped to answer the question, "when are you going to use this in the real world." He continued with, "the teachers told us that sometimes it's stuff that they teach, but sometimes it just means more when they see it coming from a business because it becomes a little bit more real." Frank went as far to bring the real-world into the classroom, "we started bringing in parts like a John Deere hood or Harley-Davidson fender and the teacher redesigned those questions to be more like, this hood is X number of cubic inches in size, if the

specific gravity of the engineering grade plastic is X, what would you overall weight of the part be?"

Dan took this concept a bit farther,

It might be having your chemistry class work in the center and see the chemistry behind plants, or the culinary team might be focused on some of their own food and understand how their food is grown to help them become better culinary students.

In six of the seven partnerships, employees from the partnering business visited the schools to directly impact the teaching and learning process. Aaron shared, "we have some engineers who are good at getting in front of a class... and those are the men and women we can send over there and inspire a class on what an engineer does."

How Partnerships Impact Students

Table 17

Impact of Partnerships on Students? (Business)

What are the educational impacts of business-school partnerships?
Research Question 5: How do partnerships impact students?
Theme A - Improved Student Experiences
Theme B - Preparing Students for Life

To facilitate a deeper analysis of how partnerships impact students, this question was broken down into two themes to illustrate the main commonalities of our business leaders: Improved Student Experiences and Preparing Students for Life. This topic was addressed by six of the seven business leaders.

Improved Student Experiences

The theme Improved Student Experiences was one of the themes under the research question, "how do partnerships impact students". The working definition of this theme was

based on the data gathered in the interviews about how the partnership impacted students directly or indirectly and was mentioned by every business leader except one.

Looking at the data, there was almost uniform agreement that the business-school partnerships gave students a richer experience, Aaron shared, "I think it gives them a holistic look at the world." Dan supported this view when he stated,

It provides a much broader education. Even students who are college-bound have the opportunity to take classes and get exposed because the program exists. I strongly believe that a broader more well-rounded education covers more than just the college preparatory classes, and in the long run benefits students immensely.

He added, "informing these partnerships and exposing kids to these things, I think gives them an opportunity to almost test the waters before fully committing to a career or pathway." Chad connected the richer experience with the skills needed in the workplace, "the students are getting the problem-solving skills and working as a team. The skills they're getting are true experience as to what we do in business and manufacturing."

Preparing Students for Life

The theme Preparing Students for Life was one of the themes under the research question, "how do partnerships impact students". The working definition of this theme was based on the data gathered in the interviews about how the partnership assisted in helping students prepare for life after graduation.

Over half of the interviews had comments about the economics of the partnerships for students. Edward's statement was a good representation of what many of our leaders stated, "how much better off are kids that aren't directionless and have a pathway they feel good about." He added, "you have a student go to Walmart and make $13 an hour, or have the skills to come

here at $22; that is a different life trajectory." Frank shared, "they're prepared and ready for life after they leave school, whether that's going into the military, going into a two-year technical college, a four-year degree, or enter directly into the workforce and use tuition reimbursement."

According to our business leaders, economics came down to having skills. Chad stated, "the students are getting the problem-solving skills and working as a team. They're getting true experiences and skills" George added, "part of our efforts are not only just focused on getting people into manufacturing and especially these technical areas, but it's also working with the schools on how we teach these soft skills or what I call innovation skills."

Factors and Conditions that Contribute to Business-School Partnerships

Table 18

Factors and Conditions that Contribute to Partnerships (School)

What are the organizational impacts of business-school partnerships?
Research Question 1: What are the factors and conditions that contribute to developing business-school partnerships?
Theme A - Initial Perceptions
Theme B - Pressure-Economic, Political, & Community
Theme C - Leadership and Culture
Theme D - School Improvement

To facilitate a deeper analysis of what the factors and conditions were that contributed to the development of the business-school partnerships, the data supported breaking this question down into four themes to help illustrate the main commonalities of our school leaders: Initial Perceptions, Political & Community Pressures, Leadership & Culture, and School Improvement.

Initial Perceptions (School)

The theme Initial Perceptions was one of the themes under the research question, "what are the factors and conditions that contributed to the development of the business-school

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partnerships". The working definition of this theme was based on the data gathered in the interviews about any thoughts or misconceptions the school leaders had before getting involved with the partnership. This theme was mentioned by every school leader except one. One interesting side note was the fact that the one school leader that did not mention anything about initial perceptions in the interview was the one partnership that reported having been established since both business and school leader can remember.

Fiona's statements were a good overview of the school leaders initial perceptions, "we assumed a lot of things but we really didn't know." One story that illustrates how some schools wrongly assumed things about business comes from partnership Alpha-One. Adam reported,

There were a lot of misconceptions. One of the areas taught throughout the entire school was small engines. The misconception was that we have [Business Number One] in town that puts small engines on devices every single day; therefore we should probably teach small engines." After touring the plant with the administration team and others, Adam asked the vice-president, "where is your small engines department? The vice-president chuckled and he says, well we don't have a small engines department... the only thing we do with a small engine is tightening four bolts and attach throttle cable.

In Greg's interview, he blamed himself for his district's early misconceptions, "It's my 16th year here. For the first 12, I had no communication whatsoever with [Business Number Seven]. A lot of misconceptions, a lot of misunderstanding, a lot of lack of anything on my part." Clint offered a suggestion to why some of these misconceptions existed. He believed that we have educators that are institutionalized after being in education their entire life: "institutionalized teachers from when they begin kindergarten to where they are today; they've only been in education."

Lastly, our school leaders had thoughts about the financial perceptions of business-school partnerships, Eric stated, "in the past, we would hide behind the statement, businesses just don't understand, that's a crock." He believed that one issue was that, "educators are always going back to people saying, 'hey we need donations'." Fiona shared a comment from her initial conversation that supported Eric's example, "well what do you want from us now; you always say you want stuff but you never follow through."

Political and Community Pressure (School)

The theme Political & Community Pressure was one of the themes under the research question, what are the factors and conditions that contributed to the development of the business-school partnerships. The working definition of this theme was based on the data gathered in the interviews about any pressures felt in the community or by the political climate that helped to encourage the partnership. This theme was mentioned by five of our seven leaders.

Betty shared, "I think it's important that they don't put us in any kind of political position in any way. It's all about what's good for kids and good for schools." In general, the data showed our school leaders perceived getting pressure from business to put out higher skilled students. Adam shared, "the terminology that was coming out was 'we need problem solvers who can work in teams, who knows a little bit about a lot of things, who understand lean manufacturing, who have a continuous improvement mindset'." Greg shared a story on how he shared his frustrations with his partnering business, "I said, 'I'm so tired of getting my ass kicked... I'm just trying to find a team and if you're not the right folks help me find the ones that are.'"

Leadership and Culture (School)

The theme Leadership & Culture was one of the themes under the research question, "what are the factors and conditions that contributed to the development of the business-school

partnerships". The working definition of this theme was based on the data gathered in the

interviews about missions, visions, or cultures in their organizations that helped to inform their

partnership. This theme was mentioned by six of our seven school leaders.

The data for leadership and culture was in general agreement that school leaders needed

to do this work. Greg's statement was a good synopsis of how most the school leaders thought,

"I'm not so sure that it should have to come down to some school superintendents trying to drive

this and lead this; but when you look at it, we're probably some of the best equipped for it."

According to Eric,

> You need the guts to go out to the companies and say, 'we're trying to prepare all our kids
>
> and we're not doing that now. We can't do it without you; we need your help. Just like I
>
> think you need help to get the skilled labor you need.'

Four of the interviews included the topic of the "right person with the right visions".

Fiona said, "there's a certain makeup of the person who really gets this and why they're doing it

…. they're visionaries that see the big picture, but they also understand what it takes to get an

idea to fruition." Donna believed that with the right person, you should have a mission and a

vision to support the work. In her district, "we have four pillars to our strategic plan: an

academic pillar, a community engagement pillar, financial pillar, and an extracurricular pillar,

business partnerships are actually embedded into three of the different pillars."

Each of our school leaders made mention of the change in culture from a four-year

college preparation into something different. Fiona suggested, "I would make an argument for

the whole philosophy of why we need to be more diverse and that we can't just focus on the four-

year college university track, because that's just not realistic anymore." Greg added a thought

about how we can ensure not to repeat this, "make sure that doesn't happen again, right, the partnerships are the only way to make sure that doesn't happen again."

School Improvement (School)

The theme School Improvement was one of the themes under the research question, "what are the factors and conditions that contributed to the development of the business-school partnerships". The working definition of this theme was based on the data gathered in the interviews about the conditions and factors around school improvement that informed their partnership. This theme was mentioned by all seven of our school leaders.

In each of the interviews, our school leaders had views on how the business-school partnerships helped them improve their schools. Greg mentioned how he approached this topic, "we were coming from a little different perspective. It wasn't about just hitting him up for cash; it was about trying to make something better." Fiona elaborated on how "something better" could look,

> We do a really good job of doing school here... if we're seriously committing to getting a well-rounded kid as opposed to just preparing them to go to college, we need to do a better job of putting all those components in place.

Each of the leaders made comments about the big picture of school change. Greg stated, "we're not failing by lack of interest or effort, we're failing because we haven't modernized." He then added, "if you're frustrated and you don't like the world, let's change it, we're educators." Andy capped this theme off best with the statement, "if we work together we could both achieve great things."

An Unsuccessful vs. a Successful Partnership (School)

Table 19

An Unsuccessful vs. a Successful Partnership (School)

What are the organizational impacts of business-school partnerships?
Research Question 2: What constitutes an unsuccessful from a successful partnership?
Theme A - Tangible/Student Results
Theme B - Lasting Relationship
Theme C - Changed Perceptions

To facilitate a deeper analysis of what differentiates an unsuccessful from a successful partnership, the data supported breaking this question down into three themes: Student Results, Lasting Relationships, and Changed Perception.

Student Results (School)

The theme Student Results was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by our school leaders that referred to student results that constitute a successful from an unsuccessful partnership. This theme was mentioned by every school leader and was the most mentioned topic under the broader code of factors and conditions that contributed to the partnership.

The topic of measurement for success had the school leaders using both quantitative and qualitative data to define success. Eric stated, "businesses want and deserve metrics; they're giving you money and should ask, 'how do you know what success looks like?'" Donna shared how they measured success, "we look at enrollment and we look at the careers that students are going into." Greg's partnership measured by, "how many kids are leaving here with skill certificates and or advanced credits." Fiona spoke to the number of students impacted by, "job

shadows, apprenticeship and the partnerships with robotics and with project grill." Summed up well, Adam stated what the measures should be, "getting students excited about what they're doing and interested in educational opportunities. Kids discipline problem goes down as the yearning to learn and the ability to become lifelong learning goes up."

Lasting Relationship (School)

The theme Lasting Relationships was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by the school leaders that referred to how their partnership built structures to ensure a lasting relationship between their school and the business. This theme was mentioned by five of the seven school leaders.

Fiona shared a theme found in many of the partnerships, "the employees were really, really excited and proud about connecting with the school... those relationships are the key, and I think that's what will keep this partnership strong." Some of the other partnerships had organized teams to help guide the partnerships. Eric shared, "The guiding team is critical. They're critical because they're the businesses and our teachers in the same group saying, 'how's it going?' Things are dynamic, as they change, then you need to adjust." Greg shared, "we meet quarterly with an evaluation team and do quarterly audits to look at numbers of kids exposed, how many courses are being offered; and one of our targets is transcripted credits." Betty stated, "the advisory committee asks us for certain things, and we try to give them those things as they're looking forward, still working and trying to grow and make the program bigger and better."

Changed Perceptions (School)

The theme Changed Perceptions was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by the school leaders that referred to how their partnership had impacted perceptions. Although it was not one of the prevailing themes, it was mentioned by six of the school leaders and was an important consideration for business-school partnerships.

Betty felt the partnership helped change perceptions of the district, "from a district perspective, I feel like it helped to put us on the map as having a best practice model." Adam liked what it did for the entire community, " the partnership between the school and the business created a culture in the [Alpha-One] community that STEM education technology and engineering education is cool and is great for young people."

Eric spoke to how their partnership changed the perceptions between business and schools, "teachers opened up their curriculum and said 'here's what we're offering, you tell us'. The companies couldn't believe it." Donna shared how the student perceptions changed about their home community, "they might go away for four years; they might go to a technical school; they might even go to a culinary school; but they come back because they've made these connections in the community."

Using a Study of Business-School Partnerships to Inform Future Endeavors (School)

Table 20

Studying Business-School Partnerships to Inform Future Endeavors (School)

What are the organizational impacts of business-school partnerships?
Research Question 3: By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?
Theme A - The Right People
Theme B - Shared Mission
Theme C - Required Structure

To facilitate a deeper analysis of the knowledge, skills, disposition, and resources to inform future business-school partnership endeavors, the data supported breaking this question down into three themes to help illustrate the main commonalities of our school leaders. The three themes were titled The Right People, Shared Mission, and Required Structure, and aligned with the themes of the data collected from the business leaders.

The Right People (School)

The theme The Right People was one of the themes under the research question about "the knowledge, skills, disposition, and resources to inform future business-school partnerships endeavors". The working definition of this theme was based on the data gathered in the interviews about the group make-up, mentality, or anything that informed having the right people to help build and guide the partnership. This theme was mentioned by every school leader except one.

Clint shared, "it takes the right group of people to do this... I found you have to get the key decision makers in the room." An agreed-upon member was the superintendent, Fiona stated, "obviously the superintendent is probably a critical component." Eric added, "you need

support from the top, especially when we're talking about significantly changing curriculum and changing credits." Once the group identified district leadership, there were other components mentioned. Betty helped to define the right people, "you need a business partner, you need a post-secondary partner… and have a teacher who owns this."

This group had advice on what to do when the right people came together, Eric shared, "you have to have the confidence to say, 'um I'm not stupid, I just don't know'." The topic of finances—more importantly, not asking for money—had numerous mentions from our school leaders. Greg stated, "I would tell schools, 'don't ask for money, ask for partnerships'." Fiona shared, "we had a lot of conversations before we did anything. I mean I can't tell you the hours we spent talking, but we didn't ask for money"

Clint shared, "not every principal and not every administrator, just like not every business, is going to embrace your idea." Fiona was the sole leader to mention the school board, but her comments informed the research on what the right person looked like,

> I'm really clear about the expectations and why we're doing what we're doing. If the board would come to me and say we can't do this partnership anymore, boy that might be a turning point for me to say, 'well philosophically, that would conflict with my beliefs and maybe this isn't honestly a good fit anymore'.

Shared Mission (School)

The theme Shared Mission was one of the themes under the research question about "the knowledge, skills, disposition, and resources to inform future business-school partnerships endeavors". The working definition of this theme was based on the data gathered in the interviews about the process to find a common purpose, agreed upon goals, or a shared mission. The importance of a shared mission was the single most common theme to emerge.

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The data collected on shared mission was one of the strongest themes coming from the data collected from the school leaders. Fiona stated, "you've got to understand who each other is... if you don't understand each other's goals you can create barriers all the way along the process." Donna shared, "I didn't want them to hear all about me and my school district needs, I wanted to hear about their needs. I wanted to hear what it was that our school district could do to help them." Betty added further considerations for the business partners to also take into account, "business people need to understand the red tape of a school district... I think a lot of the business people didn't understand how much there really is."

Consideration of what the conversations should look like created a plethora of data. Greg shared, "I think a key piece of it is being able to engage folks right away in honest conversations, frank conversations about what it is we're trying to accomplish." Eric added to the data with,

> You need the guts to go out to the companies and say we're trying to prepare all our kids and we're not doing that now. We can't do it without you, we need your help just like I think you need help to get the skilled labor.

> Donna believed once you know what the business needs, you can start working together, "what is it that you want to see in a school district, and what can our district do to help you. Then it can be, what can we do to work together for our kids."

One subtopic under Shared Mission mentioned by the school leaders dealt with how money fits into the conversation on vision/mission. Fiona said, "when we started all these discussions there was never ever, ever any intention to have that conversation about well, how much money can you give us... it was very much a two-way street." Greg shared his experience, "our conversations were purely driven by what we needed. There wasn't anything about what we were going to use to provide the instruction. It was what instruction was needed." Andy credited

the success of his program when "the core values of [Company Number One] matched up exactly with the vision and the core values of our technology and engineering area in [School District Alpha]."

Required Structure (School)

The theme Required Structure was one of the themes under the research question concerning "the knowledge, skills, disposition, and resources to inform future business-school partnerships endeavors". The working definition of this theme was based on the data gathered in the interviews about the structure of the partnerships. This theme was mentioned by every school leader.

When explaining his partnerships, Greg stated, " it was about trying to make something better... it led to a blending of European and then ultimately the Asian concept." To add to this, Adam stated,

> … we were not implementing a short-term solution to a long-term problem." Greg believed, "to change the redefining ready concept we really needed to take a look at everything from credit structures to school structures to redefine what it is our kids need. To do this our leaders found structures to aid in the discussions with each other's organizational needs.

The data showed that the school leaders agreed, once the conversations started they needed to continue. Fiona stated, "we have to keep communication lines open. We have to be persistent, patient and just have to keep expecting those good things will happen." Donna added, "we continue to talk and understand each other and see the benefit of working together." One method the school leaders reported doing this was through steering committees or advisory/guiding teams.

Eric shared, "The guiding team is critical. They're critical because they're the businesses experts and our teachers watching the progress and changing things that need to be adjusted." Betty added, "our advisory committee has asked us for certain things and we try to give them those things." She added, "we set the agenda and facilitate those meetings by having a representative from business, industry, post-secondary, a school board member, and members of the school like the principal, the associate principal." Greg shared how their team worked,

> We meet quarterly with an evaluation team. It's an audit; we do quarterly to look at numbers of kids exposed, how many courses are being offered, and transcripted credit... it's a continual conversation to make sure that our skill sets are matching what our kids are going to need.

> According to Fiona, these conversations should, "set realistic goals. I think you have to be careful your goals are realistic." Donna then added, "it really was focused around what we could do for our students' curriculum wise." Greg's comment about Professional Learning Communities (PLC) was a good analogy for what our leaders described as the goals of the guiding teams, "to provide programs for kids we ought to make sure the programs are what they need... this is the PLC concept."

The school leaders had numerous data points that mentioned the warnings related to the structure of partnerships. Fiona's advice, "start small, communicate, communicate, communicate; don't go in asking for money, build trust." Eric had a sentiment that was shared by a number of the leaders, "the worst thing you can do is have a misstart." Donna added, "don't make promises that you know you might not be able to hold up to." The one way to help ensure this doesn't happen is to create clear lines of communication. Donna shared, "you have to

establish a chain of communication. You have to make sure that you know who you're talking to and what you're talking about."

A majority of our leaders also mentioned the need for this to be a long term vision. Adam stated,

Industry and schools really have to be futurist, because they're not necessarily training young people to go out and do exactly what the skills and jobs are for right now. They're actually training young people and teaching young people the ways of thinking to be successful in the future.

Betty continued,

You have to be in this for the long term. You may not see any direct return on your investment as far as I've invested, and now I have employees, I think for at least five to seven years. You have to be in this for the long term.

A vision for business-school partnerships might have best been given by the most mature relationship, Delta-Four, when Donna stated, " I will tell you that sometimes it just becomes so natural that you can't even see what it was like without having those partnerships."

Educational Impacts of Business-School Partnerships (School)

How Partnerships Influence the Teaching and Learning Process

Table 21

Influence of Partnerships on the Teaching and Learning Process (School)

What are the educational impacts of business-school partnerships?
Research Question 4: How do partnerships influence the teaching and learning process?
Theme A - Impact on Classroom Teacher
Theme B - Authentic Learning Experiences
Theme C - Pride & Engagement

To facilitate a deeper analysis of how partnerships influenced the teaching and learning process, the data supported breaking this question down into three themes to help illustrate the main commonalities of our school leaders: Impact on Classroom Teacher, Authentic Learning Experiences for students, and Pride & Engagement. This topic was addressed by every one of the school leaders.

Impact on Classroom Teacher

The theme Impact on Classroom Teacher was one of the themes under the research question, "how do partnerships influence the teaching and learning process". The working definition of this theme was based on the data gathered in the interviews about how the partnership impacted the teacher or impacted what was taught. This theme was mentioned by every school leader.

Impact on classroom teachers was a common theme for our school leaders. Fiona stated, "this relationship allowed us to really have a focused way of getting teachers to think differently." Donna continued with, " teachers are gaining insight; they're gaining expertise. The really neat thing about this is the teachers are building the relationships." One way that teachers experienced this was through the addition of business professionals in the classroom. Clint shared, "they got their engineers out from behind the desk and out working in front of kids."

The impact was also felt by school leaders, as business helped justify the need for course and instructional change. Adam share, "if I could get the CEO of a major manufacturing company to say yes to this type of education... it would definitely help me sell the idea of a more progressive curriculum." Eric added, "we're no longer bound by offering courses that we have people certified in. We're going to offer what our community needs." It is Greg that helped frame

how this impacted teachers, "you're a kindergarten teacher or a band director. Aren't we all teaching people to be good at work?"

Authentic Learning Experiences

The theme Authentic Learning Experiences was one of the themes under the research question, "how do partnerships influence the teaching and learning process". The working definition of this theme was based on the data gathered in the interviews about how the partnership allowed students to experience the curriculum with use of real-world examples. This theme was mentioned by every school leader except one.

The school leaders had many comments about authentic experiences for students. Greg stated, "we had to expose kids younger and younger and we had to expose teachers. We had to show them what kind of skills were going to be necessary for the future." He added, "to stay current we need to continue to show our kids what a global environment looks like. At the same time, how do we use common sense and not jump into the test score scenarios." Clint was a little more immediate with how his partnership impacted his school, "I said to the staff members, 'you cannot get mad at students for asking, what am I going to learn today and why'."

The leaders had many examples of what the authentic learning experience could look like but Donna statements helped to give an overview,

> it has opened up tours for our kids; it's opened up a better curriculum in our school
> district; it has opened up real-world opportunities. One of them, we had received a robot
> from [Company X] and one of their engineers comes in and teaches with our physics
> teacher. Those are the kinds of things that just continue to happen over and over again.

Pride and Engagement

The theme Pride & Engagement was one of the themes under the research question, "how do partnerships influence the teaching and learning process". The working definition of this theme was based on the data gathered in the interviews about how the partnership helped to engage and give pride to both teachers and students. This theme was not present with our business leaders for this research question.

The most profound of statements for this theme came from the teacher that assisted Betty in the interview, "I really enjoy this partnership and actually I was thinking about leaving teaching before this came along." He added,

> In my opinion, the teachers that we have hired that work in these customized pathways, it changes who they are in a very positive way. Whether they know it or not, you can just see it almost breathes new life into their profession.

Betty finished, "there's such a sense of pride about what goes on in that section of the school. Really you see kids with their sweatshirt on because they're so proud of it. We've kind of created a brand."

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Impact of Partnerships on Students

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Table 22

How Partnerships Impact Students (School)

What are the educational impacts of business-school partnerships?
Research Question 5: How do partnerships impact students?
Theme A- Improved Student Experiences
Theme B - Preparing Students for Life

To facilitate a deeper analysis of how partnerships impact students, the data supported breaking this question down into two themes to help illustrate the main commonalities of our

school leaders: Improved Student Experiences and Preparing Students for Life. This topic was addressed by every school leader.

Improved Student Experiences

The theme Improved Student Experiences was one of the themes under the research question, "how do partnerships impact students". The working definition of this theme was based on the data gathered in the interviews about how the partnership impacted students by giving them richer experiences. This theme was mentioned by every school leader.

The leaders spoke about how their partnership helped improve student experiences through better engagement in the curriculum. Adam stated, "the more young people get excited about what they're doing and interested in the educational opportunities, kids discipline problem goes down and the yearning to learn becomes lifelong." Clint added, "it gets the kids engaged in activities and have a purpose for coming to school." Adam followed, "anytime there's a partnership, the number one way I think it benefited students is by having them believing in the philosophy."

With mention of students more engaged in the curriculum there were numerous statements about enriched experiences. Adam gave the best overview of this, "first and foremost partnerships can create unbelievable opportunities for not only the business and industry but also to young people within the school district." Donna added by sharing,

> The fact that our teachers have so many relationships with our businesses has opened up tours for our kids. It's opened up a better curriculum in our school district. It has opened up opportunities like when we received our robot and one of the engineers teaches with our physics teacher.

Fiona shared that it also changed the narrative teachers were telling students,

We had a high school science teacher who taught chemistry and after the externship goes wait a minute, why am I telling kids to go to college to get a chemistry degree when they could go to [Business Number Six] and they will help pay for it.

Clint summarized how his partnership enriched student experiences, "Just interacting with people that are actually doing the job, that they have the opportunity where it's not me the teacher telling you this; that is huge."

Preparing Students for Life

The theme Preparing Students for Life was one of the themes under the research question, "how do partnerships impact students". The working definition of this theme was based on the data gathered in the interviews about how the partnership impacted students by giving the skills that would be utilized after graduation. This theme was mentioned by every school leader.

Greg shared his thoughts about future-ready students, "it's so much easier for us to get involved in a partnership because it's about a bigger scenario than just providing [Business Seven] workers; it's truly about getting our kids future ready to compete globally." Adam shared how his partnership helped prepare students to be career ready, "where they apply the engineering design process or the problem-solving process over and over and over. It benefited the students because that's exactly what every company was looking for." Clint offered his thoughts about leadership for a group of students that do not always feel like leaders,

Working on these projects, you can have some of the A+ kids working with the C or D students in English class, but now these kids all of a sudden rise to the top because their skill set is very much higher than that of the book learned.

Donna shared that in their Center, they ran it like a business to ensure an authentic learning experience,

> In the Center, they actually run it just like a business... The kids get in and they've got those standard operating procedures right up on the board so when they do go into the workforce, they understand all of that giving the kids an edge in both college and in the workforce.

A number of leaders focused their comments on a different set of skills that will prepare students for life. Fiona shared, "It just opens things up for kids. It opens opportunities and it lets them see the big picture. It helps them develop those soft skills, but really they're life skills." Betty shared a story of how this looked for one young man,

> It was kind of a transformation he went through. He was a great welder and did all kinds of great fabricating; but what might have been more important than the education he got technically, was the journey that he did with confidence and just learning how to talk to people. Maybe that was more important than the technical skills that he acquired over that school year.

Adam summarized this idea, "partnerships can help show young people how they will use the skills, knowledge, and ways of thinking taught in school later in their life, outside the walls of the school."

Cross-Case Analysis

This cross-case analysis was conducted to determine patterns and themes between the interviews given to business leaders and interviews given to school leaders. To accomplish this, it was necessary to first identify the themes and patterns for the business leaders (Group A) and school leaders (Group B) in individual case studies. The findings from the analysis of the two

individual case studies were then used to build the cross-case analysis. Engaging in cross-case analysis extended the investigator's expertise beyond the single case. It provoked the researcher's imagination, prompted new questions, revealed new dimensions, produced alternatives, generated models, and constructed ideals and utopias (Stretton, 1969).

Table 23

Factors and Conditions Contributing to Business-School Partnerships (Cross-Case)

What are the organizational impacts of business-school partnerships?
Research Question 1: What are the factors and conditions that contribute to developing business-school partnerships?
Theme A-Initial Perceptions
Theme B-Pressure-Economic, Political, & Community
Theme C-Leadership and Culture
Theme D-Community/School Improvement

To facilitate a deeper analysis of factors and conditions that contributed to the development of the business-school partnerships, the data supported breaking this question down into four themes to help illustrate the main commonalities between our business and school leaders. For our business leaders, the four themes included Initial Perceptions, Economic Pressures, Leadership & Culture, and Community Good. For our school leaders, the four themes were Initial Perceptions, Political & Community Pressures, Leadership & Culture, and School Improvement. The cross-case analysis combined the themes from Group A and Group B to form Group C themes: Initial Perceptions, Pressure-Economical, Economic, Political, & Community, Leadership & Culture, and Community/School Improvement.

Initial Perceptions (Cross-Case)

The theme Initial Perceptions was one of the themes under the research question, "factors and conditions that contributed to the business-school partnerships".   The working definition of this theme was based on the data gathered in the interviews about any thoughts or misconceptions the leaders had before getting involved with the partnership.

As a collective group, Fiona's thoughts about her first meeting with their business was a good general overview for the initial perceptions for both groups of leaders, "we didn't know what we were going to get when we first met, and it was a disaster. But I just felt that we needed to go back and we needed to have a second conversation."

Every partnership duo but one agreed there was a communication barrier between the two types of organizations. Some of the barriers were caused by the larger political messages. Our business leaders seemed to agree with Barry, "politicians rather than school and businesses putting together what they think a school report card should be—what the hell do they know." Our school leaders' comments focused more on their own misconceptions about business, especially around the topics of business needs and business interests in school. The leaders do all generally agree with the comments of Greg on why they were able to get past the initial perceptions, "we're not failing by lack of interest or effort; we're failing because we haven't modernized. We have let the world get by us as a country—not our fault, but we are the most able to create change and fix it."

Initial perceptions were a barrier for the majority of the leaders interviewed for this study. Although the leaders agreed on incorrect initial perceptions, they did not agree on the origin of their misconceptions. The business leaders reported more often that the political climate made it difficult, whereas the school leaders had more data concerning their own misconceptions. No

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matter the cause of the initial perceptions, the leaders reported feelings of mistrust between the two organizations. This supported the work of Rigden from nearly twenty years earlier. By the late 1970s, there was an atmosphere of mistrust between schools and businesses. Businesses issued "expectations" for schools, while educators feared business support of any kind would grow into "inappropriate influence." Many educators enforced limits on business involvement in schools (Rigden, 1991).

These misconceptions were obstacles that needed to be navigated. Some leaders reported that their initial meetings were outright contentious. The partnerships studied found a way to break through the initial perceptions and became some the most successful business-school partnerships in the area. The information gathered on why the leaders worked past those initial perceptions seemed to match the conclusions of JBL Associates, "partnerships are critical for the success of the many students who sit in classrooms today, but also for industries and businesses who require a motivated and talented pipeline" (JBL Associates, 2016).

The leaders studied for this project believed that greater success could be achieved by working together. Their belief in partnership was stronger than nearly forty years of preconceived biases, and allowed them to find a new truth. The leaders in this study challenged their personal beliefs to find new possibilities. The fortitude and motivation needed to work through those initial perceptions might have best been stated by Greg, "it kind of hit me that the impact that [Business Seven] has in this area and that if [Business Sevebn] has to leave because they can't fill workforce, what that does to our area."

Pressure-Economic, Political, and Community (Cross-Case)

The theme Pressure-Economic, Political, & Community, was one of the themes under the factors and conditions that contributed to the business-school partnerships. The working

definition of this theme was based on the data gathered in the interviews about any pressures felt by our leaders, including those from the economy, politics, and community, that helped to encourage the partnership.

The common need for our business leaders was on the topic of "access to the properly trained and qualified labor," as stated by George. The data from our school leaders focused on the pressure received, as expressed by Eric, "we're not preparing all our kids and we need to do something." Although the problem was the same, we see our business leader's definition of pressure different from that of the school leaders. While our business leaders pressure came internally from their goals to grow business, as stated by Barry, "we are at a severe disadvantage in trying to grow our manufacturing businesses because we don't have access to skilled labor and to technical engineering technical professional labor." The school leaders reported external pressure from community employers and other stakeholders, best expressed by Greg, "we were frustrated with business; why are they trying to change what we do." Both groups of leaders felt pressure to improve their individual organization.

Pressure for improvement was a common theme for the leaders; but the kind of pressure originated from different sources. The pressure was applied at varied levels and by different forces, but the leaders from both organizations felt it the same. This pressure might have been one explanation for why the leaders were able to challenge their initial perceptions, but the literature shows that partners have many different motivations when developing a partnership (Russell & Flynn, 2000). The pressure for organizational improvement was a driving force for the partnerships interviewed and is an important element to consider for future partnerships.

The motivation for the leaders to build their partnership derived from the internal and external pressure put on the organization. Although pressure is commonplace in leadership, the

group studied looked outside their organization for answers. The pressure to improve a school or build a stronger business in these cases found allies outside their walls. Each of the leaders studied were motivated to achieve greater results. This pressure helped to motivate many of the partnerships but motivations are in fact complex, involving consideration not just of each stakeholder's immediate organizational needs or those of the community they serve (Shaffett, 2002). When the leaders of this study found different organizations with similar goals the partnerships found success. No matter the reasons to start the partnership, the data supported that at least one of the main drivers of those conversations was due in fact to the statistic that on January 1, 2017, there were 5.6 million job openings unfilled in the United States (BLS, 2016).

Leadership and Culture (Cross-Case)

The theme Leadership & Culture was one of the themes under the research question about "the factors and conditions that contributed to the business-school partnerships". The working definition of this theme was based on the data gathered in the interviews about missions, visions, or cultures in their organizations that helped to inform their partnership. This theme was mentioned by every one of our leaders except one.

In each of the interviews there was evidence of mission, vision, and goals that supported the partnerships. Stated best by Donna, "you have to make sure that your mission and your vision and your strategic plan is understood by everyone." Aaron shared,

You can't force culture; you have to hold an expectation for how we behave together and those behaviors need to be consistent. For us, that's being honest with each other, fair, committed, respectful, and then we're challenging each other to get better.

The preponderance of evidence helps to support the importance of leadership and culture in each partnership. One added data point for the leaders was the numerous statements made

about their feelings of breaking from the norm. This was explained best by Clint, "not every principal and not every administrator, just like every business is going to embrace your idea... especially if you have an administrator that may have that institutionalized framework of we are a school of college prep track." The data collected around the theme Leadership and Culture showed that our leaders felt their partnership and collaboration was out of the "norm" and broke from the traditional customs of their peers.

The interviews uncovered a consistent theme of positive culture in each of the organizations. The individuals interviewed for this project reported an organizational culture that supported innovative practices like partnering within the community. A majority of the leaders studied made statements pertaining to how their projects were breaking from the norms and customs of their peers. Aaron stated, "we wasted time as business leaders talking about what we can't find instead of going to make it work." This group of leaders found innovative ways to react to the pressures on them, and did so because the culture in each of the organizations supported partnerships.

The data was clear that the leaders in the researched organizations created a culture and supported a partnership the was not replicable everywhere. The theme of Leadership & Culture was an important component in building successful business-school partnerships. Without leaders that nurtured a positive culture of change or embrace innovative practices, partnerships like the ones studied will not be replicated. The data collected about leadership and culture showed that leadership was an important factor in building partnerships as can be heard in Barry's comments, "you come to the conclusion rather quickly when you analyze the problem that this needs to be a collaboration amongst many companies in order to move the needle if you have an impact."

Community/School Improvement (Cross-Case)

The theme Community/School Improvement was one of the themes under the research question about the "factors and conditions that contributed to the business-school partnerships". The working definition of this theme was based on the data gathered in the interviews about the conditions and factors about improving community/schools that informed their partnership. This theme was mentioned by all but one of the leaders.

The business leaders had an overall agreement that their commitment to improving the community was a motivator that helped to inform their partnership. Edward shared,

> We very much have a commitment to the community that we live and work in, yet we want to be able to produce high-quality goods for our customers. We want to employ people in the community but we also have to get a reasonable economic return for our shareholders or else it doesn't work.

The school leaders also focused on improvement but were much more parochial. In the case of schools, our leaders were much more interested in their students and their school, as stated best by Betty, "it's all about what's good for kids and good for schools." Although both groups had data about community improvement, it was more prevalent in the business leaders.

Table 24

Characteristics of an Unsuccessful vs. a Successful Partnership (Cross-Case)

What are the organizational impacts of business-school partnerships?
Research Question 2: What constitutes an unsuccessful from a successful partnership?
Theme A - Tangible/Student Results
Theme B - Lasting Relationship
Theme C - Changed Perceptions

To facilitate a deeper analysis of the research question about what constitutes an unsuccessful from a successful partnership, the data supported breaking this question down into three themes to help illustrate the main commonalities between our business and school leaders: Tangible/Student Results, Lasting Relationship, and Changed Perception. The only difference between the themes of the business leaders and the school leaders was in the verbiage. While business looked more globally for results, school leaders were focused on their student results.

Tangible/Student Results (Cross-Case)

The theme Tangible/Student Results was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by our leaders that referred to tangible or student results that constitute a successful from an unsuccessful partnership. This theme was mentioned by every leader.

The business leaders had multiple data points concerning Return on Investment (ROI). Edward stated this best, "true altruism is tough to come by, so there really has to be a 'why buy' for the private side." He continued, "I think sometimes the public sector gets a little kumbaya and why wouldn't we just do this, it's good for kids. You have to forget that it is the right thing to do and realize it's not free money." Another tangible result concerned the attainment of college credits. Barry stated, "if enrollments are going up then we believe the mission is on the right path." The metrics mentioned most by both sets of leaders was increased attainment of college credits in high school (dual credits), increased enrollment in technical colleges, or an increase in the number of direct entry workers.

Our school leaders had an overall agreement with their business counterparts about college credit attainment and job skill certification, as can be heard in Greg's statements, "we

measure how many kids are leaving here with skill certificates and or advanced credits." The

school leaders had an increased focus on individual student results. The results they were most

concerned with included increased enrollments and increased number of dual credits, but

mention of added work-based learning opportunities was noticeably absent from the business

interviews. This was heard best by Fiona when she was asked how she measures success, "I

would show them how many job shadows and apprenticeships came about with the

partnerships."

The need for each partner to realize tangible results was a continuation of the

Community/School Improvement theme. In the previous section, the research identified how the

leaders wanted to improve their school/community. The theme Tangible Results continued this

goal in the form of concrete examples needed to show improvement. The need for tangible

results was an important element to produce the studied business-school partnerships. It was also

one of the most important aspects in the factors and conditions that contribute to developing

business-school partnerships, in order to assess if the partnership was successful or not.

Lasting Relationship (Cross-Case)

The theme Lasting Relationship was one of the themes under the research question,

"what constitutes an unsuccessful from a successful partnership". The working definition of this

theme was based on the data gathered in interviews by our leaders that referred to how their

partnership built structures to ensure a lasting relationship between the school and the business.

In every business-school partnerships except one, there was a recurring team of people

that regularly reviewed the partnership. Although some "steering committees" were more formal

than others, Eric's comments rang true in most of our interviews, "the businesses need to stay

involved." Overall, with all partnerships studied, there was a strong commitment to continued

relationships. George stated, "it's an ongoing thing that has to be fluid. It has to be willing to change within the partnership from both sides industry as well as school systems." With a mutual agreement that partnerships needed to have a long term commitment, Dan stated, "you invest for the long term because they do take time. They don't happen overnight, and if you have that mindset, I do believe that you can see and build long-term success."

The leaders were clear with their advice about lasting relationships and made this theme a straightforward one to identify. The work done with each of the partnerships was not meant to be "quick-fixes", they were long term solutions as stated by Adam, "we were not implementing a short-term solution to a long-term problem." The research showed that the complexity of a partnership was such that it would not be successful if thought of as a quick solution. Leaders from each organization warned that any business that entered a partnership to fill an immediate labor need would only be setting their partnership up for disappointment.

Changed Perception (Cross-Case)

The theme Changed Perception was one of the themes under the research question, "what constitutes an unsuccessful from a successful partnership". The working definition of this theme was based on the data gathered in interviews by our leaders that referred to how their partnership had any impact on changing perceptions. Although it was not one of the prevailing themes, it was mentioned by four of our business leaders and six of our school leaders.

Although not directly stated by any of the leaders, there was an undertone in message about the negative reputation of manufacturing, as can be heard in Frank's comments, "I'm hoping that the students have an opportunity to actually see that manufacturing isn't bad... I had stricken the word 'factory' from my vocabulary, because even I think of a factory as huge smoke stacks with black smoke." Adam added that there was a change in perception from the school

perspective, "that STEM education technology and engineering education is cool and is great for young people." In each of the case studies, there was data that showed how individual partnerships helped to change the perception of a business, increase attention for a school, or helped students find a career in a job market they had previously not considered.

Changed perceptions were an extension and result of the theme Initial Perceptions. With the voluminous amounts of data shared about the misconceptions the leaders navigated, it was natural that the leaders would also touch on changing those perceptions. What emerged from the data was an intent from both sets of leaders to assist in changing their organizational goals. Manufacturing wanted to change the stigma of a dirty factory while the schools wanted to see more of their graduates stay in the community. The changed perceptions were a product of and solution to the misconceptions of the initial perceptions.

Table 25

A Study of Business-School Partnerships Informing Future Endeavors (Cross-Case)

What are the organizational impacts of business-school partnerships?
Research Question 3: By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?
Theme A - The Right People
Theme B - Shared Mission
Theme C - Required Structure

To facilitate a deeper analysis of the research question about the knowledge, skills, disposition, and resources to inform future business-school partnerships endeavors, the data supported breaking this question down into three themes to help illustrate the main commonalities between our business and school leaders. These three themes were titled The

Right People, Shared Mission, and Required Structure and were identical for both our school and our business leaders.

The Right People (Cross-Case)

The theme The Right People was one of the themes under the research question, about "the knowledge, skills, disposition, and resources to inform future business-school partnership endeavors". The working definition of this theme was based on the data gathered in the interviews about the group make-up, mentality, or anything that informs the right people needed to help build and guide the partnership. This theme was mentioned by every business leader except one and every school leader but one.

Fiona gave the best overview of what the right people should look like, "there's a certain makeup of the person who really gets this…. they're visionaries that see the big picture, but they also understand what it takes to get an idea to fruition." Adam added this about the right person, "if the leader is truly vested in the partnership and if the leader truly has a global overview of how this is going to not only make their company successful, but their community and their school." The partnerships needed more than just leaders; Clint shared his thoughts, "you have to get the key decision makers in the room." The nearly identical data gathered from both groups of leaders was the concept of having collaborative members on the team willing to have honest open discussions, as shared by Frank, "I would say you've got to just put your ego in a box at the door." Secondly, the makeup of the team had common themes as stated by Betty, "our teacher sets the agenda and we have representatives from business, industry, post-secondary,; we now have a school board member, the principal, the associate principal, and a district staff member." Both groups of leaders agreed that alignment from the top was critical, but just as important was the inclusion of people that will do the work and educate the students.

The "Right People" was a theme that seemed to be bred in organizations with the correct culture and leadership to incubate business-school partnerships. Thompson (2015) reported that the partnership motives fit into three themes: students, personal reasons, and organizational benefits. The leaders in this study shared examples of how the person to lead this effort must have motivations from all three of these themes to be successful.

Shared Mission (Cross-Case)

The theme Shared Mission was one of the themes about the knowledge, skills, disposition, and resources to inform future business-school partnership endeavors. The working definition of this theme was based on the data gathered in the interviews about the process and need to find a common purpose, agreed upon goals, or a shared mission. This theme was mentioned by every business leader and every school, and the importance of a shared mission between the schools and the business had the single most data points from both the school leaders and business leaders.

The data from both groups of leaders mirrored the statement by Adam about when he knew his partnership was going to be successful: "when the core values of [Company Number One] matched up exactly with the vision and the core values of our technology and engineering area in [School District Alpha]." In different ways, the leaders expressed how important it was to understand their partner, as could be heard in Dan's comment, "the partnership is really one of kind, in how we openly listen to each other to understand our collective challenges and opportunities."

The preponderance of evidence connected for this theme made it one of the most profound in the research, especially given the agreement between the two sets of leaders. Dan's

thoughts on how to create this shared mission were mentioned in part by comments from nearly all of our leaders,

> I would set up an opportunity for the business to tour the school to understand the school's capabilities, where their focus is, and understand the broad range of programming that school may or may not offer. Then I would reciprocate that offer and have members of the administration come and learn about who you are, tour your facilities, understand where you're headed from a strategic standpoint then talk about what are your challenges what are your opportunities.

Shared Mission was the single most identified topic by the leaders of this research project. The fact that this project interviewed organizational leaders experienced in building mission and vision can be one explanation for the total data collected on this topic, but it cannot be the only explanation. The creation of shared mission in the partnerships interviewed resulted from the pressure—economic, political, community—that was applied to leaders with organizations that already developed leadership and culture needed to work with outside organizations.

The participants were clear that schools and businesses are very different organizations with very different goals. The leaders interviewed for this research project looked past what they did not have in common with their partner, and found what they did have in common to address the organizational pressures applied to each of them. The fact that the organizations in this project leaned on the creation of a strong shared mission for their partnerships was a tribute to the culture within each of the organizations.

Nancy Flynn (2007) identified vision as the number one principle needed to build successful partnerships. She stated that any successful school-business partnership needed to

develop a clear vision of what you expect to accomplish through the relationship (Flynn, 2007). The leaders interviewed for this project shared this sentiment and identified shared mission as the single essential component for business-school partnerships. The interviews helped to demonstrate how shared mission was not always easily achieved but was the necessary step before the partnership could start to implement the required structure.

Required Structure (Cross-Case)

The theme, Required Structure, was one of the themes under the research question, about the knowledge, skills, disposition, and resources to inform future business-school partnerships endeavors. The working definition of this subgroup was based on the data gathered in the interviews about the partnership structure. This theme was mentioned by every business leader, except one, and every school leader.

In partnership Alpha-One, Aaron shared, "little things that are big which are people, personalities and communication." A common piece of advice given by a number of leaders was to start small as can be heard in Fiona's comments, "start small, communicate, communicate, communicate, don't go in asking for money, build trust." In nearly three-fourths of the partnerships, there existed a formal steering team or advisory committee that provided continued support to the partnership. Betty shared, "You have to be in this for the long term," but not all the leaders agreed on how the structure should look. In partnership Alpha-One the structure was a yearly check in with the administrators and teachers. In partnerships Bravo-Two, Echo-Five and Golf-Seven formal meetings occurred regularly with posted goals and metrics discussed at each meeting. In the interviews, an interesting correlation between the advisory teams and Professional Learning Communities (DuFour et al., 2016) was uncovered and may inform

possible future research. The total amount of data gathered and the overall congruence of the data makes this theme another of the most profound areas of the research.

The formality of structure in each of the partnerships interviewed was different but seemed to correlate with the intensity of the overall relationship. In partnerships Alpha-One and Charlie-Three the advisory meetings would be accomplished with a few of the leaders from each organization with a general goal of continued support of a shared mission between the organizations. In numerous partnerships, there was a designated group of individuals that carefully planned and measured the success of the partnership. In these structured partnerships the members on the team included leaders, workers, teachers, students and in one, a board member. The creation of a shared mission required input from many different voices. This was done best by the partnerships that created a structure to review data, discuss needs, and celebrate successes.

Table 26

The Influence of Partnerships on the Teaching and Learning Process (Cross-Case)

What are the educational impacts of business-school partnerships?
Research Question 4: How do partnerships influence the teaching and learning process?
Theme A - Impact on Classroom Teacher
Theme B - Authentic Learning Experiences
Theme C - Pride & Engagement (School Leaders Only)

To facilitate a deeper analysis of how partnerships influence the teaching and learning process, the data supported braking this question down into three themes to help illustrate the main commonalities between our business and school leaders. These three themes were titled, Impact on Classroom Teacher, Authentic Learning Experiences, and Pride & Engagement. This topic was addressed by every one of the leaders but had the lowest frequency of comments when

compared to all other codes in this project. It is important to note that these themes have less content because there was less data collected by our leaders on this topic. This was a surprising development in the research and may be due to the fact that high level leaders were interviewed instead of classroom teachers that work with students on a daily basis. It is for this reason that educational impacts will be a consideration for future research.

Impact on Classroom Teacher

The theme, Impact on Classroom Teacher, was one of the themes under the research question, how do partnerships influence the teaching and learning process. The working definition of this theme was based on the data gathered in the interviews about how the partnership impacted the teacher or what was taught in the classroom. This theme was mentioned by every leader, except one.

The leaders of this research shared expereinces on how their partnerships impacted the teaching and learning process. The physical results of this impact had contrasting degrees of implementation on the classroom teacher. Aaron shared, "we had the curriculum ideas around STEM education, what is it, what does it mean, how we were going to teach it, and what are the outcomes we expect...we were converting what was vocational education back in my day and we're actually going to turn it into STEM education." One strong undertone message from the leaders focused on the message students get in high schools today. Eric stated, "I think even if you ask some of the more college prep teachers, they'd realize all kids shouldn't be going on to school but we're not doing anything different so we push them to the place that we're comfortable in and that's a four year college." Eric continued with how that changed with his partnership, "teachers opened up their curriculum and said here's what we're offering you tell us what we should be doing because we want our kids hired that have skills that you value."

Although there will need to be further research focused on the impact of business-school partnerships on the classroom teacher, there was enough antidotal data collected to assure some impact on the teachers involved in the partnerships. The fact that many of the partnerships gave classroom teachers direct access to the technical professionals doing the work in the field suggests great opportunity for informal professional development. With the many classroom visits, company tours, and embedded cooperative teaching activities completed in each of the partnerships suggested impact. Future research on the level and intensity of the impact will be an important component for continued research on business-school partnerships.

Authentic Learning Experiences (Cross-Case)

The theme, Authentic Learning Experiences, was one of the themes under the research question, how do partnerships influence the teaching and learning process. The working definition of this theme was based on the data gathered in the interviews about how the partnership allowed students to experience the curriculum and learning with real-world examples. This theme was mentioned by every leader except one.

The research had many examples of how the leaders used the partnership to increase the authentic learning experiences for students. In partnership Foxtrot-Six, Fiona Shared, "we started looking at how we improve or enhance our kids' experiential learning, we were looking to get kids more school-to-work kind of experience and opportunities." Chad spoke about the apprenticeships in partnership Charlie-Three, "we've been involved in youth apprenticeships since 1999, and I think that's a really good way for a student to get more in-depth exposure." He continued, "they have the opportunity to learn a lot more in-depth. One gentleman, once he graduated, went right into the adult apprenticeship to continue his education." Greg's comments are a good overview of the general ideology around authentic learning experiences, "I think we

need to change the redefining ready concept. We really need to take a look at everything from credit structures to school structures to redefine what it is our kids need." He continued, "last year's graduates are expected to have 25 different jobs in seven different careers 80% of which aren't invented yet. If we can do that, we've done something powerful."

Authentic learning was referred to as activities where students performed learning activities that directly related to a profession or job. The authentic learning activities could have been classroom visits from business professionals with a company problem to solve or students going out to the jobsite to learn on the job. If the authentic learning took place in the school or in the business, it is discernible that the business-school partnerships resulted in an increase in authentic learning. Schools not in a relationship with a business would find it difficult if not impossible to duplicate the authentic learning achieved in the researched partnerships. Without the relationship to but when combined on the impact of students this is an important factor of any relationship.

Table 27

The Impact of Partnerships on Students (Cross-Case)

What are the educational impacts of business-school partnerships?
Research Question 5: How do partnerships impact students?
Theme A- Improved Student Experiences
Theme B - Preparing Students for Life

To facilitate a deeper analysis of how partnerships impact students, the data supported braking this question down into two themes to help illustrate the main commonalities between our business and school leaders. These two themes were titled Improved Student Experiences and Preparing Students for Life. This topic was addressed by all but one of the leaders, and had the second lowest frequency of comments when compared to all other codes in this project. It is

important to note that these themes have less content because there was less data collected by our leaders on this topic. This was a surprising development in the research and may be due to the fact that high level leaders instead were interviewed instead of classroom teachers that work with students on a daily basis. It is for this reason that educational impacts will be a consideration for future research.

Improved Student Experiences

The theme, Improved Student Experiences, was one of the themes under the research question, how do partnerships impact students. The working definition of this theme was based on the data gathered in the interviews about how the partnership impacted students directly or indirectly. This theme was mentioned by every leader except one.

In many cases, the partnerships were created to engage students with enriching activities that helped students experience authentic problem-solving strategies. George in the Golf-Seven partnership stated, "you start one thing at a time and you start really small. I think you benefit from starting in the K-12 and really working through kindergarten, into the middle schools, then high schools. Getting these skill sets reintroduced with critical thinking along with teamwork. That is when you really start making a fundamental good change." Adam in Alpha-One partnership added how this fundamental change helped students understand the importance of core academics, "students who were more of your quote "hands-on" type of kids started to see the value of mathematics."

Greg used the Golf-Seven partnership to improve students experiences with a grander view, "the exposure to what a global environment looks like for our kids." He added, "we had to expose kids younger and younger. We had to expose teachers and we had to show them what kind of skills were going to be necessary for the future." Barry's partnership did this by showing

students what those careers might look like, "one of the key strategies was the plant tours, the job shadowing, and the internships. Those are all exposure mechanisms to get students exposed to manufacturing careers." Frank agreed, "one thing that I really pushed was job shadows or career experinces." Be it a grander view of the world or students that better understood the importance of math, Donna's statement represents how her partnership improved student expereinces, "the fact that our teachers have so many relationships with our businesses-it has opened up tours for our kids it's opened up better curriculum in our school district-it has opened up more opportunities."

The leaders interviewed for this research project disclosed that their business-school partnerships improved student experience. The improved experiences were a result of financial support, curricular help, increased dual enrollment, and an overall increase in authentic learning. The examples provided are the result of businesses and schools working together to share resources take gave students authentic learning. Although the data collected on this topic was anecdotal and will require more research, the large sums of money and time dedicated for each of the partnerships studied impacted students. To discover the quality of impact beyond quantitative metrics like attainment of college credits, credentials, and work skills, future research will need to be done to assess the total impact on students.

Preparing Students for Life

The theme, Preparing Students for Life, was one of the themes under the research question, how do partnerships impact students. The working definition of this theme was based on the data gathered in the interviews about how the partnership assisted in helping students prepare for life after graduation. This theme was mentioned by every leader, except one.

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Dan from the Delta-Four partnership might have phrased it best when we stated, "wow we need to do a better job with these students so that they're prepared and can be successful after school." For many of our leaders, there was a sense of community within their statements. Frank stated, "I'm hoping that students after they had a chance to spend some time with me and with others that they understand that they don't have to go to California, they don't have to go to Washington, they don't have to go to Colorado to find a job and find themselves. They can find themselves in the state." Dan added, "we're preparing students for what life is after school if we can keep them in the area that's even better."

The ability to make a life-earning wage was a common response for the leaders. Barry shared, "so these careers in manufacturing will provide middle-class jobs and will allow families to make wages that will allow them to live a comfortable lifestyle." The ability to attain college learning without student loans came up numerous times as stated by Frank, "you hook your wagon to a manufacturing facility now, you end up getting tuition reimbursement and at the end of the day you not only have started a terrific career but you're debt-free." With all of the different motivators, Adam's statement might be the best conclusion, "we are doing this because it is best for the young people who are going to be entering our highly technical innovative ever-changing 21st century."

The leaders interviewed for this project believed their partnership helped to prepare students for life. The extensive data supporting that idea came in references to better grades in school, grander view of the world or higher earning jobs. With a closer look at this theme, we see that preparing students for life was the result of exposing them to real-world problems, authentic learning experiences, and using these skills to problem solve. The business leaders' data gravitated more on job-related skills while the school leaders concentrated more on the real-

world experiences and relevancy of core academics to life. No matter how the leaders suggested this in the interview, there was a general acceptance that their partnership helped prepare students for life.

Summary

This chapter presented the findings about the business-school partnerships. This study aimed to understand how the experiences of business and school leaders in successful partnerships could help to inform others interested in building relationships. Additionally, this study aimed to understand the impacts of the business-school partnerships on the organization as well as the teaching and learning process. Lastly, this study showed how business and school leaders are working together to address the pressures of preparing a College and Career Ready graduate in a way that strengthen their entire community. In Chapter Five, the data analyzied in this chapter will be used to construct the findings and conclusions.

CHAPTER 5: DISCUSSION AND ANALYSIS

Summary of Study

The purpose of this study was to discover and describe the relationships between high schools and partnering employers as it related to career technical education in the area of manufacturing. This study aimed to find commonalities among researched partnerships that could inform future business and school leaders interested in building successful collaborative models. Additionally, this study aimed to understand the impacts of the business-school partnerships on the teaching and learning process in the context of direct and indirect effects on students and teachers. It is important to note that his research was completed by a researcher that has a neoliberal capital stance as it pertains to business-school partnerships. This was a study of successful partnerships. This study does not contain any information about why partnerships fail because that was not a part of this study.

Through an analysis of business-school partnerships within one of the states of the Midwest, seven school districts and their partnering manufacturing business were identified for this study. Each of the seven business-school partnerships involved in this study were selected based upon the significance of the partnership in which they were involved. The districts and their partnering company ranged from small rural school districts with enrollments under 900 students to large urban districts totaling over 20,000 students. The partnering businesses varied in products and size with the smallest company earning roughly $14 million annually and the largest grossing over $4.7 billion annually. In total, there were fourteen individuals interviewed for this study, seven school leaders and seven business leaders.

This qualitative cross-case analysis used interviews to investigated the research questions. The case study approach allowed for research focused on discovery, insight, and understanding from the perspectives of those offering the greatest promise of making significant improvements to the knowledge (Merriam, 1998). The cross-case analysis was a search for

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patterns and themes that cut across individual experiences (Ragin, 1997). The use of interviews allowed for the research to enter into other peoples' perspectives (Patton, 2009).

Individual face-to-face interviews were the primary means to acquire data for this study with follow-up interviews as needed. Each participant was interviewed in a location and time of their choice. The seven school leaders included four superintendents, one district coordinator, and one teacher all identified as the primary partnership facilitator. The seven businesses leaders interviewed included four presidents/CEOs, two human resource specialist, and one plant manager also identified as the primary partnership influencer within their organization. The questions guiding this research and used to build the interview questions were:

1.　　What are the organizational impacts of business-school partnerships?

　　a.　　What are the factors and conditions that contribute to developing business-school partnerships?

　　b.　　What constitutes an unsuccessful from a successful partnership?

　　c.　　By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

2.　　What are the educational impacts of business-school partnerships?

　　a.　　How do partnerships influence the teaching and learning process?

　　b.　　How do partnerships impact students?

This cross-case analysis illustrated the necessary skills, knowledge, and motivational factors needed for business and school leaders to collaborate. The methodology of the cross-case study was essentially an analysis of three different groups. The themes were developed from a total of 561 data points (274 Business & 287 School). The three distinct groups included:

Table 28

Interview Groups

INTERVIEW GROUPS		
Group A	Analysis of Business Leaders	Seven Interviews
Group B	Analysis of School Leaders	Seven Interviews
Group C	Analysis of All Leaders	Fourteen Interviews

The cross-case analysis was conducted to discover patterns and themes within the business leaders (Group A), patterns and themes within the school leaders (Group B), and finally to find commonalities within both sets of leaders when combined into Group C to complete the cross-case analysis. Once themes and patterns were identified, the findings from the analysis were used to create conclusions and recommendations.

Cross-case analysis extended the investigator's expertise beyond the single case. It provoked the researcher's imagination, prompted new questions, revealed new dimensions, produced alternatives, generated models, and constructed ideals and utopias (Stretton, 1969). The following conclusions and analysis were divided using the five research questions.

In its entirety, this dissertation introduced the research through a description of the background, purpose, approach, significance, limitations, and vocabulary of the study in Chapter One. Chapter Two provided a historical perspective of career education while it also provided relevant research in the literature for partnerships in the United States and abroad. Chapter Three discussed the research design, setting & participants, instrumentation, procedure, data processing & analysis, ethical considerations, and limitations of this cross-case analysis. Chapter Four presented the findings generated by the study design using the research questions as the framework. The final chapter will include a summary along with conclusions from the findings.

The results and implications of this research in regards to professional practice and future

research will also be included.

Discussion and Analysis of the Findings

Table 29

Business-School Partnerships Findings

Discussion and Analysis of Findings

Finding One: Changing the Narrative

    Question One Theme A- Initial Perceptions

    Question One Theme B- Lasting Relationships

    Question Two Theme C- Changed Perceptions

Finding Two: Agents for Change

    Question One Theme B- Pressure-Economic, Political, & Community

    Question One Theme C- Leadership and Culture

    Question Three Theme A- The Right People

    Question Three Theme B- Share Mission

    Question Three Theme C- Required Structure

Finding Three: Impacts of Business-School Partnerships

    Question Four Theme A- Impact on Classroom Teacher

    Question Five Theme A- Improved Student Experiences

    Question Four Theme B- Authentic Learning

    Question Five Theme B- Preparing Students for Life

Finding Four: Motivation to Start

    Question One Theme D- Community/School Improvement

    Question Two Theme A- Tangible Results

    Question Four Theme C- Pride & Engagement

Finding One: Changing the Narrative

For nearly fifty years, the majority of communications between schools and businesses looked more like finger-pointing than problem-solving (Darabi & Clark 2012). By the late 1970s, there was an atmosphere of mistrust between schools and businesses where, businesses issued "expectations" for schools, while educators feared business support of any kind would grow into "inappropriate influence." (Rigden, 1991). In the Echo-Five partnership, Eric shared a story about how very early in their process one of the high school principals called him to ask permission to work with a local business. The new principal reported that he and the potential business partner were not sure they could or even should be working together. This caution was not localized to inexperienced administrators as reported by Greg, "this is my sixteenth year here, for the first twelve, I had no communication what-so-ever with Business Number Seven. A lot of misconceptions, a lot of misunderstanding, a lot of lack of anything on my part."

The business leaders described their pre-partnership perceptions differently. Barry believed, "the biggest barrier [to partnerships] is how highly politicized the education process is." Aaron went deeper into this topic and referred to the politics of working with the different political climates of the two organizations. He stated, "even if the teachers are voting Democratic and the business leaders voting Republican, let's not worry about that, let's just work on our kids and our business will benefit." Barry concluded, "once you get through that and you get through the finger-pointing and truly spend time together, the trust level starts to rise in that relationship and you can do great innovative things."

Albeit many reasons, Stone's comments about the many struggles in navigating the relationship between the schools and businesses (Stone, 2011) were found in the data for this project. The partnerships studied found a way to break through the struggles and navigate into

some of the most successful business-school partnerships in the region. The leaders studied for

this project believed that greater success could be achieved by working together. Their belief in

the partnership was stronger than nearly forty years of preconceived biases.

The initial misperceptions were just the first step according to the leaders interviewed.

The real work happened after the initial discussion finished and building a lasting relationship

began. Dan warned, "you're not going to see the benefit... in year one." Eric's comments echoed

this same sentiment, "the businesses need to stay involved...they're critical because they're the

businesses and the teachers in the same group saying, how's it going?" He believed, "things are

dynamic, as they change you need to adjust."

The leaders were unmistakable with the data collected about their relationships. The

work done was not meant to be "quick-fixes" as stated by Adam, "we were not implementing a

short-term solution to a long-term problem." The literature showed an important component of

any partnership is the longevity and terms of a lasting relationship (Flynn, 2007). The data and

the literature showed that the complexity of any partnership was such that it would not have been

successful if thought of as a short term solution to a long-time problem. As the business

representation of the Golf-Seven partnership, George proclaimed, "it's an ongoing thing that has

to be fluid. It has to be willing to change within the partnership from both sides, industry as well

as schools."

To change the narrative there needed to be multiple ingredients present according to the

data. Initially there needed to be individuals willing to challenge their initial perceptions. These

conversations needed to continue to nurture a new ideology by establishing lasting relationships

to come to the changed perceptions. For the leaders interviewed, changed perceptions were an

extension and result of breaking from the initial perceptions and establishing lasting

relationships. With the voluminous amounts of data shared about misconceptions the leaders navigated, it was natural that the leaders would also touch on changing those perceptions. What emerged from the data was a goal from both sets of leaders to assist in their organizational goals.

Manufacturing wanted to change the stigma of a dirty factory while the schools wanted to see more of their graduates stay in the community. The changed perceptions were a product of and solution to the misconceptions of the initial perceptions. In each of the case studies, the data showed how individual partnerships helped to change the perception of a business, increase attention for a school, or help students find a career in a job market they had previously not considered.

Finding Two: Agents for Change

The business-school partnership was a topic that has had many different iterations in history. Today's contemporary concepts of the school-business partnership had its beginnings in the 19th century with the founding of the National Association of Manufacturers (NAM) in 1895. In conjunction with NAM, the National Chamber of Commerce helped to establish what became known as Business Education Days (Turnbull, 2015). In 1988, Congress enacted the Educational Partnerships Act with the objective of stimulating the creation of educational partnerships. Cobb and Quaglia (1994) believed that Congress hoped these newly formed partnerships would demonstrate their impact on educational reform. With the many laws and acts passed in over a hundred years of public education, the results of these partnerships were uneven at best. More recently the Sullivan Report cautioned, "this time around, educators and employers need to collaborate with the job market in mind, so that we do not produce students that are ill-suited to enter the workforce" (Sullivan, 2012, p. 38).

One possible reason for the uneven results in history might have been that businesses had all the employees it needed. The luxury of a strong workforce no longer existed when baby boomers began to retire. On January 1, 2017, there were 5.6 million job openings unfilled in the United States (BLS, 2016), and companies felt the pressure. The data collected for this study showed that the business leaders felt the need for "access to the properly trained and qualified labor," as stated by George. Edward concurred by sharing, "a problem for the company involves access to the properly trained and qualified labor." Compounding the issue of the total number of people were the skills of the people now available, "A great divide has emerged in the United States between the education and skills of the American workforce and the needs of the nation's employers" (Bridgeland et al., 2011, para. 1). The convergence of these competing forces created pressure for change.

The pressure for change seemed to have a ripple effect. The pressure to improve schools originated from the leaders of businesses who felt pressure to replace and expand an aging workforce. The ripple effect can be heard in Greg's comments, "we were frustrated with business; why are they trying to change what we do?" The pressure was applied at varying levels and by different forces, but the data showed how the leaders from both organizations felt it the same. This pressure might have been one explanation of why this group of leaders challenged their initial perceptions.

Although pressure is commonplace in leadership, the leaders studied looked outside their organization for answers with a goal to work together for a more strongly trained graduate that would be more productive in the community (Stone, 2014). The pressure to improve a school or build a stronger business in the cases studied found allies outside their walls. Each of the leaders studied were motivated to achieve greater results. This pressure helped to motivate many of the

partnerships; but motivations are in fact complex, involving consideration not just of each stakeholder's immediate organizational needs or those of the community they serve (Shaffett, 2002).

The way that the studied organizations responded to this pressure was a testimonial to the leadership and culture of the institution. This topic was one of great importance to the leaders interviewed and was the most mentioned topic. In the interviews, the leaders made different comments about how their organization's mission, vision, or culture helped to inform or propel the partnership. In 2007, Flynn discussed the ten principles for effective partnerships, and named the development of a clear vision as the most important component of working together. The preponderance of evidence gathered by the leaders supported the importance of leadership and culture. Donna's comments helped to illustrate this, "you have to make sure that your mission and your vision and your strategic plan are understood by everyone." Adam further explained this, "when the core values of Company Number One matched up exactly with the vision and the core values of our technology and engineering area in School District Alpha we knew we would be successful." Dr. Guy D. Alba (2000), might have been the most direct when he stated that the partnership mission statement must complement each organization's mission for a successful partnership.

Within the mission statements of the studied organizations there was an emphasis on culture. According to Osmo, one of the six core beliefs that lead to Finland's transformation was instilling a positive culture (Osmo, 2001). Aaron shared,

> You can't force a culture; you have to hold an expectation for how we behave together and those behaviors need to be consistent. For us, that's being honest with each other, fair, committed, respectful, and then we're challenging each other to get better.

The data showed that this culture helped to cultivate the partnership as can best be heard in Frank's comments. He believed that their partnership, "was bred out of [Business Number Six] president's culture of working together and teamwork. You can't survive without good partnerships no matter how good you think you are, you still need partnerships."

The interviews uncovered a consistent theme of a positive climate in each of the organizations. The individuals interviewed for this project reported an organizational culture that supported innovative practices like partnering within the community. A majority of the leaders studied made statements pertaining to how their projects were breaking from the norms and customs of their peers. Aaron stated, "we wasted time as business leaders talking about what we can't find instead of going to make it work." This group of leaders found innovative ways to react to the pressures applied on them and did so because the culture in each of the organizations supported partnerships.

The data was clear that the leaders in the researched organizations created a culture and supported a partnership that would not be replicable everywhere. As Clint stated, "not every administrator or every business is going to embrace your idea." The theme of leadership and culture was an important component in building successful business-school partnerships. Without leaders that nurtured a positive culture of change or embraced innovative practices, partnerships like the ones studied will not be replicated. The data collected about leadership and culture showed that leadership was an important factor in building partnerships, but it really rested on the shoulders of the right people within these organizations.

Fiona's description of the right people was a good representation of the kind of person needed to build a business-school partnership, "there's a certain makeup of the person who really gets this…. they're visionaries that see the big picture but they also understand what it takes to

get an idea to fruition." Adam added two additional elements, "the leader is truly vested in the partnership, and the leader truly has a global overview." The work of Nausieda supported these ideas, "the people in these organizations that are motivated to begin, develop, and sustain partnerships need to remain aligned between the organizations for the partnership to continue" (Nausieda, 2014).

One of the discussions about the right people also uncovered a need to have the right titles at the table. Flynn stated that the group must identify the point people within the school and the corporation who will be liaisons for the partnership to ensure consistent communication (Flynn, 2007). Clint echoed these remarks, "you have to get the key decision-makers in the room." The data gathered from both groups of leaders were nearly identical. The first step was to have collaborative members on the team willing to have honest and open discussions. Frank shared, "I would say you've got to just put your ego in a box at the door." Secondly, the make-up of the team had common themes as stated by Betty, "our teacher sets the agenda and we have representatives from business, industry, post-secondary. We now have a school board member, the principal, the associate principal, and a district staff member." The common theme from both sets of leaders was to ensure that both organizations had buy-in from the top while also including the people that will do the work. The data from both sets of leaders emphasized the need for the superintendent to be in support, if not a full member, of the partnership meetings.

The Right People was a theme that seemed to be bred out of organizations with the correct culture and leadership that incubated innovative business-school partnerships. Barry shared, "the way that you become more innovative and more productive is by having extremely high levels of collaboration and accountability within the culture of the organizations." Thompson (2015) shared that partnership motives fit into three themes: students, personal

reasons, and organizational benefits. The leaders in this study believed that to be successful, the person to lead this effort must have motivations from all three of these themes.

Nausieda (2014) directly connected the support of an organization's mission to the motivation and success of the partnership. The data mirrored the literature and can be heard by Adam's description of when he knew they were going to be successful, "when the core values of [Company Number One] matched up exactly with the vision and the core values of our technology and engineering area in [School District Alpha]." He continued, "when industry and schools are more knowledgeable about what each other do, when they're more connected on what each other do, great unbelievable things can happen for young people in schools and for the companies."

The literature advised that the partnership mission statement must complement the district/school mission (Alba, 2000). The leaders echoed this and expressed the importance of taking the time to understand the other organization's mission, as could be heard in Dan's comment, "we openly listen to each other to understand our collective challenges and opportunities."

The preponderance of evidence concentrated on the theme of shared mission made it one of the most profound in the research, especially given the agreement between the two sets of leaders. Dan's thoughts on how to create a shared mission was mentioned in part by nearly all of our leaders,

> I would set up an opportunity for the business to tour the school to understand the
> school's capabilities, where their focus is, and understand the broad range of
> programming that school may or may not offer. Then, I would reciprocate that offer and
> have members of the administration come and learn about who you are, tour your

facilities, understand where you're headed from a strategic standpoint then talk about what are your challenges and what are your opportunities.

A shared mission was the single most identified topic by the leaders of this research project. The fact that this project interviewed organizational leaders experienced in building mission and vision can be one explanation for the total data collected on this topic, but it cannot have been the only explanation. The creation of a shared mission in the partnerships interviewed resulted from the pressure—economic, political, community—that was applied to leaders with organizations that already developed the leadership and culture needed to work with outside organizations.

The participants were clear: schools and businesses are very different organizations with very different goals. The leaders interviewed for this research project looked past what they did not have in common and found what they did have in common to address the organizational pressures applied to each of them. The fact that the organizations in this research leaned on the creation of a strong shared mission for their partnerships was a tribute to the culture within each of the organizations.

Flynn (2007) identified vision as the number one principle needed to build successful partnerships. She stated that any successful school-business partnership needed to develop a clear vision of what you expect to accomplish through the relationship (Flynn, 2007). The leaders interviewed for this project shared this sentiment and identified shared mission as the single essential component for business-school partnerships. The interviews helped to demonstrate how a shared mission was not always easily achieved but was the necessary step before the partnership could start to implement the required structure.

In many of the researched partnerships, there existed a formal steering team or advisory committee that met to review the effectiveness of the program, report enrollment numbers, and discuss program needs. Along with answering the immediate needs of the partnership, the advisory teams ensured a lasting relationship, as indicated by Adam, "we were not implementing a short-term solution to a long-term problem." Greg believed this team was required to make the changes needed, "to change the redefining ready concept, we really needed to take a look at everything from credit structures to school structures to redefine what it is our kids need." The data gathered showed the importance of advisory teams in the partnership. The most common advice given by the leaders could be heard in Fiona's comments, "start small, communicate, communicate, communicate, don't go in asking for money, build trust." Aaron added, "the little things that are big are people, personalities and communication."

The agreement between the leaders helped to inform the importance of this structure and provide insight for future practice. The interviews also discovered an interesting correlation between business-school partnerships and Professional Learning Communities (PLC) research (DuFour et al., 2016) as it pertained to the goals of the advisory teams. Given the amount of data and the overall congruence of the data, this theme was another of the most profound of the research.

The formality and structure of the advisory committees were different in each partnership but seemed to correlate with the intensity of the overall relationship. In partnerships Alpha-One, Charlie-Three, and Foxtrot-Six, the advisory meetings were accomplished with a few of the leaders from each organization conducting a discussion of general goals, to ensure continued support of a shared mission. In partnerships Bravo-Two, Delta-Four, Echo-Six, and Golf-Seven, there were designated groups of individuals that carefully planned and measured the success of

the partnership. In these structured partnerships the members on the team included leaders,

workers, teachers, students and in one, a board member. The creation of a shared mission

required input from many different voices. This was done best by partnerships that created a

structure to review data, discuss needs, and celebrate successes.

Finding Three: Impacts of Business-School Partnership

Over a hundred years ago, Dewey warned educators that techniques of the trades should

not be for the sake of producing skilled workers, but for the sake of securing job-related skills to

allow the individual student to make choices and adjustments and be in control of his own

economic fate (Dewey, 1917). In the review of the literature, numerous authors communicated

how business-school partnerships could help improve classroom learning. Symonds believed

that the need for developing a system that provides every student with high-quality training will

require that we make a leap forward in the collective responsibility we assume for the education

and training of our young people (Symonds et al., 2011). The legislation also tried to find ways

to impact career-based learning. The education policymakers who wrote and developed Perkins

IV intended to prepare more students for high-skill jobs in high-wage occupations while bringing

academics into these course areas (Perkins, 2006).

The business leaders' comments related to the impacts of their partnerships on learning

were merely conceptual. This is understandable given their lack of expertise in the teaching and

learning process. Aaron's comments represent the message a majority of the business leaders

reported:

> We had the curriculum ideas around STEM education, what it is, what does it mean, how
>
> we were going to teach it, and what are the outcomes we expect... we were converting

what was vocational education back in my day and we're actually going to turn it into STEM education.

The literature review uncovered how the National Defense Education Act helped perpetuate the now one-size-fits-all college-readiness agenda, while it also began to change the nation's academic landscape and made it tougher to find funding for career education in schools (Stone, 2014). In the research, school leaders addressed the sixty-year narrative as can be observed in Eric's statement, "I think even if you ask some of the more college prep teachers they'd realize all kids shouldn't be going on to school, but we're not doing anything different so we push them to the place that we're comfortable in, and that's a four-year college." Eric continued by explaining how his partnership changed this ideology, "teachers opened up their curriculum and said, 'here's what we're offering you, tell us what we should be doing because we want our kids hired that have skills that you value'." For both sets of leaders, there was a general agreement that their partnership gave teachers greater insight, helped to enrich the curriculum, and gave the classroom a better connection to the employability skills needed for the future.

In the Echo-Five partnership, Eric shared a story about how he observed a conversation between technical education teachers and business professionals. Eric shared, "you could just see the teachers listening to the businesses, thinking, 'I didn't know that'. That was the great stuff that was just happening with getting them together." Although there will need to be further research focused on the impact of business-school partnerships on the classroom teacher, statements like the one made in the Bravo-Two partnership shows promise. The teacher accompanying Betty reported, "I was thinking of leaving teaching before this came along." Remarks like this exhibit enough anecdotal data to show an impact on the teachers involved in the partnerships. The fact that many of the partnerships gave classroom teachers direct access to

technical professionals doing the work in the field suggested great opportunity for informal professional development. With the many classroom visits, company tours, and embedded cooperative teaching activities completed in each of the partnerships, the fact that professionals worked together in the field suggested impact. In the words of Fiona, "we learned a lot from that first experience about how to do it better the second time." Future research on the level and intensity of the impact will be an important component for continued research on business-school partnerships.

Much like the authentic learning opportunities that showed the anecdotal impact for educators in the partnerships, access to real-world people and environments affected the students as well. Although not initially coined as such, authentic learning was one of the first modes of education, used generously by ancient nations like the Greek's and Rome's. Apprenticeships in colonial America were one of the fundamental modes of education for the time period (Barlow, 1976). In the case of business-school partnerships, "This time around, educators and employers need to collaborate with the job market in mind, so that we do not produce students that are ill-suited to enter the workforce" (Sullivan, 2012, p. 38). The research had many examples of how leaders used partnership to increase the authentic learning experiences for students. Fiona shared, "we started looking at how to improve or enhance our kids' experiential learning, we were looking to get kids more school-to-work kind of experience and opportunities." Chad spoke about apprenticeships, "we've been involved in youth apprenticeships since 1999 and I think that's a really good way for a student to get more in-depth exposure." He continued, "they have the opportunity to learn a lot more in-depth. One gentleman, once he graduated, went right into the adult apprenticeship to continue his education." Greg's comments were a good overview of the general ideology around authentic learning experiences, "I think we need to

redefine the concept of readiness. We really need to take a look at everything from credit structures to school structures to redefine what it is our kids need." He continued, "last year's graduates are expected to have 25 different jobs in seven different careers, 80% of which aren't invented yet. If we can do that, we've done something powerful."

Authentic learning was referred to as activities where students performed learning activities that directly related to a profession or job. Examples of authentic learning activities included classroom visits from business professionals, company problem-solving activities with students, or students going out directly to the job site to learn on in the actual environment. No matter if the authentic learning took place in the school or in the business, it is discernible that the business-school partnerships resulted in an increase in authentic learning. Betty shared a story about a student in the Bravo-Two partnership,

> If you had seen him from day one until the end of the year it was amazing the kind of transformation he went through. He was a great welder and did all kinds of great fabricating, but what might have been more important than the education he got technically was the kind of confidence and learning how to talk to people. That was more important than the technical skills that he acquired over that school year.

> Schools not in a relationship with a business would find it difficult if not impossible to duplicate the authentic learning achieved in the researched partnerships.

The leaders of this research project shared many stories on how their partnership improved students' experiences. In dollar figures, some of the schools found six and seven-digit financial benefits with their partnership: Alpha-One partnership—$3,000,000, Bravo-Two partnership—$400,000, Delta-Four—$1,000,000 plus, Echo-Five Partnership-$5,000,000, Foxtrot-Six—$100,000, and Golf-Seven—$1,000,000 plus. The review of the literature showed

that a business-school partnerships had the potential to change the life experience of a young

person in ways that may not always be measurable, but certainly provided an impact (JBL

Associates, 2016). The review also showed how a company's financial support of a school can

enable students to have experiences they otherwise would not receive (PIE, 2016). The nearly

nine million dollars donated to the schools researched for this project supported the review of the

literature. The data showed that many of the leaders agreed with George,

> You start one thing at a time and you start really small. I think you benefit from starting
>
> in the K-12 and really working through kindergarten, into the middle schools, and then
>
> high schools. Getting these skill sets reintroduced with critical thinking along with
>
> teamwork. That is when you really start making a fundamental change.

The literature acknowledged that any school leader who was not taking advantage of

potential business partnerships in and surrounding their community was missing a tremendous

opportunity to improve their school (Anderson, 2016). Adam echoed these statements with how

his partnership helped students understand the importance of core academics, "students who

were more of your quote, 'hands-on', type of kids started to see the value of mathematics."

Greg's partnership with a business that is a global leader allowed him to think even

bigger,

> The exposure to what a global environment looks like for our kids... we had to expose
>
> kids younger and younger. We had to expose teachers and we had to show them what
>
> kind of skills were going to be necessary for the future.

Barry's partnership did this by showing students what those careers might look like, "the

key strategies were the plant tours, job shadows, and internships. Those are all exposure

mechanisms to get students exposed to manufacturing careers." Frank agreed, "one thing that I

really pushed was job shadows or career experiences." Be it a grander view of the world or helping students understand the importance of math, Donna's statement represented much of the leaders statements, "the fact that our teachers have so many relationships with our businesses has opened up tours for our kids, it's opened up better curriculum in our school district, it has also opened up more opportunities."

The leaders interviewed for this research project disclosed that their business-school partnerships improved the student experience. The improved experiences were a result of financial support, curricular help, increased dual enrollment, and an overall increase in authentic learning. The examples provided were the result of businesses and schools working together to share resources that gave students authentic learning. Although the data collected on this topic was anecdotal and will require more research, the large sums of money and time dedicated to each of the partnerships studied showed an impact on students. To discover the quality of impact beyond quantitative metrics like attainment of college credits, credentials, and work skills, future research will need to be done to assess the total impact on students.

In the literature review, it was discovered that partnerships between businesses and schools were neglected economic and educational tools, pairings that have the potential to raise student achievement and more closely align the work of educators with workforce demands (Cavanagh, 2013). JBL Associate described how partnerships were critical for the success of the students who sit in classrooms today, for industries who require a motivated and talented pipeline of young people to drive innovation, and for the communities that depend on a productive citizenry for their sustainability (JBL Associates, 2016). A consistent theme that surfaced within each of these partnerships was the goal for education and business to work

together for a more strongly trained graduate that would be more productive in the community (Stone, 2014).

Dan might have best paraphrased these concepts when he stated, "wow, we need to do a better job with these students so that they're prepared and can be successful after school." For many of our leaders, there was a sense of community within their statements with regard to preparing students for life. Frank stated,

I'm hoping that students, after they had a chance to spend some time with me and with others, will understand that they don't have to go to California, they don't have to go to Washington, they don't have to go to Colorado to find a job and find themselves. They can find themselves in the state.

Dan added, "we're preparing students for what life is after school if we can keep them in the area that's even better."

The ability to make a life-earning wage was a common answer for the leaders. Barry shared, "so these careers in manufacturing will provide middle-class jobs and will allow families to make wages that will allow them to live a comfortable lifestyle." The ability to attain college learning without student loans came up numerous times as stated by Frank, "you hook your wagon to a manufacturing facility now, you end up getting tuition reimbursement and at the end of the day you not only have started a terrific career but you're debt-free." With all of the different motivators, Adam's statement might have best paraphrased all the leaders, "we are doing this because it is best for the young people who are going to be entering our highly technical innovative ever-changing 21st century."

The leaders interviewed for this project shared stories about how their partnerships prepared students for life. The stories made multiple references to how they exposed students to

authentic learning experiences. The leaders also made reference to how a focus on problem-solving skills would assist students to acquire higher-earning jobs. With a closer look at this theme, the data showed that improved student experiences were the result of better-informed teachers, increased authentic learning experiences, exposure to real-world environments, and a focus on problem-solving skills. The business leaders' data gravitated more to job-related skills while the school leaders concentrated on the real-world experiences and relevancy of core academics. No matter how the leaders suggested this in the interview, there was a general consensus that their partnership helped prepare students for life and contributed to a better-trained workforce.

Find Four: Motivation to Start

Many of the individuals interviewed for this study expressed goals for the partnership to help contribute to community/school improvement. George reinforced this motive with his comments, "Business Seven's culture is to be involved in the community and the owners of Business Seven have been over the years very involved in all aspects of the community." This statement fits with Austin's (1998) comments: "Cities cannot be rescued without business, but business can't do it alone. Business, government, and civic organizations must join together to bring about effective community building" (p. 97). Edward shared how this goal needs to fit with the financials of running a business,

> We very much have a commitment to the community that we live and work in, yet we want to be able to produce high-quality goods for our customers. We want to employ people in the community, but we also have to get a reasonable economic return for our shareholders or else it doesn't work.

As found in the literature, the power of partnerships in a 21st century school can be transformational (Cavanagh, 2013). Going back to 1917 with the Smith-Hughes Act, there were countless ways that the government tried to leverage business partnerships to improve schools (America 2000, 1991; Education Partnership Act, 1985; Perkins Act, 2006; Smith-Hughes Act, 1917). Cobb and Quaglia (1994) believe that Congress hoped newly formed partnerships would have an impact on school improvement. The school leaders in this study concentrated their focus on the improvement of their schools with the partnership. Fiona shared her thoughts on this improvement,

> We do a really good job of doing school here... if we're seriously committing to getting a well-rounded kid as opposed to just preparing them to go to college, we need to do a better job of putting all those components in place.

> Betty might summarize the intentions of the school leaders best when she said, "it's all about what's good for kids and good for schools."

The literature review helped to enlighten the research on how business investments in education can produce substantial and sustained improvements in labor market prospects while assisting in the transition from youth to adulthood (Kemple, 2012). In the research, the business leaders made mention of the improvements in the labor market when they discussed Return on Investment (ROI). Edward shared his thoughts, "true altruism is tough to come by, so there really has to be a why buy for the private side." He continued, "I think sometimes the public sector gets a little kumbaya and 'why wouldn't we just do this?' It's good for kids. You have to forget that it is the right thing to do and realize it's not free money." Not all leaders were solely worried about the return. When Aaron from the Alpha-One partnership was asked about ROI, he responded, "part of me doesn't really care."

The investment for better-prepared graduates was not unique to the United States. In

Finland, one of the main objectives of the secondary school reform was to invest in a high school

education that would lead to a certified profession (Aho, Pitkänen, & Sahlberg, 2006). The

leaders of this research project shared similar initiatives. For both sets of leaders, an increase in

the attainment of college credits in high school (dual credits), increase enrollment in technical

colleges, and/or increase direct entry workers was the main goal. Barry believed, "if those

enrollments are going up then we believe the mission is on the right path."

The school leaders shared some of the same interests with their business counterparts

regarding to college credit attainment and job skill certification. This could be heard in Greg's

statements, "we measure how many kids are leaving here with skill certificates and or advanced

credits." Different from their business equivalents, the school leaders had an increased focus on

individual student results. The results they were most concerned with included increased

enrollments, increased number of dual credits, but added career-based learning opportunities

noticeably absent from the business interviews.

The need for each partner to realize tangible results was a continuation of the

Community/School Improvement theme. In the previous section, the research identified how the

leaders wanted to improve their school/community. The theme of Tangible Results continued

this goal into the concrete examples needed to show improvement. The need for tangible results

was an important element to produce a successful business-school partnerships. It was also one

of the most important aspects in the factors and conditions that contributed to developing

business-school partnerships when it came to the assessmest of the partnership.

The participants in this study were selected because they were some of the most

recognized partnerships in the midwestern states of the United States. This fact allowed many of

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the leaders to show pride in their accomplishments. The most profound of statements for this theme came from the teacher that assisted Betty in the interview, "I really enjoy this partnership and actually I was thinking about leaving teaching before this came along." He added,

> In my opinion, the teachers that we have hired that work in these customized pathways, it changes who they are in a very positive way. Whether they know it or not, you can just see it almost breathes new life into their profession.

> Betty finished, "there's such a sense of pride about what goes on in that section of the

school. Really you see kids with their sweatshirt on because they're so proud of it. We've kind of created a brand."

This pride was not just localized to students. Adam reported how the business partners felt about working with the students, "they found it was not only an investment in the youth but also an investment in the employee because they came back more excited about the job that they were doing." He continued,

> The partnership between the schools and the business created a culture in the community. Regardless of the funding, regardless of the curriculum energy, it created a culture in the community that STEM education technology and engineering education are cool. That gravitated towards the culture of the entire community, just like winning a state football championship.

> Pride and engagement was the result of business and schools working together towards

improvement for each organization. When the partnership was successful and could show tangible results, students were more engaged and entire communities took pride in the partnership.

The findings of the research uncovered that perceptions were both a product of, and solution to, the barriers and solutions that existed between the schools and businesses studied. The barriers were navigated when the leaders in this study felt pressure to change, resided in a culture that supported innovative practices, and brought the right people to the table to create a shared mission. In the groups interviewed, the shared mission included benefits for the business, but more importantly, focused on improved student experiences. The improved experiences were financial support, curricular help, increased dual enrollment, or an overall increase in authentic learning that strengthened the learning in the classroom. The findings from this research support increased business-school partnerships and were the basis for the recommendations for practice.

Recommendations for Practice

While the findings and conclusions from this study were specific to the seven business leaders and the seven school leaders that participated in this research project and cannot be generalized onto the larger body, the information gathered did provide important insights into the experiences and practices of business and school leaders forging ahead in the area of business-school partnerships. The data collected may inform the work of other business and educational leaders looking at non-traditional ways to achieve their school, business, and community goals. Additionally, the information gained through this study may be used to inform administrative/leader preparation programs as the next generation of business and school leaders rise to these important roles.

This study uncovered themes that ran through each of the recommendations for practice. A message consistently found in the data referenced the school leader's intentions to seek their partnership. Each leader interviewed for this study made comment(s) that there was no financial

motivation to build their partnership. Many of the recommendations of practice require

resources and money, but school leaders in this study specifically denied any notion that money

played any motivation to partner with business. This fact is an important asterisk for any school

leader looking to work with business. Schools looking to build partnerships should not do so

looking for money and should not build any relationship with the goal of finding money. The

data from this study suggested that this motivation could put students at risk of corporate greed

in a dollars for kids type agreement.

A Tool for the College and Career Ready Graduate

The pressure to produce a graduate that is college and career ready has increased in

schools as the job market continues to starve for skilled workers. Even with the debate about the

skills gap, the literature showed that there are more jobs open today than can be covered by

available bodies.

In the research, leaders felt pressure either to expand their company in a growing

economy or to produce students prepared for the 21st century. The leaders shared how their

partnership was a paradigm shift from the work of their peers, a majority of the leaders reported

that their partnership only flourished after continued commitment to the shared vision. They

described how their lack of information along with existing political biases lead to

misperceptions that made their experience initially more difficult. In the partnerships researched,

we heard leaders from both schools and businesses that worked together towards mutual

improvement of both organization.

Explained best by Frank, "the partnership should be one spoke of the many things that

schools, businesses, and communities can use as a tool to assist preparing college and career

ready graduates." Professional development on business-school partnerships is required, to help

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equip future leaders on the positive and negative impacts of this school reform tool. This professional development needs to contain the possible benefits of a successful business-school partnership, but also needs to discuss the dangers this relationship can present to students. This training will need to address the misperceptions many educational leaders have about business and vice-versa. With further research in this area, a blueprint or list of suggestions for building successful partnerships could help school leaders realize how matching the business needs to the goals of the school can build successful relationships like this.

The Leadership of the Organization

The findings from this research were clear as it pertained to the seven business-school partnerships. The formula for successful partnerships included three key ingredients. The first was the leadership and culture within the organizations that allowed the school and business employees to be innovative and work with outside organizations. Second, the right people with the right cross-section of titles and motivations needed to find time to work together. Third, it must be ensured that the ultimate goal of the group focused on a shared mission that supported the needs of each partnering organization to form a symbiotic relationship.

The importance of culture and leadership in the success or failure of an organization was well documented. Positive culture was evident in the comments from both the business and school leaders that participated in the study. Leadership and culture cultivated the right people to build successful partnerships. These findings were important to note as our country continues to see the need for skilled labor, and schools look to prepare students to be college and career ready. Future leaders looking to build partnerships should look to match culture and leadership styles that complement their own mission and styles, to assist in building the partnerships of the future.

The most frequently mentioned theme from this research was the need for the group to identify, build, and maintain a shared mission for the partnership. The need for forward-thinking, courageous leaders was only part of what made the researched partnerships successful. The vast majority of them had a formal or informal agreement to the goals and mission of the relationship. The literature illustrated the importance of a shared mission and the leaders in this study reinforced the importance by their collective attention to the topic.

Leaders of the future will need to be cognizant of the importance of shared mission when building successful partnerships. In the analysis, a common practice emerged to assist in the creation of shared vision. This practice included physical tours of both the partnering school/business that included open/honest discussion about each organizations mission, goals, strengths, and struggles. When this activity included the right people with the right titles, this simple first step should be the initial activity for any group looking to work together.

The Need for Structure in the Partnership

The theme that produced the greatest number of data points was the importance of shared mission. Shared mission resulted when partners worked within a formal or an informal structure. The data discovered that the partnerships in this study had little direction beyond the collective commitment of the members of the group. Many of the leaders studied stated that they started small and built on their successes. They measured the small wins as tangible results as they worked through the struggles. The leaders studied were clear that their results were only possible because everyone on the team made the commitment to a lasting relationship.

The most obvious recommendations for practice concluded from the data was the creation of a team or steering committee for any group looking to build a business-school partnership. This committee should meet regularly and contain a cross-section of people from

each organization. The duration and frequency of these meetings can vary, but must include leaders as well as teachers, business employees, and possibly representatives from post-secondary institutions. The team members must know their role in the committee; one team member repeatedly suggested in the data was the engagement, support, or attendance of the superintendent or other high ranking school leader.

The agenda and structure of the steering committee was also suggested in the data. In each of these steering committees, time was allotted to discuss curriculum, identify needs, set or monitor goals, and time to discuss struggles. In one partnership, a reference to how their group answered three questions surfaced: What do we want students to learn? How will we know if they learned it? What do we do if they didn't learn it? Partnership Golf-Seven referred to the work in their steering committee as that of a Professional Learning Community (PLC) (DuFour et al., 2016). Using the research of Professional Learning Communities within the meeting structure of business-school partnerships could be an important tool for future leaders and should be examined further in future research.

The Impact on Students

The leaders in this study had a surprising number of themes in common. From the common experiences for both school and business leaders to the structures each partnership put in place, the commonalities helped to build sound recommendations for practice that future leaders will be able to use. Once all the data collected and analyzed for this study was stripped down to its essence, the data revealed that the overarching goal for both sets of leaders was to impact students. While our school leaders would refer to this impact as increased engagement or college and career readiness, the business leaders would discuss the Return on Investment (ROI) as preparing their future workforce. No matter how it was referenced, the motivation of all 14

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leaders was to impact students. For this study, the impact on students fell into two classifications: impact on classroom teacher and improved authentic learning experiences for students.

In a number of the partnerships studied, a central goal was to impact teacher practice. This impact would occur in collaborative teacher professional development activities like business tours or a more intense practice of embedding skilled business employees into specific courses to work cooperatively with the classroom teacher. In each of these instances, it was the ultimate goal to impact the most influential individual in students' academic life, the teacher. This internal or external professional development helped to give the instructor a better view of the scope of skills needed by students after graduation, while giving teachers real world activities for their lessons. Although these practices were much more difficult to assess, the impact on students was undeniable considering the fact that teachers were working with professionals to help shape practice, lessons, and activities directly with students.

In nearly all of the partnerships studied, there was a goal to increase the authentic learning experiences for students. This increase in authentic learning was as simple as having a class speaker come into a classroom, as complex as a class solving a business problem that the company experienced in production, and even included students leaving school to learn on the job site. In every activity, the leaders believed these activities built engagement in students around real world problems that required higher-level thinking. No matter the intensity of the activity, increased authentic learning opportunities for students is a recommended practice for any partnership.

Recommendations for Future Research

Although the results of this study can only be attributed to the fourteen leaders who volunteered to participate in this study and cannot be generalized to all business-school partnerships, the findings can help to elevate the need for further study in numerous areas. In each of these areas, further research could inform and influence current and future practice in the area of business-school partnerships.

Leadership and Culture

In this study, one commonality found was the similarities in leadership and culture. Although the theme that most frequently presented was that of leadership and culture, one fact that was discovered after the interviews was that each of the partnering businesses in this study were privately held and not publicly traded on any stock exchange. This fact could be coincidence, but it might also hold important information for future partnerships.

A recommendation for future study would be to research the leadership and culture of privately-held companies as compared to companies that are publicly traded. Comparing business-school partnerships in privately held companies to ones with publicly traded companies might give school leaders insight into motivational factors, as well as mission and culture. Although this future study might not assist in the process of building partnerships, the repeated occurrence of this trend could be an important factor for future school leaders. School leaders might use this information to select the companies they choose to approach and the companies that they opt to skip.

Professional Learning Communities in Business-School Partnerships

One of the most unexpected findings from this study was how little guidance our leaders had in the building of their partnership. Nearly all the leaders reported that they improvised their

journey step by step. Many of the leaders reported that they started with small wins and built on those wins, while others reported that they just kept meeting until something happened. The commonality was that each leader created their partnership without a blueprint and found success without prescribed directions. In the absence of a road map to assist the leaders toward a successful partnership, groups made it up as they went along. They started small and kept building using small wins as metrics to show tangible results.

In one of the partnerships, the actions of their steering committee was correlated to the framework of the Professional Learning Community (PLC) research (DuFour et al., 2016). Although this was mentioned in only one of the partnerships, using the corollary questions of the PLC (1.What do we want students to learn? 2. How do we know they learned it? 3. What do we do if they don't learn it?) could be an important discovery that has the potential for all business-school partnerships, providing steering committees the guidance and direction needed to be able to create successful partnership. Future research of the use of the corollary PLC questions along with the structure of steering committee meetings could support the leaders of the future as they look for a blueprint to build business-school partnerships.

Impacts on Students (Negative and Positive)

The literature review exposed many of the dangers with introducing students to the commercialized world. These dangers are real and present a formidable barrier for many school leaders in building partnerships. Further research needs to be done on the results of and practices in, safe and productive business-school partnerships. There is little information in the literature about how relationships formally impact students. In the digital era of hyper commercialization and social media with this generation of students, further research on how these relationships support student learning needs to be studied with special attention to possible negative impacts.

The dangers of partnerships might be one explanation for the limited number of partnerships and the initially frosty meetings reported by some of our leaders. Further research on what the acceptable standards are for business-school partnerships might assist in bridging this gap, to show why relationships like this can be beneficial and safe for students.

Limitations of Study

The findings of this study are limited to an examination of the seven business leaders and seven school leaders that participated in this study. While each participant was selected because they met the requirements of this study, the conclusions and inferences brought out as a result of this study should not be generalized beyond the sample interviewed for this study with any degree of certainty. It is the hope of that the findings from this work can serve as a foundation for additional exploration and inquiry.

This study of business-school partnerships focused on the experiences and perspectives of the business and school leaders that were instrumental in creating successful partnerships. While the researcher made every effort to articulate the thoughts and experiences of the participants clearly and accurately without bias, it must be stated that the interpretation of the data was that of a researcher that has personally and professionally been recognized for successes in building business-school partnerships. This fact was an unavoidable limitation of this study and should be a consideration of bias even with the special attention given to this topic.

This study of business-school partnerships focused on the experiences and perspectives of the business and school leaders through the use of face-to-face interviews. The initial research project proposed a total of two interviews per leader to allow for follow-up and continued inquiry. While in the process of doing the research, the second round of interviews were only completed on nine of the leaders. The modification from the initial proposal of two interviews

per participant resulted from the fact that many of the leaders interviewed for this project were high level leaders. This research project had the good fortune to interview some of best known leaders in the Midwest, from the biggest districts and businesses in the area. Their knowledge of the partnerships were at a high level and they supported the research with many of the structures; however knowledge of the day to day operations were limited in some cases. This fact combined with the nearly 14 hours of video and five hundred plus data points collected from the initial interviews gave this research project all the information needed. This experience helped to inform the need for future research to include the teachers, business employees, and students to inquire on the impacts of students.

Summary

The pressure for schools to produce a college and career ready graduate has increased as businesses search for a skilled workforce. As business and schools continue to work with a changing millennial student body and workforce, they may find one solution by working collaboratively. This study, through an analysis of seven school and seven business leader interviews, aimed to answer these primary research questions:

1.   What are the organizational impacts of business-school partnerships?

     a.   What are the factors and conditions that contribute to developing business-school partnerships?

     b.   What constitutes an unsuccessful from a successful partnership?

     c.   By using the interview process to attain the knowledge, skills, disposition, and resources, how can studied business-school partnerships inform future endeavors?

3.   What are the educational impacts of business-school partnerships?

a.   How do partnerships influence the teaching and learning process?

b.   How do partnerships impact students?

The leaders included in this study identified specific leadership dispositions, knowledge, and skills necessary to build a partnership that could mutually impact the institutions of both school and business in the creation of symbiotic relationships. In this study, these leaders reported their experiences in hopes that future leaders could use the data collected to help inform future partnerships. While the leaders interviewed for this study could identify the experiences that assisted them in building their partnership, not one of the leaders represented themselves as an expert in building these types of relationships.

The data analysis of this study did reveal that leaders of both school and business did have similar experiences. The inference of these occurrences can only be thought as coincidental until further research can be completed. A preponderance of the evidence indicated the leaders' desired to impact students, but it indicated a lack of direction or the presence of a blueprint to create a partnership. This theme could be a reason why there are not more successful business-school partnerships in education today.

The results of this study are clear on the impact of the business-school partnerships.   The pressures for schools to produce college and career ready graduates will take the collective will of a community (Sullivan, 2012). If schools want to increase student achievement while instilling the employability skills of the future, they will need help. The work and leadership of the fourteen leaders interviewed had an impact on the lives of their students. While much can still be studied about the positive and negative impacts of business-school partnerships, the transformational leadership of those interviewed for this study cannot be denied. The grasp on how organizations can work together to mutually benefit each other is important. It is the hope

that the results of this study can inform the work of future leaders that can look to the innovative

practices of the business-school partnership to provide their students and their community a

distinct advantage.

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Appendix A: Business/School Partnership Interview Protocol

Date: _____

Your Name: _____

Business Name: _____

Position: _____

Telephone Number: _____

E-Mail Address: _____

Script Protocol

Thank you for taking time from your busy schedule to do this interview. Let me assure you that all information revealed through this interview will remain strictly confidential. I will be speaking with seven (7) business leaders and seven (7) school leaders working in Business-School Partnerships. Your business was selected because of the success documented in your partnership agreement with a public high school in this area. The information that is provided in this interview will be combined with that of the information gathered from other business and school leaders. What you say in this interview will be kept strictly confidential and neither your name or that of your company will be used in conjunction with this report.

This interview will take approximately forty-five (45) minutes. If any question seems unclear to you, please let me know and I will be happy to clarify it. After round one of interviews, I do request the option to do a (30) minute follow-up phone interview.

Do you have any questions?

Let's begin:
I would like to talk about your understanding of how business-school partnerships work together. I am mostly interested in your perceptions of the value that business brings to the process. This interview will be divided into four sections, beginning with the motivation of your partnership, followed by the conditions present to support this partnership. Third we will discuss

what you feel constitutes a successful partnership and finally, how you feel these partnerships directly benefit students.

1. Tell me about your business?

Probes
a. What does your business do?
b. What is the mission/vision of your business?
c. How large is your business (local, state, national, international)?
d. Number of employees

2. Tell me about the business-school partnership?

Probes
a. Who in the organization is responsible for your partnership?
b. What level in the organization does that person hold?
c. How would you describe your partnership agreement?

3. Why was this Business-School Partnership started?

Probes
a. Why did you begin this endeavor?
b. Was the motivation tied to community investing?
c. Was the motivation tied to business investments?

4. What does your business expect to gain from this relationship?

Probes
a. What is the value of your presence on a high school campus?
b. How are business partnerships assisting in the preparation of students towards the post high school experience?
c. Do you have an established Return on Investment (ROI)?

5. What needs to happen to continue with this partnership?

Probes
a. Is there an economic reason for this investment?
b. Is there a talent shortage that lead to this partnership?

6. How will you know if this partnership is successful?

Probes
a. Does your partnership have metrics?
b. How often do you get updated on this partnership?

7. How does this partnership benefit students?

Probes
a. Technical Skills
b. Communication skills
c. Public relation skills

8. What would you say to a business or school leader looking to build partnerships?

Probes
a. What is your belief concerning the principal's understanding of the value of a business partnerships?
b.

9. What barriers are you able to identify that might interfere with a successful business/school partnership?

Probes
a. How are overcoming those barriers?

10. What advice would you give another business that is interested in engaging in a business/school partnership?

Probes
a. What would you tell them to do?
b. What would you tell them not to do?
c. Is there anyone you think I should talk about with this topic?
    a. Do you have their contact info?

Date: _____

Your Name: _____

School Name: _____

Position: _____

Telephone Number: _____

E-Mail Address: _____

Script Protocol

Thank you for taking time from your busy schedule to do this interview. Let me assure you that all information revealed through this interview will remain strictly confidential. I will be speaking with seven (7) school administrators and seven (7) business leaders working in Business-School Partnerships. Your school was selected because of the success documented in your partnership agreement with a business in this area. The information that is provided in this interview will be combined with that of the information gathered from other high school principals and summarized for my report. What you say in this interview will be kept strictly confidential and neither your name nor that of your school will be used in conjunction with this report.

This interview will take approximately forty-five (45) minutes. If any question seems unclear to you, please let me know and I will be happy to clarify it. After round one of interviews, I do request the option to do a (30) minute follow-up phone interview.

Do you have any questions?

Let's begin
I would like to talk about your experience in the business-school partnership. I am mostly interested in your perceptions of the value that school brings to the process. This interview will be divided into four sections, beginning with the motivation of your partnership, followed by the

conditions present to support this partnership. Third we will discuss what you feel constitutes a successful partnership and finally, how you feel these partnerships directly benefit students.

1. Tell me about your school?

Probes
a. What is the total student count in your building?
b. Are you the primary contact for your partnerships?
c. How long has your school been involved in a business partnership?

2. Tell me about the business-school partnership?

Probes
d. Who in the organization is responsible for your partnership?
e. What level in the organization does that person hold?
f. How would you describe your partnership agreement?

3. Why was this Business-School Partnership started?

Probes
d. Why did you begin this endeavor?
e. Was the motivation tied to community investing?
f. Was the motivation tied to business investments?

4. What does your school expect to gain from this relationship?

Probes
a. What is the value for your school?
b. How are business partnerships assisting in the preparation of students towards the post high school experience?
c. What percentage of students are directly affected by partnership(s)?

5. What needs to happen to continue with this partnership?

Probes
c. Is there an economic reason for this investment?
d. Is there a curriculum benefit to this partnership?

6. How will you know if this partnership is successful?

Probes
c. Does your partnership have metrics?
d. How often do you get updated on this partnership?

7. How does this partnership benefit students?

Probes
d. Technical Skills
e. Communication skills
f. Public relation skills

8. What would you say to a school or business looking to build a partnership?

Probes
c. What is your belief concerning the principal's understanding of the value of a business partnerships?

9. What barriers are you able to identify that might interfere with a successful business/school partnership?

Probes
b. How are overcoming those barriers?

10. What advice would you give another school or business leaders that is interested in engaging in a business/school partnership?

Probes
d. What would you tell them to do?
e. What would you tell them not to do?
f. Is there anyone you think I should talk about with this topic?
    a. Do you have their contact info?

Appendix C: Interview Invitation E-mail

Dear XXXXXXX,

Many consider you one of the innovative leaders that have been paramount in propelling Business-Education Partnerships in the Midwest. With this reputation, I am inviting you to participate in a research study that will help others follow the great work you have accomplished.

The purpose of this study:
The purpose of this study is to examine the impacts of Business-School Partnership on the business and schools that participate in them. This study will look at the impacts on both the organizations and on the educational processes. The goal will allow future business and school leaders to look at successful partnerships and assess if/how they might embark on a process such as yours

The steps of this study:
I will be speaking with seven (7) business leaders and seven (7) school leaders working in Business-School Partnerships within the Midwest. Your business was selected because of the success documented in your partnership. The information that is provided in this interview will be combined with that of the information gathered from other leaders and summarized for my report. What you say in this interview will be kept strictly confidential and neither the name or that of your company will be used in conjunction with this report.

Requirements:
The initial face-to-face interview will take approximately forty-five (45) minutes and can take place in your office. You will be provided the 10 question Interview Protocol before the interview to allow for preparation. After round one of the interviews, I do also request the option to do a (30) minute follow-up phone interview to clarify if needed.

If you do consider being a part of this research, please know you would be working with someone that has a passion for building community collaborations. I have witnessed great partnerships that benefited both students and communities. Below is a link to my Linkedin site if you would like to know more about my personal journey.

Thank you for considering,

Mike

Appendix D: Informed Consent Document

UNIVERSITY of WISCONSIN
UWMILWAUKEE

Informed Consent for Research Participation
IRB #: Click here to type
IRB Approval Date: Click here to type

Study title	Business-School Partnerships in Career and Technical Education
Researcher[s]	Michael Trimberger, Ph.D. Candidate, Urban Education Doctoral Program

I'm inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate now, you can always change your mind later. There are no negative consequences, whatever you decide.

The purpose of this study: The purpose of this study is to examine the impacts of Business-School Partnership on each organization. This study will look at the impacts both on the organizations and on the educational processes to allow future business and school leaders assess if partnerships are appropriate for them.

The steps of this study: I will be speaking with seven (7) business leaders and seven (7) school leaders working in Business-School Partnerships within the Midwest. Your business/school was selected because of the success documented in your partnership. The information that is provided in this interview will be combined with that of the information gathered from other leaders and summarized for my report. What you say in this interview will be kept strictly confidential and neither your name or that of your company will be used in conjunction with this report.

This interview will take approximately forty-five (45) minutes. If any question seems unclear to you, please let me know and I will be happy to clarify it. After round one of interviews, I do request the option to do a (30) minute follow-up phone interview. You can stop either interview at any time.

Risks

Possible risks	How we're minimizing these risks
This research puts you in minimal risk.	If you feel at risk during any part of this interview, you may stop all proceedings or skip any individual questions if you feel uncomfortable.
Breach of Confidentiality	The interview protocols will be secured in a locked location and all transcripts will exclude names and any other identifiable information.

There may be risks we don't know about yet. Throughout the study, we'll tell you if we learn anything that might affect your decision to participate.

Other Study Information

Possible benefits	• Allow others to learn from your experiences. • Your time here could support future students and employees.
Estimated number of participants	• Seven (7) Business Leaders • Seven (7) School Leaders
How long will it take?	• 1.25 hours
Costs	• None
Compensation	• None
Future research	Your data won't be used or shared for any future research studies

UNIVERSITY of WISCONSIN
UWMILWAUKEE

Informed Consent for Research Participation
IRB #: Click here to type
IRB Approval Date: Click here to type

Recordings	We will record the interview. The recordings will be used and transcribed to ensure the research reflects our interview.

Confidentiality and Data Security

I'll collect the following identifying information for the research: Your name, business name, position, email address, telephone number, and E-mail address. This information is necessary for filing the data and will be destroyed at the end of this research.

Where will data be stored?	On my computer
How long will it be kept?	Spring 2020

Who can see my data?	Why?	Type of data
The researcher only	To analyze the data and conduct the study	What is said in the interview will be used as the data for this research. All information will be Coded with names removed and labeled with a study ID.
The IRB (Institutional Review Board) at UWM The Office for Human Research Protections (OHRP) or other federal agencies	To ensure we're following laws and ethical guidelines	What is said in the interview will be used as the data for this research. All information will be Coded with names removed and labeled with a study ID.

Contact information:

For questions about the research	Michael Trimberger	• (920)918-3121 • mtrimberger@rladvantage.org
For questions about your rights as a research participant	IRB (Institutional Review Board; provides ethics oversight)	• 414-229-3173 • irbinfo@uwm.edu
For complaints or problems	Dr. Elise Frattura	frattura@uwm.edu
	IRB	414-229-3173 / irbinfo@uwm.edu

Signatures

If you have had all your questions answered and would like to participate in this study, sign on the lines below. Remember, your participation is completely voluntary, and you're free to withdraw from the study at any time.

_____

Name of Participant (print)

_____   _____

Signature of Participant   Date

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Michael E. Trimberger Jr.
Curriculum Vitae

Professional Purpose
To provide every student access to Strong Classrooms, Strong School Cultures, and Strong Community Connections.

Education and Licensure
2019, Doctor of Philosophy in Urban Education, University of Wisconsin-Milwaukee
2006, Master of Science, Cardinal Stritch University
2002, Bachelor of Science, Silver Lake University
1997, Associates Degree, University of Wisconsin-Sheboygan

Professional Licensure, Wisconsin
#03, District Administrator
#51, Principal
#80, Director of Special Education
#811, Special Education Teacher (6-12)

Positions Held
July 2017 - Present, District Administrator
Random Lake School District, Random Lake, WI
As the superintendent of the School District of Random Lake (SDRL), we have a $10 million budget for approximately 800 students. The vision of the SDRL is to give tomorrow's leaders a distinct advantage. For the 2018-2019 school year, our schools realized the advantage when all three schools scored Exceeds Expectations on the DPI State Report Card for the first time ever. Current projects include an organizational analyisis that has resulted in restructoring of the teacher compensation model, alignment of leadership teams, implementation of Professional Learning Communities (PLC), and implementation of Positive Behavior Intervention Supports (PBIS). A $1.0 Million Capitol Campaign was launched in Fall of 2019 with $750,000 pledged as of December 2019.

July 2011 - June 2017, Principal, South High School
Sheboygan Area School District, Sheboygan, WI
During my time at South High School, our team realized tremendous acadmic growth. We were proud to say that before I left, we were scoring the highest percentage of proficient/advanced students than at any other time. Our DPI School Report Card jumped from a 62.2 to a 70.8, moving South High from near the bottom to a top four high school in the FRCC Conference. As principal of South High School, I was also able to help architect a plan to motivate twelve company Presidents/CEOs to invest $4.2 Million into our high school students to allow access to Advanced Technology Centers for over 2600 students.

July 2008 - July 2011, Principal, Sheridan Elementary School
Sheboygan Area School District, Sheboygan, WI
Academic successes were not isolated to the district and high school levels. While at Sheridan Elementary, our team was able to realize unprecidented growth in the number of proficient/advanced students on the Wisconsin Knowledge and Concept Exam(WKCE). The increased scores included: Language 42% to 76% (81% growth), Science 46% to 78% (74% growth), Math 68% to 74% (9% growth), and Reading 64% to 68% (6% growth). As principal, Sheridan Elementary was also one of the first schools in the State of Wisconsin to be honored as a School of Disinction by the Wisconsin RtI Center.

June 2007 - July 2008, Assistant Principal, Farnsworth Middle School
Sheboygan Area School District, Sheboygan, WI
The foundations of Professional Learning Communities (PLC), Positive Behavior Intervention Supports (PBIS), and general school governace were learned as the associate principal at the middle school level.

Community Relations
August 2012-Present, President and Founder of INSPIRE Sheboygan County
State recognized as a Workforce Development Company of the Year for 2019, INSPIRE Sheboygan County now raises in excess of $200,000 annually to connect students to employers. This Non-Profit organization was designed to foster relationships between community employers and K-12 Education and has become the state model for implementation of Work-Based Learning in the state.

September 2017-Present, Board Member, Lakeshore Technical College
Represent the educational institutions on the Lakeshore Technical College, Board of Education, for both Sheboygan and Manitowoc County public K-12 schools.

August 2016- Present, Contractor, WEDC/NEW North INSPIRE Implementation
As a leader in Business-Education Partnerships, I have had a number of contracted activities to assist regions in connecting their workforce to the public K-12 system. This work was designed to facilitate collaboration between business and schools and has become a model for the Wisconsin Economic Development Corportation (WEDC) to implement the INSPIRE model across the State of Wisconsin

Affiliations
Congressional Briefing at US Senate on Academic and Career Planning
- 2016 panel member for the implementation of career education in the United States

2019 WIACE Fall Conference
- 2019 Keynote speaker for Wisconsin Association for College and Employers on how to build Business-School Partnerships

2019 Wisconsin Pathways Conference

- Presenter on how Business-School Partnership impact Academic and Career Planning

2019 Wisconsin SLATE Conference
- Presenter on Virtual Learning Days

<u>Awards</u>
- 2019 New Manufacturing Alliance Career Pathmaker Award
- 2016 State of Wisconsin Secondary Principal of the Year Finalist
- 2016 Herb Kohl/AWSA State of Wisconsin Leadership Award
- 2016 Sheboygan County Golden Apple Award
- 2014 New Manufacturing Alliance Career Pathmaker Award
- 2014 Sheboygan County Top Young Professional
- 2014 Sheboygan Area School District Administrator of the Year
- 2013 Department of Education Principal Fellowship Finalist