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Closing the Manufacturing Skills Gap Through Innovative Recruiting Practices

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Abstract

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MS, Southern Wesleyan University, 1999

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Doctoral Study Submitted in Partial Fulfillment

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Doctor of Business Administration

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Abstract

Business leaders' recognition of the increasing shortage of skilled workers to meet industry demand is a business problem. The purpose of this multiple case study was to explore strategies that business leaders used to recruit skilled workers at 3 manufacturing facilities in South Carolina. The human capital theory was the conceptual framework used for this study. Data were collected from face-to-face interviews with 3 business leaders who demonstrated successful recruitment strategies, a focus group of 4 skilled manufacturing employees hired during the time period of 2018-2019, and a review of company documents. Data were analyzed using Yin's 5-step process. Six key themes emerged from data analysis: competitive wages and benefits; clean, safe, and stable work environment; employee investment and on-the-job training; use of recruiting agencies and skilled recruiters; strong community relations/image; and industry competition. The implications of this study for positive social change include the potential to provide significant knowledge and skills to manufacturing leaders conducive to the success of recruiting skilled workers to meet their needs. By meeting the demand for skilled manufacturing workers, organizations could boost their bottom line by increasing productivity and sales. Because of greater profits, business leaders could increase their contribution to the community with stable employment and the creation of additional jobs through supplier initiatives.

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Dedication

I dedicate this paper to my biggest fan and supporter, my wife, Traci. Dedicating this paper will never express how much I love, and many times underappreciate, her strength in this journey. She has spent endless hours ruthlessly pushing me to reach this goal, not unlike she has done in the past for my other goals. For her determination and belief in my capabilities, I am eternally grateful. Now comes the biggest challenge of all, making good on all those promises I made during those late nights, weekends spent in seclusion, and countless missed date nights. But not to be forgotten is the long list of "Honey do's," or soon to be "Doctor do's," waiting for me shortly.

Table of Contents

i

List of Tables

List of Figures

Section 1: Foundation of the Study

As the manufacturing industry becomes more technologically advanced, so have the necessary skill set demands for potential workers. Business leaders must develop successful recruitment practices to attract skilled workers. Without the successful recruitment of skilled workers, manufacturers potentially face decreased profits and loss of their competitive advantage. My goal for conducting this study was to explore innovative practices that business leaders successfully apply to recruit skilled workers to meet their organizational demands.

Background of the Problem

Business leaders recognize that the increasing shortage of skilled workers in meeting industry demand is a valid business problem (Denning, 2018). The problem of meeting industrial manufacturing demand for skilled workers is a topic that business leaders express (Denning, 2018; Hanushek, Ruhose, & Woessmann, 2017; Javdekar et al., 2016). Researchers are seeking methods to mitigate this issue by identifying business leaders who demonstrate the use of successful recruiting techniques to obtain skilled workers.

The lack of innovative techniques by business leaders to recruit skilled workers is a problem that demands further research. Denning (2018), and Melguizo and Perea (2016) reported that if businesses cannot meet the requirements for increased production through successful recruitment practices, a widespread detrimental economic effect will occur. As a result, additional strain through the loss of competitive advantage may affect

the United States economy, government, and the general population (Denning, 2018; Hanushek et al., 2017; Malik, Manroop, & Patel, 2017). Business leaders are aware of the potential detrimental economic effects of the skilled worker shortage.

Although there are many open positions in the manufacturing field and a significant amount of people unemployed, the recruitment of qualified job seekers remains elusive to most business leaders. Without effective methods to recruit skilled workers, business leaders are not able to gain the competitive edge necessary in today's global economy (Deming, 2018). The need for additional research in identifying sources that can alleviate this mismatch between the lack of skilled workers and industry demand is significant.

Problem Statement

A rapidly widening gap exists between organizational needs for skilled workers and the availability of skilled workers in the manufacturing industry (Denning, 2018; Hanushek et al., 2017; Javdekar et al., 2016). Greater than 82% of manufacturers reported a moderate to a severe shortage of skilled resources negatively affecting their organizations (Javdekar et al., 2016). The general business problem is the lack of skilled workers creates a loss of competitive advantage for manufacturing organizations. The specific business problem is that some business leaders lack strategies to recruit skilled workers to fill their organizational needs.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies that business leaders successfully apply to recruit skilled workers to fill their needs. The target population consisted of three manufacturing leaders in South Carolina, selected because they have satisfactorily implemented strategies to recruit skilled workers to fill their needs. The results of this research could provide new insights to business leaders and contribute to a competitive advantage for their organization. By increasing the recruitment success rate of skilled workers in manufacturing, organizational leaders can appreciate improvements in productivity and profitability.

Nature of the Study

Three research methods are taken into consideration when exploring the nature of a scholarly study; the methods include qualitative, quantitative, or mixed methods (Molina-Azorin, 2016). Since I was seeking answers that are a more complex and open dialogue, my study was designed to ask open-ended interview questions, consistent with a qualitative methodology. Researchers who follow the qualitative method use open-ended questions to glean what is occurring or has already happened (Yin, 2017). Researchers who opt for the quantitative method use close-ended questions to test their hypotheses (McCusker & Gunaydin, 2015; Yin, 2017). Occasionally, researchers design their study to address qualitative and quantitative data through a process called mixed methods research (McCusker & Gunaydin, 2015; Molina-Azorin, 2016). To explore how employers can successfully recruit a skilled workforce to meet industry demand in

manufacturing, I did not apply the quantitative methodology, or the mixed method mode, a hybrid of quantitative and qualitative methodology. My research did not attempt to validate a hypothesis, but instead, I explored the research question of what strategies do some business leaders use to recruit skilled workers to fill their needs.

I considered three research designs that apply to a qualitative study on successful human resource recruitment practices used to address the need for skilled workers. The three research designs I considered were (a) mini ethnography, (b) phenomenological, and (c) case study. Mini ethnography and phenomenological designs were eliminated. A researcher attempts to understand the culture of a particular group through observation and questioning when applying the mini ethnographic design (Jarzabkowski, Bednarek, & Cabantous, 2015; Spradley, 2016). The phenomenological design is used to gain a deeper understanding of the subjects' lived experiences of a unique phenomenon, with a beginning and an end (Reynolds & Hicks, 2015). Data in a phenomenological study is gathered from in-depth interviews aimed at eliciting an individuals' meaning based on their own experiences (Bruce, Beuthin, Sheilds, Molzahn, & Schick-Makaroff, 2016; Reynolds & Hicks, 2015). The phenomenological design was not adaptive to my research topic, as I was seeking a set of techniques that applied to my specific business problem. I did not observe or try to understand the culture of the organizations I was studying, as in an ethnographic design. I selected the qualitative case study design for my research. The case study design fits my study because the opportunity for open-ended research questions in a semi structured format delivered detailed data beyond the standard

questionnaire. I sought the answers to my specific business problem from more detailed responses.

Research Question

What strategies do business leaders use to recruit skilled workers to fill their organizational needs?

Interview Questions

1. What are your current recruitment strategies for attracting skilled workers?

2. What specific strategies are the most successful in recruiting skilled workers?

3. What are the external and internal factors that challenge your success in recruiting skilled workers?

4. What additional information would you like to contribute to the conversation that will lead to a better understanding of your success in recruiting skilled workers?

Conceptual Framework

The conceptual framework selected for this study was the human capital theory (HCT) developed by Becker (1962). Becker's theory established a direct link between human capital and economic growth (Melguizo, & Perea, 2016; Riley, Michael, & Mahoney, 2016). The human capital theory is a standard labor-based theory that views increased worker skills and competencies as tools to improve productivity within the workforce and to increase a competitive organizational edge (Channar, Talreja, & Bai, 2015; Riley et al., 2016).

Becker's concept aligns with the neoclassical economic theory that separates economic and social activities (White, 2017). Becker assumes that people will act in rational and intentional ways at all times (White, 2017). The HCT is a strategic resource that can explain the differences in competitive edge among rival businesses (Channar et al., 2015; Ketchen, Crook, Todd, Combs, & Woehr, 2017; Riley et al., 2016). A business leader can appreciate an exponential increase in performance by structuring and bundling resources and leverage the existing organizational human capital (Ketchen et al., 2017). I selected to apply the HCT because of the investigative ability to address the existing problem of successfully recruiting skilled workers to meet individual needs.

Operational Definitions

The operational definitions are derived from scholarly resources and define the terms contained in the research study.

Baby Boomer: Baby Boomers are the generation of workers born between the years of 1945-1964 (Sumbal, Tsui, & Barendrecht, 2017). The Baby Boomer generation is projected to retire within the next 5-10 years (Sumbal et al.,2017).

Employability Skills: Employability skills are specific soft skills that relate to the ability to gain employment and progress within an organization (O'Connor & Bodicoat, 2016). Employability skills, combined with competence and professionalism, increase an applicant's chances of employment (O'Connor & Bodicoat, 2016).

Growing Your Own: Growing your own is defined as training an unskilled workforce while they are on the job (Machlica, 2017).

Human Capital: Human capital is known as the stock of economically productive human capabilities stemming from knowledge, skills, competencies, and other assets; unlike economic capital that can wear out, human capital grows with increased use and experience (Neagu, Lazar, Teodoru, & Macarie, 2016).

Skills Gap: The skills gap is the perceived mismatch between the employer's needs for skilled talent and the availability of a skilled workforce to fill those specific needs (Fletcher & Tyson, 2017).

Soft Skills: Soft skills are the personal skills necessary to interact effectively with others; soft skills can include the ability to communicate, teamwork, problem-solving, leadership, and self-control (Hirsch, 2017).

Talent Pipeline: The talent pipeline is the ability to support a corporate competitive advantage by ensuring a steady flow of skilled and available workers to meet an individual company's needs (Ng, Henshaw, & Carter, 2017).

Assumptions, Limitations, and Delimitations

The identification of assumptions, limitations, and delimitations are a necessary component of a doctoral study (Marshall & Rossman, 2016). Without the discussion of assumptions, limitations, and delimitations, reviewers of a doctoral study could have questions that could threaten the research validity (Marshall & Rossman, 2016). The following three sections will expound on the components of assumptions, limitations, and delimitations definitions and application in my doctoral study.

Assumptions

Assumptions are the set of beliefs that are assumed true, although not yet validated, within a research study (Haegele & Hodge, 2015; Marshall & Rossman, 2016). I assumed the three business leaders I selected were appropriate for exploring effective recruitment practices for skilled workers in the manufacturing sector. Secondly, I assumed the responses from the business leaders were honest and transparent through all phases of the interview and validation process. I also assumed the results of the interviews would bring forth a common theme related to my research question.

Limitations

Limitations are potential study weaknesses that are beyond a researcher's control (Marshall & Rossman, 2016). The most significant limitation of this study was the inability of the participants to answer interview questions openly and honestly for fear of disclosing their proprietary techniques used for the recruitment of skilled workers in the manufacturing industry. A secondary limitation concern was the geographical and cultural influence of this small participant group. The use of a small participant group, coupled with geographical restrictions and cultural influences, could lead to results that are limited to this specific group. Sampling several business leaders from a variety of geographical locations could mitigate this limitation.

Delimitations

Factors that limit the scope and boundary of a qualitative study are delimitations (Marshall & Rossman, 2016). Delimitations are those factors that a researcher imposes

through the conscious selection of scope and boundary, such as selecting participants, geographical area, and industry focus questions. The primary delimitations of this study included selecting business leaders within South Carolina who have successfully recruited skilled workers in the manufacturing sector. Because I used purposeful selection, this study is not applicable to other job sectors or locations.

Significance of the Study

Manufacturing leaders face the specific business problem of recruiting skilled workers to meet their needs. Therefore, business leaders seek to identify effective recruitment practices that successfully recruit skilled workers to meet their needs. This study is significant to business practice in that it may provide a practical model for improving the recruitment of skilled workers in the manufacturing sector. Through the identification of innovative recruitment practices, leaders could be more effective in their recruitment of skilled workers. The implications for positive social change include the potential to provide significant knowledge and skills to manufacturing leaders to support their success in recruiting skilled workers to meet their needs. Through meeting the demand for skilled manufacturing workers, organizations could make significant social contributions to their communities' economies and residents.

Contribution to Business Practice

This qualitative multiple case study could contribute to business practice through the identification of successful strategies that manufacturing leaders use to recruit skilled workers. The skills gap continues to be a challenge for the manufacturing sector. The lack

of a skilled workforce threatens the competitive advantage and economic vitality of an organization (Denning, 2018; Hanushek et al., 2017; Riley et al., 2016). This study could assist manufacturing leaders in improving their recruitment success and in turn, realize greater economic growth and competitive advantage for their organization.

Implications for Social Change

The implications for positive social change include the potential to provide significant knowledge and skills to manufacturing leaders conducive to the success of recruiting skilled workers to meet their needs. By meeting the demand for skilled manufacturing workers, organizations could boost their bottom line by increasing productivity and sales. Because of greater profits, business leaders could increase their contribution to the community with stable employment and the creation of additional jobs through supplier initiatives.

A Review of the Professional and Academic Literature

I began the literature review with a brief discussion of my investigative strategies and resources used to research and uncover information related to my research question. I followed up with the organizational path used to develop the literature review. Most of my sources came from the Walden University Library databases. The most frequented databases included Business Source Complete, Sage Premier, Emerald Management, Educational Research Information Center (ERIC), ProQuest, and Science Direct.

Additionally, I used Google Scholar and the United States Department of Labor (USDOL) as valuable sources of information. Keywords used as search tools included:

skilled workers, skills gap, innovative recruitment, successful recruitment practices, human capital theory, talent pipeline, workforce recruitment, employability, manufacturing skills gap, skills mismatch, soft skills, and *baby boomers.* While conducting keyword searches during my literature review, I discovered 155 sources. From the keyword search, I selected 154 sources, all of which were within the 85% of peer-reviewed journal articles within 5 years (2013-2018). Many of the peer-reviewed articles related to successful recruitment practices, skilled workforce, human capital, talent pipeline, and the manufacturing skills gap.

The purpose of this qualitative multiple case study was to explore strategies that business leaders successfully apply to recruit skilled workers to fill manufacturing industry demand. To meet the manufacturing industry demand for skilled workers, business leaders must employ innovative methods to engage and enlist potential employees. I focused my study on three business leaders in South Carolina who have successfully applied recruitment techniques and innovative tools to mitigate their own skilled worker shortage needs.

I began the literature review with a discussion of human capital as the conceptual framework for my study. I presented the history and growth of the human capital theory, followed by the implications for gaining competitive advantage, and the organizational effects of strategic human capital. From there, I discussed the historical view of manufacturing and how the skills base is evolving from the influence of technology and globalization. Also included in the review are the topics of the lack of skilled workers and

the theories behind this phenomenon, and the research relative to methods and tools to successfully recruit skilled workers in the manufacturing industry.

Human Capital Theory

Over 60 years ago, Becker and Schultz first began the study and development of the HCT (Becker, 1962). Becker's (1962) basic tenets of the HCT theory lie in the belief that HCT is made up of intangible items related to skill, knowledge, and the innate ability to make oneself more marketable, productive, and economically advantaged. Through the growth of these intangibles, growth is realized not only on the individual level but also at the organizational level. Human capital (HC), unlike economic capital, grows with continued use and application (Neagu et al., 2016).

Each person has a different set of intangible skills. It is these intangible HC skills that contribute to the organization because they are rare, not imitable, and are not substitutable (Inkinen, 2015; Saadat, Tan, Owliya, & Jules, 2013). Saadat et al. (2013) further posited the growth of one's HC is linked to a positive competitive advantage in growth for the organization. Increased recognition of how HC could contribute to business success is becoming more evident as business leaders are finding it increasingly difficult to recruit, hire, and retain a skilled workforce (Denning, 2018; Ketchen et al., 2017).

According to Delery and Roumpi (2017), HC resources can be directly correlated with improving sustainable competitive advantage for a corporation. Delery and Roumpi further posited the increase in competitive advantage is achieved through the successful

recruitment and retention of a highly skilled workforce. Individual workers in an organization can realize the positive effect of increased competitive advantage that leads to a greater value of the company. The return on investment for employees in the form of increased wages, opportunities for education, training, and personal development can be realized (Wright, Coff & Moliterno, 2014). Understanding that HC has value for both the individual and the corporation is essential to understanding how to achieve a competitive advantage. The three components that make up the continuum of HC are listed below in Figure 1.

Figure 1. Investments and Outcome Components of Human Capital
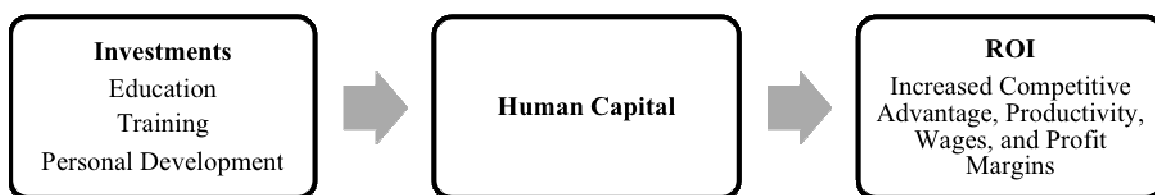
Figure 1. Flow chart demonstrating the input and return on investment process of Human Capital. Adapted from Wright, P. M., Coff, R., & Moliterno, T. P. (2014). Strategic human capital: Crossing the great divide. *Journal of Management, 40*, 353-357. doi:10.1177/0149206313518437

According to Figure 1, on the front end are *investments* or items that require some form of action or cost by the individual or corporation. Investments are activities that contribute to the growth of personal/professional life or competitive edge (Wright et al., 2014). Activities such as school, training, and work experience all constitute individual contributions to personal HC. A business leader would define investments from a

corporate perspective. Employer offerings such as professional development, on-the-job training, and tuition reimbursement are all considered corporate investments (Wright et al., 2014). Both individual and corporate investments could require time, effort, money, or all three. Becker's (1962) work identifies these pre-HC investments as specific behaviors that are fueled by individual desires to achieve personal goals such as; better pay, advancement, and autonomy. It is from Becker's identification and use of pre-HC investments, combined with innate talent and business strength, that HC comes to be. From this pool of intangible assets, a return on investment could occur (Inkinen, 2015). While the majority of Becker's early works focused on individual HC, his more recent work includes the role and benefits of HC for the organization.

The Evolution of United States Manufacturing

With advancements in technology and globalization, the United States manufacturing sector has experienced significant evolutionary changes over the past 250 years. United States economists agree the manufacturing sector has been through four major revolutions (Schwab, 2017). The first Industrial Revolution (1760-1840) began in Great Britain with the evolution of railroads, steam engines, and the infancy of mechanical production (Schwab, 2017). Improved transportation and the ability to produce products with the assistance of tools and machines began the move from away from the agricultural society (Schwab, 2017), which allowed for a second industrial revolution to develop.

The late 19th century into the early 20th century marked the period for the second industrial revolution. Kim, Heshmati, and Park (2010) noted the period from the early 1800s to the 1930s agricultural societies had been on a decelerating growth pattern. Kim et al. declared the agricultural society at its growth limit by the beginning of the Industrial Revolution in the 1840s. In the early 1800s, United States factories evolved from the household manufacturing model where individual artisans supplied goods to support their communities to the factory business model of mass production to a broad market of consumers (LeBlanc, 2017). The second industrial revolution was an innovative time marked by new inventions and business models.

The discovery of electricity and the advent of Ford's assembly line model are but a few examples of new inventions and business models during the second industrial revolution (Schwab, 2017). LeBlanc (2017) credited the United States factory system with the transition from the *putting-out system* to what is now known as modern manufacturing. United States manufacturers created a prosperous manufacturing sector through these years; jobs were abundant, workers enjoyed long-term employment, and there was little to no global competitiveness (LeBlanc, 2017). United States manufacturers would soon face competitiveness on another level as the third industrial revolution began.

The exponential increase in communication and computation resources shaped the competitive third industrial revolution. The third industrial revolution (1960-2000) has been termed the *computer revolution* by Schwab (2017). The third revolution focused on

the building of mainframe computers, personal computers, the internet, and cellular

communications (Porritt, 2016; Saniee, Kamat, Prakash, & Weldon, 2017). During the

third revolution, United States manufacturing companies began to feel the threat of losing

competitive advantage to overseas and multinational competitors (Schwab, 2017). The

focus quickly shifted from the traditional manufacturing model to an innovative model

that focused on speed, innovation, and productivity (Porritt, 2016; Schwab, 2017). The

shift in manufacturing processes was implemented with the intent to remain a world

leader in manufacturing (Schwab, 2017). The next industrial revolution would be an even

more significant challenge to the ability of companies to meet the demands of global

competitiveness.

As technology and communications continued to advance, the fourth

manufacturing revolution was a continuance of the third computer revolution, with an

increasing focus on advanced technology and the ability of organizations to meet the pace

of global demands (Caruso, 2018; Sainee et al., 2017). Caruso (2018) and Rubmann et al.

(2015) described the fourth industrial revolution as the *digital revolution*. The fourth

revolution takes the technology a step further by embedding technology and innovation

from the previous third industrial revolution (Caruso, 2018; Saniee et al., 2017; Yeoh,

2017). Robotics, artificial intelligence, and the concept of working smarter, not harder, all

hallmark this fourth industrial revolution (Rubmann et al., 2015). The digital revolution

of today is a blend of virtual and tangible systems working together to accomplish the

most efficient and intelligent workflow system possible (Saniee et al., 2017). The digital

revolution is influencing global society and economics at a previously unimagined pace. Manufacturing organizations must accurately analyze the future impact and implement a strategic workforce plan to identify new roles, improve recruiting practices, and develop successful training programs (Rubmann et al., 2015). Innovative manufacturers can create disruptive technology by using the fourth revolution to create more efficient factories and production processes. Rubmann et al. (2015) cautioned organizations that to gain competitive advantage, one must move forward quickly. Business leaders must set priorities and enhance workforce competencies (Rubmann et al., 2015). Companies that garner the greatest competitive advantage will be those organizations that analyze the long-term effect and use that information to develop strategic workforce planning (Caruso, 2016). It is up to business leaders to identify the major drivers that result in creating a successful fourth revolution.

Li, Yun, and Aizhi (2017) identified three major drivers contributing to the speed, size, and scope of the fourth industrial revolution as digital, physical, and biological technology. Much like other theories, Li et al. concurred that the fourth revolution has a direct impact on global industrial, economic, and social development. United States manufacturers must be prepared to increase their speed, size, and scope of operations to maintain a global competitive advantage (Rubmann et al., 2015; Schwab, 2017).

Advancing Skill Requirements of Modern-Day Manufacturing

The early efforts of manufacturing required minimal skills beyond the ability to follow directions, perform repetitive tasks, and work under less than optimal conditions

(Schwab, 2017). As the United States continued the transition from an agricultural society to a manufacturing society, the skills necessary to gain employment increased (Kim et al., 2010). Although the period between 2000-2010 saw a 30% (6 million) decrease in manufacturing jobs, the requirements for those remaining available jobs steadily increased (Bureau of Labor Statistics [BLS], 2016). The United States recession of 2007-2009 resulted in a further decline in demand for skilled manufacturing workers (BLS, 2016).

Molnar (2014) studied the decline in demand for skilled manufacturing workers over a 12-year period. It was at the time of Molnar's study, the Great Recession of 2007-2009 occurred. Because of the Great Recession rebound, the United States manufacturing industry demand for skilled workers increased dramatically (Molnar, 2014). The strengthening of the United States economy, combined with the reshoring of businesses, contributed to the phenomenal growth of over 750,000 new jobs for skilled manufacturing workers (Molnar, 2014). Workers who filled these skilled manufacturing jobs realized a higher income (38%) over non-manufacturing employees (Molnar, 2014).

It was during the post-2009 recovery period that manufacturing skills demand evolved from the former traditional factory worker to the demand for workers possessing Advanced Manufacturing Technology (AMT) certifications or experience (Molnar, 2014). AMT increases global competitiveness and increased sustainability for organizations (Krause, 2015). The downside of AMT is the resulting skills gap where available workers lack the necessary skills to meet industry demands (Gylling, Heikkila,

Jussila, & Saarinen, 2015; Jutte, 2016; Melguizo & Perea, 2016). According to Owens (2015), over 40% of today's AMT positions require some form of post-secondary training as compared to the workforce before 2010. Without the ability to increase worker's AMT skills, industries will be falling behind the global competitiveness race.

As manufacturing global competitiveness increases, business leaders aggressively recruit for higher skilled workers who are adept at problem-solving, critical thinking, and computer applications (Molnar, 2014). Successful business leaders are interested in a candidate's mix of hard skills and soft skills. Hard skills are the technical knowledge and aptitude that a job requires (Hirsch, 2017). Before the discovery of how soft skills positively influence a company's competitive advantage, manufacturing leaders focused primarily on the hard skills of applicants (Molnar, 2014). Hirsch (2017) defined soft skills as the possession of personal attributes that enable an individual to effectively and harmoniously interact with others. Attributes such as teamwork, communication skills, and forward-thinking abilities are sought out as desirable soft skills (Hirsch, 2017). As business leaders become more aware of the global impact of employees who possess soft skills, United States manufacturers are increasing the corporate demand for a wide range of soft skills from their manufacturing candidates (Balcar, 2016). Today, business leaders seek applicants who demonstrate a balance of hard skills and soft skills.

A challenge that business leaders are facing is the determination of how soft skills and hard skills can integrate into an organization's operational plan, and how to best achieve a balance between the two skill sets. Balcar (2016) conducted a study to

determine if one skill set, soft versus hard, is a better investment for an organization. Balcar discovered that soft skills were as essential as hard skills in determining employee productivity and contribution to competitive advantage. An increase in productivity because of increased technical (hard skill) ability is a direct link to the cultivation of soft skills (Balcar, 2016). Balcar noted many desired soft skills do not stem from innate, noncognitive ability, but rather from proper training and awareness development. Gender differences were present in Balcar's study in the area of return on investment of both hard and soft skills. There were significant gender differences in increased productivity, with females showing the greatest return on investment of hard skill development at two times that of their male counterparts (Balcar, 2016). Soft skill data showed no statistical significance between the two genders (Balcar, 2016). Business leaders recognize that both soft and hard skills are essential employee requirements for gaining a competitive edge. The challenge for business leaders is determining which skill set, if any, should take precedence over the other during the recruitment process.

Employers are increasingly aware that quality employees are not always those with the most robust hard skill sets. Manufacturing business leaders are moving towards selecting the employee with soft skills over the technically trained applicant with minimal soft skills (Deming, 2017). Deming (2017) researched to examine the growing importance of soft skills in the labor market. During the 1990s, job polarization increased because of the rising market demand for skilled labor (Sparreeboom & Tarvid, 2016). The labor market hollowed out during the decade as computers began to replace middle

skill routine tasks and complement high skill tasks (Deming, 2017; Sparreeboom &

Tarvid, 2016). The skills gap became wider as employers were increasing the number of

advanced skills an applicant would need. Deming found that workers with higher social

skills tend to gravitate towards positions that are nontraditional and require greater levels

of teamwork, communication, and overall higher soft skills. Deming posited that during

the period from 1980-2012, employment and wages climbed rapidly for employees

possessing a higher level of soft skills. Deming stressed the importance of soft skills as

the *human advantage* where workers can demonstrate increased flexibility, adaptability,

and work together by playing off each other's traits and skills. More significant

productivity numbers occur for workers who can demonstrate complementarity between

soft and hard skill sets (Weinberger, 2014). Ritter, Small, Mortimer, and Doll (2018)

While hard skills have been a part of the recruitment assessment, business leaders remain

challenged with identifying and measuring desired soft skills. Ritter, Small, Mortimer,

and Doll (2018) investigated the desires of employers in regard to the applicant's soft

skills. The results revealed that over 80% of business leaders report the ability to work in

teams as their most desired soft skill (Ritter et al., 2018). Business leaders are quick to

focus on an applicant's technical abilities but often find it difficult to assess the

applicant's soft skills inventory (Ritter et al., 2018). The ability to train and assess is

connected directly to hard skills. Soft skills often develop more slowly and with increased

difficulty primarily because it requires a shift in attitude and then a training process

(Balcar, 2016). While there is training in soft skills, there is no useful tool to objectively

assess and measure the results in the context of hard skills return on investment (Balcar, 2016).

Economic Contribution of Manufacturing

Manufacturing is a large part of the United States economy. There is considerable evidence that a thriving manufacturing sector leads to an increase in stable, well-paying jobs, which contribute to a healthy economic environment for a country (Brown, 2015; Griffith, 2015). Since the recession of 2009, manufacturing output has increased by over 22%, with a relative increase in economic contribution (Levinson, 2017). The manufacturing industry's economic contribution to the United States economy represents an average of 12% of the Gross Domestic Product (GDP) from 2011-2016 (Bureau of Economic Analysis, 2018). In 2016, the manufacturing industry contributed 2.25 trillion dollars to the United States economy. The majority of these 2016 contributions came from United States firms classified as small businesses with less than 500 employees (U.S. Census Bureau, Statistics of U.S. Business, 2017). Over 75% of those small businesses were made up of organizations with less than 20 employees (U.S. Census Bureau, 2017).

Manufacturing workers make up a large portion of the United States workforce. Collectively, there are over 12.5 million manufacturing workers in the United States, representing 8.5% of the total United States workforce (Levinson, 2017). Management and professional job positions were reported to be 32% of the 12.5 million workers (Levinson, 2017). Since 2010, the industry has hired over 1 million workers (Bureau of

Labor Statistics [BLS], 2017). The average wage for manufacturing workers in 2017 was $26.50/hr., not including benefits (BLS, 2017).

Meekstroth (2016), of the Manufacturers Alliance for Productivity and Innovation (MAPI), contends that the government reports do not adequately account for the full economic impact of the United States manufacturing. Traditional value chain analysis only includes the downstream of manufactured goods while ignoring the manufacturing economic contributions found in the upstream (Meekstroth, 2016). Within the upstream, manufacturing produces products that go on to support value streams other than manufacturing. Meekstroth cited the construction industry where the production of structural steel, drywall, and other non-metallic supplies begin with the manufacturing process. The aviation and mass transportation sector also consumes manufactured supplies in the way of fuel and replacement parts (Griffith, 2015), while the agriculture industry uses fertilizer (Meekstroth, 2016). Meekstroth contends it is necessary to explore beyond the standard governmental reports to expose the true size of the manufacturing economic footprint.

Meekstroth's (2016) theory asserted the manufacturing economic footprint is much greater than we have assumed, with manufacturing accounting for over one-third of the economy rather than the one-tenth reported by the 2017 BLS report. Meekstroth pointed out discrepancies in the reported workforce and the multiplier effect. While the BLS (2017) stated that manufacturing workers account for 9% of the workforce, Meekstroth contends an additional number of workers (23%) is unaccounted for by the

exclusion of upstream numbers. These additional unaccounted for workers would push manufacturing to 32% of the United States workforce.

Lack of Skilled Workforce Evidence

Mitigation of the skills gap is one of the most substantial challenges manufacturing business leaders experience today. The current pipeline of skilled talent will fail to fill the future industry demand (Olson, 2015). United States manufacturing has experienced a paradigm shift from the past days of assembly lines and rote processes to a rapidly evolving world of technology and increasing worker skills (Giffi et al., 2015). While considerable progress comes in the form of creating processes to improve quality, efficiency, and product diversity, this progress has created a mismatch between the skilled advantages and the worker's abilities (Prahalis, 2016). Without a continuous pipeline of skilled workers, the United States is ill-prepared to compete in the global market. The United States manufacturing sector no longer has a tremendous need for low skilled jobs (Tassey, 2014). It is not profitable or competitively advantageous to continue to produce goods that employ large numbers of unskilled labor. Low skilled jobs, after the 2009 recession, are outsourced primarily to workers in India and Asia (Tassey, 2014). Yesterday's middle-skilled jobs are now low skilled jobs in modern manufacturing, which compounds the skilled worker shortage.

A large part of the skills gap challenge is determining the supply and demand for future talent (Makaruis, E. E., & Srinivasan, M., 2015). By the year 2025, about 3.5 million manufacturing jobs will be vacant (Arend, 2015; Majcher, 2014). Of those 3.5

million vacancies, skilled workers will fill only 1.5 million. Over 2 million positions will

remain unfilled (Arend, 2015). The lack of skilled workers will potentially result in a

negative impact on United States productivity and competitive advantage in the

globalized market. Over 80 percent of manufacturing leaders reported a negative impact

on their ability to meet production goals directly related to the skills gap (Arend, 2015).

Business leaders further lament that 70% of applicants lack the necessary computer skills,

69% lack the skills for problem solving tasks, and 60% lacked the math skills necessary

to perform at the minimum level of the desired position (Arend, 2015). With the rapid

advancement in technology, skill requirements outpace educational performance (Capelli,

2015; Eldeen, Abumalloh, George, & Aldossary, 2018; Olsen, 2015). With a focus on

major competencies such as teamwork, problem-solving, and advanced manufacturing,

many entry-level applicants fail to meet the minimum requirements for employment

(Olsen, 2015). Today's business leaders expect that even entry-level, low skilled

employees should demonstrate higher skills abilities in the areas of Science, Technology,

Engineering, and Math (STEM) (Majcher, 2014; Olsen 2015). All sizes of organizations

will be impacted by the lack of skilled labor; small and medium enterprises through large

multinational corporations (Majcher, 2014). Xu and Trimble (2016) posited the United

States' inability to produce increased numbers of STEM graduates only compounds the

skills shortage. Estimates are that an increase of STEM graduates by 34% is necessary to

meet the forecasted manufacturing demand (Xu & Trimble, 2016).

An additional contribution to the existing skills gap is the underutilization of recent college graduates aged 16-24. In 2015, only 52% of the group were employed (Levinson, 2017). The remaining 47% were unemployed during the month when youth employment historically spikes. The underutilization of this age bracket can potentially create a risk of decreased long-term earnings (Levinson, 2017). Even with the manufacturing post-recession recovery in 2010, employment has not followed suit with only moderate growth of employment (Levinson, 2017). A piece of the lag in employment stems from the increased skill requirements for workers, and fewer job opportunities for workers with no postsecondary education/training. Business requirements for increased skills do not always equate with increased jobs. Often organizations trade off higher skilled workers for fewer positions or opt to use temporary employees to meet their short-term employment needs (Levinson, 2017).

The large numbers of temporary workers employed in manufacturing is an additional contributing factor to the growing skills gap. Over 750,000 workers were in temporary status in 2015 (Levinson, 2017). While production and management positions declined by almost 4 million workers, temporary employee numbers have remained constant (Levinson, 2017). Giuliano, Kampelmann, Mahy, and Rycx (2017) examined the effect of temporary employment on a company's competitiveness. The results of their work noted that two employment sectors, construction, and manufacturing, exhibited adverse effects on global competitiveness from the use of temporary employees (Giuliano, Kampelmann, Mahy, & Rycx, 2017).

Often during challenging times, organizations trade off valuable long-term skills development in exchange for short-term profits. Olson (2015) and Winner, Koppenaal, Mishra, & Mishra (2015) cited declining economic conditions during the financial crisis forced organizations to cut costs, which became the contributing factor to the skills shortage. Olson listed training programs, apprenticeships, and continuing education as frequent cuts. Through the implementation of training cuts during the recession of 2009, business leaders effectively shut off the pipeline for workforce development and the resulting skills gap (Olson, 2015). The U.S. Department of Labor (2015) estimated a 40% decrease in on-the-job training opportunities, mentorships, and apprenticeship programs during the financial crisis.

Steps to Close the Skills Gap

While the skills gap is attributed to many factors, one stands out. The primary challenge of closing the skills gap lies with business leaders identifying strong recruitment practices to attract skilled workers (Manufacturing Institute, 2015). While there is no one idea or method to mitigate the skills gap in the manufacturing industry, business leaders can start with evaluating their current recruitment methodology used to attract skilled workers. The Manufacturing Institute's 2015 publication identified an extensive list of techniques business leaders could employ to assist in closing their organization's skill gap.

One successful technique is altering the public image and promoting the positive aspects of the industry. Another method revolves around developing integrated

communications and partnerships among community leaders, technical colleges, and business leaders (Lerman, 2016). Industry leaders can also explore the concept of casting the net wide to seek talent both inside and outside of the organization.

One of the most significant challenges in mitigating the manufacturing skills gap is the overall public perception of the manufacturing industry. The public perception of manufacturing focuses on the industry as a dirty, dangerous, low skilled, and low paying environment. It is this negative perception that compounds the skills gap challenge for the industry. Fewer people will select a career in a less than desirable industry. The modern manufacturing facilities of today are much different from the factories of the 20th century. Modern manufacturers strive to deliver a quality work environment, with competitive wages, and a strong safety/work culture. Manufacturing business leaders have to continue to work towards overcoming the long-standing image of the industry (Rowe, 2015). Until the negative public perception of manufacturing undergoes a dramatic change, the hiring challenges for the industry will continue.

The American culture resists recognizing the skilled trades as noble career choices that do not necessarily require a college degree (Rowe, 2015). The Manufacturing Institute (2015) reported that over 90% of Americans support the manufacturing industry and believe it is essential to the country's economic and social growth. Conversely, only 35% of parents surveyed would encourage their children to embark upon manufacturing careers despite increased wages and skills (Manufacturing Institute, 2015). Strohush and Wanner (2015) posit the idea that not having a college

degree does not preclude one to a lower return on investment than a college graduate. With over half of college freshmen not completing their degree and leaving school with student loans, Strohush and Wanner's (2015) research determined the non-college graduates realized a higher return on investment overall. Business leaders today must promote the advantages of entering the manufacturing career field.

Employer branding is an additional tool manufacturing business leaders can use to attract skilled talent. With the increasing global workforce shortage, employer branding has proven to give an organization a competitive advantage (Backhaus, 2015; Berthon, 2015; Theurer, Tumasjan, Welpe, & Lievens, 2016). The concept of employer branding is to create a clear difference in how an organization sets itself apart from the competition and creates the sense of a desirable place to work (Theurer, Tumasjan, Welpe, and Lievens, 2016; Ratcliff, 2015). Employer branding as a promise to prospective employees regarding their employment experience is identified by Buckhaus (2016), Galpin, Whittington, and Bell (2015) and Berthon, Ewing, and Hah (2015). It is crucial for the organization to ensure the internal culture accurately reflects external branding. If a corporation fails to deliver the experience as advertised, employees are quick to take to social media outlets to communicate their experience (Buckhaus, 2016).

Bellou, Chaniotakis, Kehaglas, and Rigopoulou (2015) conducted a pilot field study of 896 working adults and their replies when asked what core components are most valuable when assessing an employer's brand. Evidence from the study supported the dimensions of remuneration, relationships, opportunities for self-development,

recognition, and corporate image (Bellou, Chaniotakis, Kehaglas, & Rigopoulou, 2015). Research by Bellou et al. (2015) and Berthon et al. (2015) concluded that employer branding could serve to enhance the corporate ability to attract, retain, and motivate skilled workers. In the organizational quest for global competitive advantage through the recruitment of skilled workers, it is important for companies to promote their employer brand (Carvalho & Areal, 2015; Galpin, Whittington, & Bell, 2015; Vomburg, Homburg, & Bornemann, 2015).

Transition

In Section 1: Foundation of the Study, I introduced the specific business problem that some business leaders lack strategies to recruit skilled workers to fill their organizational needs. The purpose and nature of the study, research, and interview questions, along with the conceptual framework and significance of the study, also appear in Section 1: Foundation of the Study.The literature review supports the conceptual framework of the HCT. It is through the application of the HCT that businesses can realize the positive effect of increased performance and a stronger competitive edge. The purpose of this qualitative multiple case study was to explore strategies that business leaders successfully apply to recruit skilled workers to fill their needs. Section 2: The Project covers the role of the researcher, the selection of research participants, a description of the study participants, research design, data collection, and analysis techniques, and the methods of data reliability and validity in qualitative study methodology.

Section 2: The Project

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies that business leaders successfully apply to recruit skilled workers to fill their needs. The target population consisted of three manufacturing leaders in South Carolina, selected because they have satisfactorily implemented strategies to recruit skilled workers to fill their needs. The results of this research could provide new insights to business leaders and contribute to a competitive advantage for the organization. By increasing the recruitment success rate of skilled workers in manufacturing, organizations can appreciate improvements in productivity and profitability. Through meeting the demand for skilled manufacturing workers, organizations could make significant social contributions to the economy, the community, and its' residents.

Role of the Researcher

One of the advantages of selecting the qualitative case study design is the opportunity afforded to the researcher to conduct an in-depth study of a complex issue (Twining, Heller, Nussbaum, & Tsai, 2016). Unlike the quantitative design where the researcher is the data collection instrument, I was the primary instrument for conducting the interviews and gathering the responses in my study. The role of the qualitative researcher requires ensuring the study participants have full disclosure and a clear understanding of their role as a participant, designing the research, formulating focus group and interview questions, conducting the face-to-face interviews and focus groups,

and conducting the analysis of the collected data (Yin, 2017). Although I was a past

manufacturing business owner, I currently have no direct contact with the industry or the

study participants. As a former manufacturer, I have an interest in the increasing lack of

skilled workers to meet the manufacturing industry demand and how business leaders are

successfully recruiting a skilled workforce to meet their organizational needs.

The Belmont Report is a published source of ethical standards for the protection

of human research participants (Friesen, Kearns, Redman, & Caplan, 2017; Metcalf,

2016). The Belmont Report includes the chief guiding principles in human research

which are (a) respect for the study subject and their rights, (b) beneficence and the right

for a participant to withdraw at any time, and (c) justice held in the idea that consenting

members are adequately informed and able to make sound judgment calls regarding their

welfare during the study (Metcalf, 2016; U.S. Department of Health and Human Services

[HHS], 2016). Through the application of the Belmont Report principles, I strove to

preserve ethical research standards and prevent any at-risk participants.

Researchers attempt to remain objective throughout the design, application, and

analysis of their studies. It is human nature for researchers to hold biases that can

potentially influence the outcome of their research (Roulston, & Shelton, 2015). Bias can

potentially appear at any step of the research process, and bias occurs more often than

researchers may expect (Lomangino, 2016; Neal & Brodsky, 2018; Roulston & Shelton,

2015). Neal and Brodsky's (2018) research examined the phenomenon of *blind spot bias*.

Blind spot bias can potentially occur when researchers perceive the threat of their own

bias is less than that of their peers (Neal & Brodsky, 2018). Neal and Brodsky (2018) posited that preconceived ideas such as pre-existing values, dislike of the interview subject, cultural misconceptions, and collegial influence could result in biases that the interviewer does not recognize. Researchers must strive to set aside personal bias when designing their study, selecting study participants, in the development of data gathering tools, and in the interpretation of the data (Lomangio, 2016). My lack of personal relationships and direct professional alliances with the study participants served to mitigate potential bias, ethical challenges, and demonstrated validity.

Participants

According to Yin (2017), three participants are an adequate number for a case study. I selected three local manufacturing business leaders. All three participants were manufacturing subject matter experts with experience in the recruitment of skilled workers. I purposefully selected leaders from three different organizations to enhance the ability to gather multiple themes. All the business leaders selected were connected to the automotive manufacturing industry. It is imperative to select study participants that align with the overarching research question of the study to collect valuable data (Yin, 2017).

I also conducted a focus group to add richness to the data gathered from the interviews. As stated by Strout, DiFazio, and Vessey (2017), focus groups should consist of 6 to 7 members that have a phenomenon in common. Focus group members were encouraged to interact with each other. Gagnon, Jacob, and McCabe (2015) encouraged

the researcher to support a more social environment where participants can engage with other members.

I gained access to these manufacturing subject matter experts through my contacts in the business sector. As the researcher, I functioned as the gatekeeper. It is the gatekeeper's responsibility to ensure that vulnerable participants are excluded as subjects in a research study (Jay, Thomas, & Brooks, 2018). Through the identified business leader interviews, I recruited focus group employee participants. As a former business owner of a manufacturing company that employed skilled workers, I readily identified the organizations in the region that are successfully recruiting skilled workers. The data on hiring and vacancies of skilled manufacturing workers by the organization is available through the Regional Development Association (RDA). Because of the steep increase in businesses selecting this area to establish, relocate, or expand their manufacturing operations, the RDA has a stake in monitoring their skilled workforce recruitment success. The RDA, along with the local Chambers of Commerce, assisted me in the informed selection of potential study participants.

Initial contact with the business leaders was established through email. I requested a preliminary meeting to discuss my research project, answer questions, discuss confidentiality, and gauge the participation interest levels of the business leaders. Sugimoto, Work, Lariviere, and Haustien (2017) posited the use of scholarly email communication has escalated and is now an acceptable form of communication. Argenti

(2017) described how, over the past 2 decades, there had been a major shift in how business leaders communicate, both internally and externally.

Research Method and Design

When conducting a research study, one of the most important factors is to select the method and design that best aligns with your research question. The initial decision is to choose between a quantitative, qualitative, or mixed mode method. Because my study was seeking answers beyond the reaches of a standard quantitative questionnaire, I selected the qualitative approach. According to Yin (2017), three conditions assist in the selection of the research method; alignment between the method and the research questions, the need for control over behavioral events, and the degree to which the study focuses on contemporary or historical events. Within the qualitative approach, there are several designs to select. I selected a multiple case study. The case study design is an option when the form of the research question is *how* or *why*. Case studies are also best suited for contemporary issues and for those research questions that do not require control of behavioral events (Yin, 2017).

Research Method

Molina-Azorin (2016), Spradley (2016), and Yin (2017) identified three research methods to consider when conducting a scholarly study. The methods include qualitative, quantitative, or mixed methods (Molina-Azorin, 2016). When a researcher strives to seek answers that go beyond gathering basic data, the qualitative method should be given strong consideration (Yin, 2017). The qualitative methodology consists of data gathering

through open-ended questioning to elicit in-depth information (Yin, 2017). Singh (2015)

supported the qualitative method because, when conducted properly, the method presents

a holistic framework from which greater clarity and understanding can be presented.

Singh's research stresses recognition that the researcher cannot rely on statistical data to

demonstrate validity. Singh posited that proper qualitative research would only result

when scientists design, develop and adhere strictly to the research process.

Since I was seeking more complex answers and open dialogue, my study was

designed to ask open-ended interview questions, consistent with a qualitative

methodology. Researchers who follow the qualitative method use open-ended questions

to glean what is occurring or has already happened (Yin, 2017). Researchers who opt for

the quantitative method use close-ended questions to test their hypotheses (Yin, 2017).

Occasionally, researchers design their study to address qualitative and quantitative

data through a process called mixed methods research (Molina-Azorin, 2016; Yin, 2017).

To explore how employers can successfully recruit a skilled workforce to meet industry

demand in manufacturing, I did not apply the quantitative methodology, or the mixed

method mode, a hybrid of quantitative and qualitative methodology. My research did not

attempt to validate a hypothesis but instead, explored the research question of what

strategies do some business leaders use to recruit skilled workers to fill their needs. I

selected the case study design for my research.

Research Design

I considered three research designs that apply to a qualitative study on successful

human resource recruitment practices used to address the need for skilled workers. The three research designs I considered were (a) mini ethnography, (b) phenomenological, and (c) case study. When selecting one of the three methods, it was important to select the method that provided me with the best opportunity to find answers to my research question (Fusch & Ness, 2015; Marshall & Rossman, 2016). I eliminated mini ethnography and phenomenological designs on the basis that neither design would best address my research question of identifying successful recruitment practices that business leaders use to recruit skilled workers (see Fusch & Ness, 2015; Mayoh & Onweugbuzie, 2015; Pratt, 2015).

Fusch, Fusch, and Ness (2017) posited that novice researchers should select the research design that best (a) aligns with their research question, (b) ensures data saturation, and (c) requires the least amount of cost and time. By applying Fusch et al.'s (2017) guidelines, the mini ethnographic design was not a choice. When applying the mini ethnographic design, a researcher attempts to understand the culture of a particular group through observation and questioning (Pratt, 2015; Spradley, 2016). I did not observe or try to understand the culture of the organizations. Therefore, I did not use the mini ethnographic design.

In the phenomenological research design, in-depth interviews are done to attempt to elicit meaning and understanding of a person's lived experiences (Mayoh & Onweugbuzie, 2015). The overall intent of the phenomenological research is not concerned with seeking causation, but rather to uncover first-hand experiences of study

subjects (Lillo-Crespo & Riquelme, 2018). I elected not to use the phenomenological design because I was seeking answers to my central research question and not attempting to understand the meaning of a person's lived experiences.

The use of data saturation applies to all methods of research: qualitative, quantitative, and mixed modes (Fusch & Ness, 2015). Data saturation occurs in qualitative research when there is no additional salient data discovered (Malterud, Siersma, & Guassora, 2016; Saunders et al., 2017). The idea of data saturation can be compared to the statistical validity found in quantitative research (Palinkas et al., 2015). While researchers have disagreed on the standards of data saturation, Fusch and Ness (2015) contended that failure to reach saturation affects the validity of a study. To demonstrate rigor through data saturation is also important to validate study results (Constantinou, Georgiou, & Perdikogianni, 2017). To increase the probability of data saturation, I conducted interviews using identical questions for each participant, conducted a focus group, and reviewed company documents that were relative to my research question.

Population and Sampling

The population selected for this study were three manufacturing business leaders from South Carolina who have implemented successful strategies to recruit skilled workers and a focus group of six employees who have been successfully recruited to one of the three business participants. Participants were selected by the use of purposeful sampling. Purposeful sampling allows a researcher to select study participants that would

potentially yield the most considerable amount of pertinent data (Etikan, Musa, & Alkassim, 2016; Palinkas et al., 2015). The purposeful selection of participants also enables a researcher to identify a subset of participants based on their relevance to the research question (Hoeber, Hoeber, Snelgrove, & Wood, 2017). Purposeful sampling is a nonrandom method of selection. I used purposeful sampling to identify business leaders who are knowledgeable about the techniques used to recruit skilled manufacturing workers in South Carolina successfully and focus group participants who have been successfully recruited to the participating organizations.

Fusch and Ness (2015) suggested selecting a sample size that would ensure data saturation. Yin (2017) contended that a sample size of three is sufficient for data saturation in a qualitative case study. I selected three manufacturing business leaders as participants for my study, based on their ability to attract and recruit skilled workers. Four focus group members were selected from employees who have been successfully recruited by the participating business leader's organizations between 2018-2019. Guest, Namey, Taylor, Eley, & McKenna (2017) suggested that focus groups consist of at least six members up to a maximum of 12. The quality and richness of the obtained data are more important than the number of participants (Hennick, Kaiser, & Marconi, 2016). Hennick et al. (2016) identified the challenge found in selecting a sample size before conducting interviews and data collection. Eligibility criteria for my study participants required being a business leader in a manufacturing organization that has been successful in their recruitment efforts to hire skilled workers. Requirements for my focus group

participants were to be an employee who has been successfully recruited by one of the three participating organizations during the time period of 2018-2019.

I conducted interviews at the participant's worksite to maximize their comfort level. By interviewing at a site that is familiar, I anticipated the setting to be conducive to open conversation and rich data gathering. Gagnon et al. (2015) stressed the importance of space and place as an integral piece of the interview process. A similar process applied to the focus group setting, with groups meeting at the local technical college to ensure ease of accessibility and convenience for all group members. While the interview and focus group methods of data collection are widely accepted in qualitative research, little work has been done comparing the two (Namey, Guest, McKenna, & Chen, 2016). Guest et al. (2017) conducted a multiple qualitative case study comparing data gathering richness between individual interviews and focus groups. Guest et al. (2017) demonstrated the resulting synergy from using both individual interviews and focus groups. Documentable differences between the two data collection techniques were discovered. Guest et al., reported the focus groups were found to have a more significant number of unique items and disclosure of sensitive information over the individual interview. Namey et al. (2016) researched the financial advantages of the individual interview and the focus group. The use of individual interviews took longer but was more cost-effective by 20-36% (Namey et al., 2016). Dawson, Hartwig, Brimbal, and Denisekov's (2017) research demonstrated that human behavior is subject to unconscious influences of the interview setting. Increased comfort, both physically and emotionally,

can enhance discussion and information sharing (Dawson et al., 2017; Gagnon et al., 2015; Guest et al., 2017). I ensured the interview and focus group locations were selected specifically for each participant to maximize comfort and security.

Ethical Research

The legal process of informed consent is required for all research participants to complete before study participation. The informed consent included the purpose of the study, the methods used to collect data, any expected risks, and any potential benefits for the subject's participation (Lentz, Kennett, Perlmutter, & Forrest, 2016; Yin, 2017). Informed consent further provided the participants with a transparent view of the intent of the study, measures that were in place to protect participant privacy, and my contact information. I reviewed the informed consent with the participants before starting the interview or focus group. I answered any questions the participant had. Approval for participation in the study was documented through the subject's signature of the informed consent (Appendix A). I also informed the participants of their right to withdraw from the study at any time without fear of retribution or retaliation.

If participants opted to withdraw from the study, they could contact me with the information I provided. Once I confirmed their desire to withdraw from the study, I would destroy all information and data relative to the participant. Ambuehl & Axel (2017) discussed the importance of maintaining ethical standards by avoiding the use of compensation. The absence of compensation, combined with transparency, ensures the

ethical standards of the study (Ambuehl & Axel, 2017). There was no form of compensation offered to participants.

As a commitment to my study participants, I strictly adhered to the ethical standards of Walden University and the tenets of the Belmont Report including respect, beneficence, and justice (Lentz, Kennett, Perlmutter, & Forrest, 2016; Metcalf, 2016; U. S. Department of Health and Human Services, 2016). I sought and obtained IRB approval from the Walden University IRB before the start of any participant activities. By obtaining IRB approval, I ensured ethical compliance with the guidelines, rights, procedures, and protective measures for the participants of this study. The IRB approval number for this study is 03-07-19-0662616.

In any research study, it is imperative to protect the identity of the participants. Petrova, Dewing, and Camilleri (2016) & Lentz, Kennett, Perlmutter, &Forrest (2016) posited that researchers must not underestimate the importance of anonymity, especially in a small group of study participants. The importance of respecting privacy and the commitment to do so is a trust-building component of a qualitative study. Petrova et al., (2016) promoted acknowledging the participant's contributions to the study, verbalizing the guarantee of transparency, along with reassurance the data collected will be used for research purposes only, all serve to build researcher-participant trust. A researcher must be mindful of the balance between gathering rich data and the preservation of confidentiality (Petrova et al., 2016). For this study, I used the method of de-identifying the participants through the use of assigned combinations of letters and numbers. For

example, P1, P2, and P3 ensured confidentiality and concealed the names of the individual participants. FG1through FG4 was used for all focus group participants. The names of the participating companies were given the labels of C1, C2, C3, and C4. All of the de-identification data is stored in a secure safe. I am the only person who has access to this information. After five years, all stored data will be destroyed.

Data Collection Instruments

Qualitative studies are designed for the primary data collection instrument to be the researcher (Cypress, 2017; Yin, 2017). My role was to conduct semi-structured interviews to explore methods that manufacturing business leaders use to successfully recruit skilled workers, along with conducting a focus group of employees who have been successfully recruited to the participating companies. The researcher has six techniques of data collection to choose from; interviews, case study documents, direct observation, participant observation, company documents, and physical data (Yin, 2017). Yin (2017) stresses that a quality case study must be supported by a minimum of two of these techniques. I used semi-structured interviews, company documents, and a focus group of skilled workers who provided insight as to the meaningful ways they were recruited to support my research.

Individual interviews are the most common tool for qualitative data collection in social sciences research (Manzano, 2016). Many forms of interviews are available for the qualitative researcher, such as; closed versus open-ended questioning and formal or informal design (Manzano, 2016; Morse; 2016). The use of the semi-structured interview

was selected to allow for the collection of deeper, richer data. Unlike the close-ended questioning method, the semi-structured method allows for greater flexibility while encouraging detailed responses from the participants. I used an interview protocol for interviews and focus groups (Appendix A) that included an explanation of how the data collection was performed and a list of open-ended questions that were asked during the individual interview and focus group sessions. The use of an interview protocol enhances the validity of a qualitative study while providing participants with the necessary information before the interview (Ambuehl & Axel, 2017; Yin, 2017). With informed consent (Appendix C) of the participants, I used a recording device to supplement my handwritten notes. I also requested access to company documents that pertained to the organizational efforts to recruit skilled workers. Additionally, I obtained the consent of the business leaders for a select group of their skilled workers to participate in a focus group.

Data Collection Technique

Data collection primarily consisted of semi-structured interviews and focus groups. Working directly with participants allows the researcher to build trust with the study subjects. Khodyakov, Mikesell, and Bromley (2017) cite three primary advantages to gaining participant trust; increased participation of the subjects, increased quality of the research, and greater efficiency of the research process. Marshall and Rossman (2016) point out additional advantages of using interviews and focus groups for data collection as (a) the ability to note non-verbal clues of the participants, (b) the addition of non-

solicited spontaneous responses from participants, and (c) a cost-effective and time-effective method of data collection. Khodyakov et al. (2017) examined the negative effects associated with increased trust when conducting a qualitative research study. The primary concerns associated with increased trust include (a) questionable scientific integrity of the project, (b) potential for the researcher to compromise objectivity, and (c) the stifling of discussion and questions in the interviews and focus groups (Khodyakov et al., 2017). The use of semi-structured interviews enables the researcher a higher degree of flexibility to ask more probing and detailed lines of questions. The semi-structured interview also affords the participants to discuss their answers in greater detail and to offer information that would not typically be discovered in a structured setting. The interview protocol is located in Appendix A.

A second data collection technique was the review of relevant company records. I examined recruitment materials, such as advertising campaigns, job postings, and agency agreements. Company hiring records were also analyzed.

The third source of the data collection came from the results of a focus group of skilled workers who shared their recruitment experiences. By conducting a focus group of recently hired skilled workers, there was the potential of capturing rich data as to why they selected to onboard with their present company. The data from the focus group revealed the comparison of the business leaders' beliefs of successful recruitment strategies against the recruitment techniques the focus group workers identified as successful.

As stated by Baillie (2015), for methodical triangulation purposes and to complete a quality study, three data sources are necessary. Additionally, Fusch, Fusch, and Ness (2018) stress the importance of triangulation to ensure the validity and trustworthiness of a qualitative study. Joslin and Müller (2016) reinforce the importance of using multiple data collection tools to ensure effective triangulation.

Once I received a response to my initial email invitation, I contacted the participants to schedule a convenient time and place for the interview. To enhance the participants' comfort levels, I encouraged them to select a comfortable and uninterrupted location for the interview. Before beginning the interview, I went over the informed consent (Appendix C) and obtained the participants' signatures. I used a voice recorder to capture the interview conversation. The use of handwritten notes also served to supplement the voice recordings. I anticipated each interview to last approximately 60-75 minutes. I extended the time accordingly if the participant had additional information to contribute. When conducted properly, one of the advantages of conducting face-to-face interviews is the ability to witness the participant's responses to the questioning (Chevalier, Watson, Barras, & Cottrell, 2017; Marshall & Rossman, 2016; Zhang, Kuchinke, Woud, Velten, & Margraf, 2017). I was able to assess the participant's comfort level through speech patterns and non-verbal posturing.

The requirements for the focus group consisted of volunteer participants who had been on-boarded at their respective companies during the time period of 2018-2019 and are classified as a skilled worker, as defined by their company job description. Each

member of the focus group was assigned a code of FG1 through FG4. As with the interview participants, I am the sole keeper of identities and information. Members of the focus group were afforded the same guidelines as the interview participants. Focus group participants signed an informed consent, were assured of the anonymity measures in place, and were given the opportunity to review the transcribed focus group meeting to assist with member checking. The focus group participants also had the option to withdraw from the study at any point. There was no form of compensation or remuneration offered to the individuals or the group collectively. I conducted the focus group in a neutral location on the campus of the local technical college that is centrally located to the group's employment locations. Offering a neutral, comfortable, and uninterrupted setting contributed to stimulating conversation among the group (Dawson et al., 2017).

Once both the individual interviews and the focus group interviews were transcribed verbatim, I circled back to the subjects to conduct member checking. Researchers often assume that member checking strengthens the credibility of a research study. Thomas (2017) posits that member checking relevancy is diminished when used for studies concentrated on theory development; however, member checks can be useful, and viewed as a best practice, for participant approval of the transcribed interviews. Member checking is a good practice for qualitative researchers because the process allows participants to review, correct, and reflect upon their responses (Birt, Scott, Cavers, Campbell, & Walter, 2016; Hadi & Closs, 2016; Thomas, 2017). The inclusion

of member checking also serves to enhance the relationship and trust between the participant and the researcher (Khodyakov, Mikesell, & Bromley, 2017). I used member checking to ensure the validity and reliability of my research.

Data Organization Technique

Data organization involves using a method to organize all collected data about a study (Theron, 2015). The method I selected to organize my data was the use of Word and Excel entries contained within a project log. A project log is a valuable tool for keeping data organized and secure (Fluk, 2015). The project log data included the individual interviews or the recorded data from the focus groups, anecdotal notes, and the collection of recruitment materials relevant to the study. A Word document contained all the recorded interviews and focus group meeting transcriptions. The use of recording devices to assist with clarity and accuracy is a common practice for qualitative researchers (Cypress, 2017). To ensure accuracy and record the sessions, I used the iPhone 8, and a Sony handheld recorder. To ensure the security of data from the three collection techniques; interviews, focus groups, and relevant company records, individual folders within the project log contained the results on a secured thumb drive. I am keeping the thumb drive in a locked safe that only I have access to at my home office. All data about the study are destroyed five years after the publication date. The destruction of data includes incinerating the flash drive, erasing recordings, and shredding all hard copy records.

Data Analysis

The objective of this qualitative multiple case study is to identify successful strategies that manufacturing business leaders use to recruit skilled workers. In this study, I conducted interviews with three local manufacturing business leaders in the South Carolina area. The interviews consisted of a series of open-ended questions that are central to my research question. By aligning a series of interview questions to the central research question, it assists the researcher in eliciting additional information. All the interview sessions and focus group meetings were recorded, and transcribed verbatim and reviewed by the participant. To achieve triangulation, I assembled a focus group consisting of skilled workers hired during the time period of 2018-2019 and conducted a review and analysis of relevant company documents. I used all of the collected data in my analysis.

For the data analysis, I used the classic data analysis method. I did not use any computer software to analyze the data. The classic form of analysis required the sorting of concepts and ideas into categorized groups. To best organize my data and to identify common themes, I used the technique of mind mapping. Mind mapping dated back to the early 1970s and was first documented by Dr. J. D. Novak, who developed concept mapping (Renfro, 2017). Buzan presented the actual term *mind mapping* in 1974 (Renfro, 2017). Renfro (2017), Wette (2017), and Chen, Xiao, & Lin (2018) describe mind mapping as a useful visual tool to aid new researchers and students in their quest to organize data and identify common themes.

While initially conceived as a tool for researchers to organize and explore, mind mapping is used to identify emerging themes. Forero et al. (2018) and Renfro (2017) cite mind mapping as a tool to capture individual and group interview data. Forero et al. (2018) present mind mapping as a technique to aid in mitigating researcher bias. The use of mind mapping allows data to be gathered that accurately and succinctly reflects the study participants' lived experiences (Forero et al., 2018). Mind mapping is a useful tool for a researcher to summarize their data more effectively and efficiently (Hariyadi, Corebima, Zubaidah, & Ibrohi, 2018).

Reliability and Validity

The processes by which reliability and validity are established within a quantitative study are established through the application of statistical methods (Mandal, 2018). Because qualitative studies have no firmly established methods of ensuring reliability and validity, researchers are often challenged regarding the rigor, potential bias, and the lack of transparency of their work (Kihn & Ihantola, 2015; Lub, 2015; Noble & Smith, 2015). Because of the possibility of the increased questionability of qualitative study design, researchers are prudent in demonstrating the reliability and validity of their study (de Kleijn & Van Leeuwen, 2018). Dependability, credibility, transferability, and confirmability are the basic tenets of establishing reliability and validity of a qualitative study (de Kleijn & Van Leeuwen, 2018; Noble & Smith, 2015). Unlike the quantitative style, the reliability and validity of a quantitative study are not measurable, and therefore alternative methods must be in place to support the qualitative

study (Kihn & Ihantola, 2015; Lub, 2015; Noble & Smith, 2015). With member checking and methodological triangulation, qualitative researchers can establish the reliability and validity of their work (Lub, 2015; Yin, 2017).

Reliability

Dependability establishes the reliability of a study (Mandal, 2018; Noble & Smith, 2015). The consistency of how analytical procedures are applied describes dependability (Noble & Smith, 2015). The dependability of a study lies in the ability of the study to be repeatable by other researchers (de Kleijn & Van Leeuwen, 2018; Noble & Smith, 2015). According to Anney (2014), Marshall and Rossman (2016), and Yin (2017), the establishment of dependability can be accomplished through several different methods. In my study, I demonstrated dependability by firmly adhering to the individual interview and focus group protocol (Appendix A) and the individual interview and focus group questions (Appendix B) to ensure all study respondents were afforded the equal opportunity for discussion. I was diligent in my efforts regarding the accurate recording and transcription of the participant's responses during the semi-structured interviews and focus groups. To provide future researchers with the ability to replicate my study, I completed an audit trail. Audit trails permit the researcher to account for all collected data throughout the study. A strong audit trail includes raw data, interviews, and observation notes and transcripts, documents and records, and any other pertinent data that contributes to establishing repeatability (de Kleijn & Van Leeuwen, 2018; Mandal, 2018). Lastly, I used member checking to ensure my transcription data was free from

errors and was in alignment with each member's responses.

Validity

Credibility, transferability, dependability, and confirmability of findings make up the necessary components to support the validity of a qualitative study (Bengtsson, 2016; de Kleijn & Van Leeuwen, 2018; Smith & McGannon, 2017; Korstjens & Moser, 2018). Study validity reflects the integrity and application of the study methods in comparison to the precision of how accurate the findings reflect the data (de Kleijn & Van Leeuwen, 2018). Documentation, interviews, participant and direct observations, and artifacts are all useful tools to increase the validity of a qualitative case study (Yin, 2017). Methodological triangulation using different methods can increase the validity and reliability of a qualitative study (de Kleijn & Van Leeuwen, 2018; Fusch, Fusch, & Ness, 2018; Lub, 2015; Noble & Smith, 2015). The use of member checking also aids in strengthening the validity of a qualitative study (de Kleijn & Van Leeuwen, 2018; Lub, 2015; Mandal, 2018). I used member checking to increase the validity of my case study.

Researchers and scholars use credibility to demonstrate, through the use of member checking, correct data interpretation, review of the participant and focus group transcription, demonstrated triangulation, and both interview and focus group protocol (Birt, Scott, Cavers, Campbell, & Walter, 2016; Smith, 2017). By demonstrating credibility, researchers can ensure the data is derived from the participants and not the researcher's point of view (Birt et al., 2016; Bengtsson, 2016; Rapport, Clement, Doel, & Hutchings, 2015). The removal of any threat of bias is essential in establishing credibility

(Rapport et al., 2015; Elo, S. et al., 2014; Roulston, & Shelton, 2015). Enhanced credibility is demonstrated by methodological triangulation (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014; Fusch, Fusch, & Ness, 2018). I established credibility by semi-structured interviews with three business leaders, the review of company records and documentation pertinent to recruitment, and the results of a focus group. Member checking established credibility and absence of bias by engaging the participants to review and validate their responses.

Transferability focuses on the ability of future researchers to extrapolate the findings of one study to another (Duggleby & Williams, 2016; Marshall & Rossman, 2016). Unlike quantitative research, where the researcher states the general findings and the transferability, the qualitative researcher does not (Mandal, 2018). Marshall and Rossman (2016) support the stance that the burden of transferability lies with other researchers and not the original study author.

Confirmability is the final component in establishing the validity of a qualitative study. Establishing confirmability is a gradual and ongoing process (Korstjens & Moser, 2018). When all four quality criteria are met, there is an increase in the accuracy and power of a qualitative study (Korstjens & Moser, 2018). The establishment of confirmability is related to the presence of neutrality and transparency in a qualitative study. The use of an audit trail is an effective technique to contribute to the confirmability of a qualitative study (Houghton, Casey, & Smyth, 2017; Korstjens & Moser, 2018). Korstjens and Moser (2018) posit researchers must provide all steps of their study,

including notes, decision pathways, data management, transcribed interviews, and sampling techniques. Additionally, Shayestefar and Abedi (2017) support the audit trail to the extent of recommending a recording of the entire interview processes to demonstrate study confirmability.

Transition and Summary

In Section 2, I described the purpose of this research study, the role of the researcher, participant selection and treatment, methodology, and design of the study, and population and sampling information. Additionally, I discussed the subject of ethics and its' importance in conducting valid research. Finally, I addressed the collection of data, instruments used to collect the data, analysis of the data, and the importance of demonstrating validity and reliability.

The purpose of this qualitative multiple case study was to explore strategies that business leaders successfully apply to recruit skilled workers to fill their needs. To gather data that ~~aligned~~ with my specific research question, I conducted personal interviews with three manufacturing business leaders, reviewed relevant company documents, and held a focus group comprised of skilled workers to discuss successful recruitment tools they experienced during their job-seeking and hiring phase. Data collection from these three sources was ongoing until I reached data saturation. By using three data collection methods, I demonstrated methodological triangulation. The methodological triangulation method is a useful tool to increase a qualitative study's validity and reliability. In Section 3, I present the findings of my research, practical applications for the manufacturing

business leader, implications for social change, and recommendations for further

research. I end Section 3 with a summary of my study and the conclusion.

Section 3: Application to Professional Practice and Implications for Change

Introduction

Increasing demand for skilled manufacturing employees is challenging business leaders to develop and implement innovative recruiting practices. The purpose of this qualitative multiple case study was to explore innovative recruiting practices that manufacturing business leaders use to successfully recruit skilled workers. The data was derived from individual interviews with business leaders who have successfully recruited skilled workers, a focus group of four recently recruited employees from different manufacturing organizations, and a review of company documentation at three manufacturing businesses. The study findings revealed methods that manufacturing business leaders use to successfully recruit skilled workers.

From my research, six key themes emerged from the individual interviews, focus group meetings, and review of company documentation. In Section 3, I discuss the presentation of the findings, application to professional practice, implications for social change, recommendations for action, and further research. I concluded Section 3 with a personal reflection of my experience with the Walden University DBA doctoral study process and the conclusion.

Presentation of the Findings

Using Yin's (2017) five step manual analysis, my research resulted in six key themes related to the successful recruitment of skilled manufacturing workers. The six themes were (a) competitive wages and benefits, (b) clean, safe, and stable work

environment, (c) employee investment and on-the-job training, (d) use of recruiting agencies and skilled recruiters, (e) strong community relations/image, and (f) industry competition.

The central research question for this study was *What strategies do business leaders use to recruit skilled workers to fill their organizational needs?* Using individual semi structured interviews, a focus group, and a review of company records, I identified six themes which I will discuss in further detail. I will demonstrate alignment between my findings and the conceptual framework of Becker's HCT. Methodological triangulation was achieved through the use of common themes discovered through the interview and focus group process, literature reviews, and review of company recruitment materials.

Theme 1: Competitive Wages and Benefits

The use of competitive wages and benefits was the first key theme that emerged from the individual interviews. Tato-Jiménez, Buenadicha-Mateos, and González-López (2019) noted that workers are seeking those employers who can offer fair compensation, benefits, and quality work life balance. Tato-Jiménez et al. (2019) further state the observation of a shift away from economic benefits and more towards noneconomic benefits that contribute to an individual's quality of life. Giblin and Galli (2017) added that compensation packages need to be structured to attract applicants to the job and the organization. All three interview participants discussed competitive wages and benefits as a strong component in the successful recruitment of skilled manufacturing workers.

However, none of the three interview participants said this key theme was the major

deciding factor for employees who had hired on at their companies. Focus group (FG)

participant responses validated this statement, with all four FG participants stating that

wages and benefits were not the overall deciding factor in their individual decisions to

sign on with their organization. All FG participants voiced they felt their compensation

packages were competitive with the local market. Interview participant 3 (P3) said,

"larger corporations have a little bit more leverage, where they can pay a little more, the

benefits. Actually, I don't think they pay a whole lot more than I do." P3 also noted that

because of economies of scale, the company was limited in the ability to offer traditional

benefits such as health insurance and large amounts of paid vacation. However, P3

discussed the nontraditional benefits the company was able to offer. Some of these

benefits included bonuses, subsidies for private insurance, paid days off for exceptional

performance, and flexible scheduling. Lyria, Namusonge, and Karanja (2017) validated

that nontraditional benefits, such as flexible scheduling, can be a good recruitment tool.

All three interview participants discussed their abilities to provide benefits, especially

healthcare. P2 and P3 responded that because they were unable to purchase healthcare

policies in volume, they had to look to other benefit options such as subsidizing insurance

premiums to offer their employees. The smaller organizations were unable to offer

benefits that could compete with the larger companies' healthcare benefits because of the

volume discounts given to large policy purchases. When asked what the external and

internal factors challenging success to recruit skilled workers was, Participant 2 (P2)

replied, "Internal factors, to be honest, are that we can't offer health insurance. That's the biggest one". P2 also spoke to the ability of a smaller organization to be more flexible and innovative with their benefits offerings. P2 offered nonconventional perks, much like P3's shop, such as flexible scheduling, supplemental pay for health insurance, and the ability to have more on-the-job training. P2 commented the opportunity to flex schedules was often the tipping point for applicants in their decision-making process. Wadhwa and Madan (2017) validated P2 and P3's comments by stressing the importance of providing employees with a positive working environment. Lastly, Ployhart, Schmitt, and Tippins (2017) posited that the applicant's needs and desires would become of greater importance as the availability of skilled workers continues to decrease. Table 1 contains comments from the business leaders regarding the importance and challenges of offering competitive wages and benefits.

Table 1

Theme 1: Competitive Wages and Benefits

Participant	Participant comments
P1	Competitive wages are also a recruiting bonus.
P2	We sponsored a visa for someone who had a specialty because we heard our biggest customer had a need for this. We also are flexible. We had someone who was a welder and wanted to become a machinist.
P3	I try to be flexible as far as work-life balance. I try to help the guys who have small kids and that are single dads. That's one of the big ones right there to try and be flexible. It's a different world than when my dad started this business forty years ago.

Theme 2: Clean/Safe /Stable Work Environment

The second theme to emerge was manufacturing employers and employees value a clean, safe, and stable work environment. Gyekye (2015) and Smith (2018) reported that a strong workplace safety program and safety climate create a perception of organizational support. Historically, the manufacturing sector has been known for being an industry that lacks these attributes. In fact, only one-half of the U.S. population views manufacturing jobs as clean, safe, and reliable (Giffi et al., 2017). As a result of misinformed perceptions, manufacturing business leaders are faced with the challenge of dispelling a negative industry image. The challenge of having applicants understand the positive changes resulting from increased efforts by manufacturing leaders to set higher standards in the areas of safety, cleanliness, and stability was viewed as one of the major

hurdles to recruitment success. Wang (2018) noted that the general public must understand that today's manufacturing has a strong impact on the economy, the global competitive advantage, and society. The longstanding poor image of manufacturing, combined with the lack of community support, creates a barrier to recruitment efforts. All three of the participants viewed Theme 2 as a positive recruitment tool for their organization. P1 spoke of a new recruitment technique their business leaders had implemented for the first time in the company's 45-year history. The technique centers on holding on-site recruitment events where prospective employees tour the shop floor, interact with employees, and see for themselves what the work environment looks like. P1 added,

> "That was something different we had not done in 45 years, but once people came on site and saw the equipment they would work on and saw the clean environment, and the technology that we use, they were very interested in working here".

The recruitment technique of inviting potential employees on to the shop floor was further validated by Schake and Craft (2019). By allowing applicants to see the work environment, be exposed to the culture, and understand the employer's commitment to safety is a proven tool (Schake & Craft, 2019). P3 expressed the need to dispel the old rumors, "And kids need to get in it, they need to know that it's not a dirty, sweaty business or dangerous business to get in, and it's [manufacturing] not going away." Ployhart, Schmitt, and Tippins (2017) supported the business leaders' beliefs that a strong

organizational image directly affects an applicant's decision whether to move forward in the hiring process or to look for work elsewhere. A strong organizational image can be used to gain a competitive advantage in a market that is experiencing a skills shortage (Ployhart, Schmitt, and Tippins, 2017). Bellou, Chaniotakas, Kehagias, and Rigopoulou (2015) discovered that applicants prefer to apply to organizations with a stronger brand image. Applicants equate a strong brand with the ideal job (Bellou et al., 2015). P1 and P2 stressed the importance of stability demonstrated through the longevity of the organization and the types of contracts they secure. P2 explained it as, "I think that the types of contracts that we get, meaning with big companies and government, is attractive. It generates a sense of stability, and us being around for a very long time, which also generates stability". FG members unanimously validated the importance of a clean, safe, and stable work environment by noting company longevity and work environment as essential items in the recruitment experience. FG members also spoke of the 2009 recession and how their companies did not lay anyone off during this time. For the FG members, the absence of layoffs during tough economic times was very important. Table 2 includes comments from the business leader participants regarding the importance of a safe, clean, and stable work environment.

Table 2

Theme 2: Clean, Safe, and Stable Work Environment

Participant	Participant comments
P1	We are known in the community as being a stable employer. In 45 years, we have only had one layoff, and that was for a very short period of time. We welcome skilled workers from other organizations that have laid off workforce.
P2	We have been here a long time as a family-owned business. Even with our size, we secure major contracts and orders with the military.
P3	I think the reputation we have throughout the town definitely helps us. We have been here a long time and plan on being here a little while longer.

Theme 3: Employee Investment and On-the-job Training

Employee investment and on-the-job training was the third emerging theme. Giblin and Galli (2017) posited organizations that do not invest in their employees are more likely to struggle with meeting their organizational goals. The validation of Becker's (1962) HCT outlining the importance of education and training is seen here, with business leaders voicing their commitment to providing the necessary tools to develop and retain their human capital. It is further noted that an organization's human capital must be strong to deliver the services and products to the stakeholders (Giblin & Galli, 2017). All the participants addressed the importance of on-the-job training and investing in their employees. P1 noted their organization used the term associates when referring to the employee population. P1 felt this was a more positive moniker over the term employee. Several of the FG participants made statements centering around

opportunities for advancement, pathways for future careers, and advancement within the organization, and the overall feeling that the company had a genuine interest in their individual success. Business leaders of organizations that promote self-development could see an advantage in their recruitment of skilled workers (Bellou et al., 2015). Providing potential employees with information regarding education and on-the-job raining initiatives a company offers is a strong recruitment tool (Holzer, 2017). By improving the quality of workers, manufacturing companies could improve their overall performance and profitability, resulting in an increased community multiplier (Holzer, 2017). Investing in employees through education, training, and personal development contributes positively to increasing the organization's human capital (Wright et al., 2014). All four of the FG participants validated this statement from the employee's point of view. Two of the four FG participants revealed their organization's commitment to investing and training their employees was the primary influence in their employment decision. FG1 noted the company reputation for giving back to the community and investing in its employees greatly influenced their decision. FG2 commented on longevity, reputation, and an excellent work environment as a large influencer that played an important part in his decision process. The FG members unanimously voiced they felt their organization demonstrated a commitment to the workforce.

All three of the interviewees brought up the topic of professional development for their employees. P1 noted their company provided a mentor and buddy system training as a tool for professional development. Owens' (2015) research discovered that job

shadowing and one-on-one training is positively correlated to overall job satisfaction. P1

discussed the *Employee Value Proposition* recruitment strategy where the company's

business leaders communicate with the community and workforce their commitment to

being an integral part of the community. P1 pointed out their commitment went beyond

their many philanthropic actions, to include continuing education, clean and safe working

environments, competitive wages, and inclusion of the Veteran community in their hiring

practices. P1 also discussed their policy for interviewing skilled manufacturing workers

who had been laid off from other corporations around the community. P1 stated, "We've

done a good job at also promoting our company and why it's so good to work here." P2

discussed the organization's program of hiring workers who are just out of college and

training them in the organization's way, rather than train someone with old habits. P2

viewed this as a unique tool for demonstrating employee investment and on-the-job

training opportunities since most skilled worker positions require applicants with at least

one year of manufacturing experience. P2's practice of recommending business leaders

view applicants as potential opportunities for the organization, rather than an evaluation

of their current skill set reflects the ideas of Hamilton and Davison (2018), thus

supporting the HCT of knowledge, information, ideas, and skills. P2 spoke to their youth

recruitment initiative details by explaining the organization seeks out youth who are

"responsible, want to work, and has some sort of a work ethic, like discipline and

knowing what the purpose of being here is. If we see that, we'll give them a chance." P3

concurred that their company's longevity and reputation around town went a long way in

establishing their business as one who invests in their workforce. P3 also noted he works

hard at showing he cares about his workers by helping employees maintain a healthy

work-life balance, combined with flexible scheduling. On-the-job training availability

was also evident as part of P3's investment in employees. Table 3 includes comments

from business leaders on how they view employee investment and on-the-job training.

Table 3

Theme 3: Employee Investment and On-the-job Training

Participant	Participant comments
P1	Our company utilizes what we call the *Employee Value Proposition* that centers around the organization's commitment to the employees.
P2	So on-the-job training is essential. If you don't train someone well, then they don't meet your expectations. Then it's not really their fault; it's your fault for not training them properly. We also are flexible. We had someone who was a welder and wanted to become a machinist. So, we trained them.
P3	It's valuable (On-the-job training and employee investment); there is no doubt about it. There is a special set of skills that apply here that you can't get them everywhere. I'll train them as they come in.

Theme 4: Use of Recruiting Agencies/Skilled Recruiters

The use of professional recruiting agencies is a theme well documented (Russell

& Brannan, 2016). All three interview participants spoke to their use of industry specific

agencies and recruiters as an effective strategy for building human capital. Hipps (2017)

described the use of professional recruiters as an opportunity to work more personally

with prospective workers. Skilled recruiters are an added marketing tool to promote the mission and culture of the company to prospective workers (Hipps, 2017). P1 stated their organization uses a professional agency as their primary recruitment tool. P1 explained the effectiveness of their model is based on the fact their recruiters are the first point of contact; they understand the business and can conduct effective candidate screening. P1 also noted their recruitment team is embedded within their plant as part of the human resources division, even though they are not employees of the organization. P2's organization also employs temporary agencies to fill open positions. However, since P2 holds a position on the local community college board and is a small business with limited capital, P2 prefers to hire through word of mouth and referrals. Schlachter and Pieper (2019) stated that word of mouth and the use of current employee's social contacts are a proven method of recruitment. P2 commented they had little to no success in their attempts to hire through state and government job boards and generally defer to an outside industry-specific hiring agency. P3 also uses professional recruitment agencies to hire skilled workers, especially when the need is immediate. The cost of using an outside service was a concern for P2 as well as P3. Schlachter and Pieper (2019) suggested that referral hiring results in cost savings to the organization, as recruitment and hiring costs are lessened. P3 prefers to rely on word of mouth and referrals as their optimal choice, primarily due to the cost of using professional recruiters. P3 voiced concerns over cost as "It's an expensive proposition now. Obviously, when you bring another player into the situation, they have to have a cut too". Both P2 and P3 discussed their inability to

compete with the larger, branded organizations in town that use outside recruitment agencies on a consistent basis.

P1 stressed the importance of strong recruiters as "they are the first contact with the applicant." They understand the business, they understand the job, and they have been working on our account for several years." P1 added, "they [recruiters] can do a really good job, even when there are not many people in the market looking for jobs." P3 noted, "Basically, at this point, it comes through temp services. I don't think anyone really goes out and looks for a job anymore. I think they hire recruiting temp services to do the leg work for them, and they come through". All four FG participants described their recruitment as a pleasant experience. FG 4 stated their experience as "smooth." FG 3 said their view on the recruitment process was "excellent compared to other companies." Theme 4 aligns with the definition of human capital as the knowledge, information, ideas, and skills of individuals that are essential to increasing the productivity and profitability of and organization (Schake, & Craft, 2019). Table 4 includes comments from business leaders on how they view the use of recruiting agencies and skilled recruiters.

Table 4

Theme 4: Use of Recruiting Agencies/Skilled Recruiters

Participant	Participant comments
P1	It is quite helpful to have stability on the recruiting end. Our recruiters that do the screening have been doing it for a few years, and they can do a really good job even when there are not many people in the market looking for jobs.
P2	I rely heavily on the technical college for new talent. Because I am on the advisory board for the Machine Tool Technology program, it's like I have an inside track. I am willing to take new grads with no experience., other places want that experience.
P3	We have used temp agencies in the past, but for the most part, it is either word of mouth or referrals.

Theme 5: Strong Community Relationships/Image

Theme 5 identified the importance of strong community and postsecondary relationships. The population of available skilled workers is shrinking as more manufacturing organizations locate in the South Carolina area. As a result, business leaders must look towards new and innovative avenues to successfully recruit and create a strong talent pipeline. P3 noted, "the labor pool is obviously small and taxed heavily in this area. There is a lot of industry coming into this area that we're are all shooting for the same personnel, really." P3's concern echoed Teodoro and Switzer's (2016) work on partnerships and collaboration, in that a tight labor market with diminished human capital decreases an organization's ability to recruit skilled workers. All three interviewees

mentioned the importance of building relationships with the local technical college and community. Lerman (2016) suggests business leaders forge strong community relationships with local technical colleges and community leaders to improve their recruiting results. Teodoro and Switzer (2016) suggest that business leaders must look outside of their organization to build human capital. The development of partnerships and collaborative groups are linked to increased business performance (Teodoro & Switzer, 2016). Hernandez-Gantes, Keighobadi, Fletcher (2018) demonstrated that building strong relationships between manufacturers, communities, and local technical colleges contributes to creating a robust talent pipeline. Hernandez et al. (2018) discussed the importance of advisory committees and their ability to bridge the employer's desired skills with the curriculum that was being taught. Hernandez et al. (2018) also made the point that industry participation on advisory boards can bridge the employment gap by having the inside track on new graduates. P2 supported this fact by voicing their organization is heavily involved in the local technical college's advisory board, and has seen positive results both in student recruitment and curriculum alignment. P2 offered further commentary on the importance of advisory board participation, "It's not like we hire in mass quantities, so if I need a specific type of employee, I can ask if they have someone. I think that helps too, that aspect." P1 also demonstrated validity by stressing the importance of their active community college relationship. P1 stated their organization has a long-standing apprenticeship program in conjunction with the local technical college, for both youth and adult students. P1 validated Hernandez et al. (2018)

by offering the fact that a majority of their apprentices remain with the company once they have completed the program. Makarius and Srinivasan (2016) posited that organizations that offer apprenticeships see a greater increase in job applicants.

All three of the individual business leaders discussed the challenge to improve the overall image of manufacturing and how the overall image directly affects the number of available skilled workers. P3 demonstrated his commitment to the manufacturing industry with the comment, "The country needs it (manufacturing), it's not going away, you're not going to replace it with a computer, you're not going to replace it with software. There's a certain pride in, and sense of accomplishment in what we do. I've always felt it, and I still do". All three of the business leaders stressed the importance of working towards educating the community on the positive aspects of careers in manufacturing. The focus group participants also voiced their opinions on how company reputation, work environment, and company mantra positively reinforced their decision to sign on with their current employer. FG1 added that other family members worked at his employer, and it was their positive comments about the company that made him apply in the first place. FG2 and FG3 stated their decision was based on referrals from current employees. Schlachter and Pieper (2019) support the positive aspects of employee referrals by identifying the method as a source of *social enrichment*, whereby a new employee experiences greater job satisfaction simply by working with friends or family members. Table 5 includes comments from business leaders on the theme of strong community relationships and the overall public image of manufacturing.

Table 5

Theme 5: Strong Community Relationships/Image

Participant	Participant comments
P1	We are very well known in the community and have been in the area for over 45 years. We've done a good job of promoting our company and why it's so good to work here. We partner with the community college to build career pathways and apprenticeships.
P2	We work closely with the local community college to hire recent graduates and give them the opportunity to start a career with minimal experience. We give them a chance.
P3	When my kids were younger, I would go and visit the local elementary schools to talk about manufacturing careers. I need to get back to doing that again. My business is well-known in the manufacturing community as reputable and of high quality. We have been here for over 40 years.

Theme 6: Industry Competition

Due to the shrinking pool of skilled manufacturing workers, coupled with the large influx of new industry, all three business leaders interviewed referred to the increasing competition among employers to recruit skilled labor. Matt, Orzes, Rauch, and Dallasega (2018) described the struggles that small to medium businesses (SME) encounter when competing with larger corporations for skilled manufacturing workers. A considerable amount of the challenge can be attributed to the fact that SMEs do not have the robust human resources divisions to market and compete on a level with the larger

branded companies (Matt, Orzes. Rauch, & Dallasega, 2018). The ability to establish a

corporate brand is a verified tool used to successfully recruit workers (Tumasjan, Kunze,

Bruch, & Welpe, 2019). Lacking the ability to recruit with an established brand, SME's

are challenged to make their companies competitive (Tumasjan et al., 2019). Without

adequate HC available to the smaller industries, the ability to maintain a competitive

advantage is diminished (Delery, & Roumpi, 2017). Delery and Roumpi (2017) further

posit that a direct positive relationship exists between HC and a company's overall

performance. Matt et al. (2018) identified the additional challenge that newly minted

skilled workers tend to be attracted to the larger, branded industries over the SME's. P3

described their industry struggles with competition for skilled workers with the more

giant corporations in the area. The inability of P3's organization to offer higher-level

benefits packages has impacted the company's recruitment success. P3 stated, "larger

corporations have a little bit more leverage, where they can pay a little more, the benefits.

Other than benefits are stronger, and honestly, they may not have to work quite as hard."

P2 voiced many of the same issues as P3, especially on the topic of being an SME. P2

detailed the challenge of getting the local technical college's support as, "The technical

college can promote the benefits of a small business vs. the large business. As well,

instead of just pumping the Volvo (and) Boeing name as if they are the best of the best."

P1 described the competition with other companies as, "You feel that all the high tech

employers are competing to hire skilled workers from the same pool of applicants." P2 is

mitigating the competition by seeking out younger inexperienced youth, offering a family

work environment, and being flexible with employee's personal situations. Schake and Craft (2019) validate P2's approach by concurring it is just as important to hire for cultural fit and passion for the organization as it is for overall employee skills. P3 viewed their organization's willingness to be flexible as a way to increase their competitive advantage over the larger organizations. P3 recognized the need for change from the old ways of manufacturing expectations by stating, "That's one of the big (things) right there to try and be flexible. It's a different world than when my dad started this business forty years ago". Table 6 includes comments from business leaders on the theme of industry competition.

Table 6

Theme 6: Industry Competition

Participant	Participant comments
P1	A big external factor is other employers, new and existing, are expanding their employee base for skilled workers.
P2	Because industry has moved to the area, they have taken the people with experience and left us with a small pool. We have to offer something different to compete with that draw. It's a family business, so if you like to dip your hands into something different every day, then we are the place for you.
P3	We have to offer something different here that you can't get with the big guys. I train my employees to have a special skill set that they can't get anywhere else.

Applications to Professional Practice

Business leaders could find value in the results of this study to improve or develop their current skilled worker recruitment strategies. By increasing industry awareness of the six themes resulting from the study, business leaders could realize an increase in the number of skilled workers within their organization. With an increase in the skilled worker pool, improved productivity, profitability, and a sustainable competitive advantage could be seen for businesses. Additional gains could be noted as business leaders collaborate with educational providers and the community to establish training needs, job opportunities, and work towards improving the overall image of manufacturing within the general public. Schake and Craft (2019) note the importance of establishing manufacturing as a career, rather than a job, to drive more of the general public towards supporting manufacturing. Business leaders could build upon this idea by working towards improving awareness of the industry through career days, plant tours, and establishing strong ties with the K-12 system (Makarius, & Srinivasan, 2017; Schake, & Craft, 2019). Zinsser, Main, Torres, and Connor (2019) advocate building the skilled worker pipeline at an early age, preferably beginning with early childhood programs to build awareness of manufacturing as a profession at an earlier age. By understanding the prominent themes, business leaders can focus on how to gain a competitive advantage over their local counterparts in their quest to recruit skilled workers. The findings could increase organizational awareness in the six themes: (a) competitive wages and benefits, (b) clean, safe, and stable work environments, (c) employee investment and on-the-job

training, (d) the use of recruiting agencies and skilled recruiters, (e) strong community relationships and image, and (f) local industry competition. In alignment with the human capital theory, business leaders could use the study findings as a tool to increase recruitment efforts through collaborative partnerships and alliances to identify more specific industry training needs to supply their individual companies with skilled and knowledgeable workers. It has been well established that human investment positively correlates with increased productivity and overall firm performance (Schake, & Craft, 2019; Schlachter, & Pieper, 2019; Goblin, & Galli, 2017). Additional benefits of the study findings could be that business leaders evaluate their current recruitment practices and consider the implementation of additional techniques to improve the organization's overall performance. Finally, the findings of this study could have a strong economic effect in the communities where manufacturing businesses are located. An additional multiplier effect could be realized through the creation of additional jobs, educational opportunities, economic development, and overall improved quality of life for the community's residents.

Implications to Social Change

Business leaders could apply the findings of this study to improve their success in the recruitment of skilled workers. Over the past 10 years, several major aerospace and automotive companies have relocated to the South Carolina area. As a result of the larger original equipment manufacturers (OEM's) coming to the area, many Tier 1 and Tier 2 suppliers have also moved to the area to be closer to their large customers. Over the past

5 years, the manufacturing sector has become a significant employer in the area. As a result of this growth, combined with the area's low unemployment rate, the gap in manufacturing skilled workers is increasing. Local manufacturing business leaders who have the ability and knowledge to increase recruitment success could realize an improvement in productivity, stability, and profitability for their organizations. From these improvements, companies may be better positioned to contribute back to their community with increased job openings, opportunities for training and education, and the influence of multiplier businesses in the areas of construction, consumer goods and services, and overall discretionary spending. Ramakrishna, Khong, and Leong (2017) posit a strong manufacturing presence contributes to the multiplier effect by creating supporting jobs within the manufacturing community. By improving recruitment success, overall economic growth, and prosperity could occur. For the company's employees, their expressed needs of competitive wages and benefits, job stability, educational opportunity, and working for a reputable organization may be realized. Potentially, the results of this study could be applied to other types of business sectors that are experiencing skilled worker shortages.

Recommendations for Action

The purpose of this qualitative multiple case study was to explore innovative recruiting practices that manufacturing business leaders use to successfully recruit skilled workers. Based on the findings of six themes, I am recommending actions for manufacturing business leaders to take to increase their recruitment success in hiring

skilled workers. The manufacturing business leaders in the South Carolina area should understand these themes that link to the successful recruitment of manufacturing skilled workers: (a) competitive wages and benefits, (b) clean, safe, and stable work environments, (c) employee investment and on-the-job training, (d) the use of recruiting agencies and skilled recruiters, (e) strong community relationships and image, and (f) local industry competition. I am recommending that manufacturing leaders examine their current organizational recruitment practices and reflect on how the findings of this study may serve to increase their recruitment efforts.

First, business leaders must stay abreast of the manufacturing community's current wage and benefits structures to remain competitive. The ability to provide adequate compensation and benefits is a basic part of recruiting skilled labor. Skilled workers in the South Carolina area understand the theory of supply and demand in the labor market and are commanding higher wages and enhanced benefits. Second, providing workers with a clean, safe, and stable work environment is essential. This second theme, in conjunction with the fifth theme of manufacturing image, plays a part in the successful recruitment of skilled workers. The manufacturing industry has a long history of being dirty, dangerous, and subject to frequent layoffs. It is up to business leaders to implement changes within their companies to begin the transformation towards a more positive image. Business leaders can start with something as simple as plant tours during hiring events where potential employees get a closer look at the operations and environment of the organization. Third, employee investment and on-the-job training are

important to job seekers. Business leaders must understand that today's worker wants more than adequate compensation and benefits. Workers want to feel the company values their work and is invested in them as individuals. Regular training and educational opportunities are benefits that applicants view as added value. Business leaders could examine apprenticeships, tuition reimbursement, and stackable credentials as additional ways to demonstrate employee investment. Fourth, increasing recruitment efforts and methods could create a competitive advantage for business leaders. Engaging professional recruiters and agencies who are industry specific could lead to an increased yield of potential employees.

Finally, the study could assist in forging relationships between industry partners, educational communities, and government agencies. By increasing awareness with partner agencies, business leaders could achieve greater success from their recruitment efforts. Stachova, Papula, Stacho, and Kohnova (2019) described the success of *knowledge networks*, which are a collaboration of industry and external partners whose main interest is promoting and exchanging information. The majority of these knowledge networks, or *P3 initiatives*, are partnerships between industry and educational institutions, economic development boards, and community groups (Stachova, Papula, Stacho, & Kohnova, 2019; Wang, 2018). Through knowledge networks, businesses are developing external relationships that could provide them with additional insight regarding skilled worker recruitment. External networks could also serve to increase

industry awareness, identify and create local training initiatives, and determine future workforce needs (Snell, 2019; Wang, 2018).

All of the above recommendations for action are focused on the attainment and sustainability of competitive advantage through the growth of human capital. Businesses could continue to grow and provide economic contributions to the local economy through the creation of additional jobs, workforce stability, and overall economic multiplier contributions. Favorable public contributions could also serve to increase the overall image of manufacturing and increase organizational recruitment success.

My goal is to share the findings of my study with local professional manufacturing associations, Chambers of Commerce, Economic Development boards, and educators at the local, regional, and state level. I will also publish my study findings in scholarly journals and seek out opportunities to present at scholarly events. I am committed to continuing my research in the field of the successful recruitment of skilled workers in manufacturing.

Recommendations for Further Research

As the manufacturing industry continues to grow and be successful within the global marketplace, so do other industry sectors. It is essential for any business to have the ability to build a qualified pool of skilled workers to be able to sustain a competitive advantage. Becker's (1962) Human Capital Theory (HCT) represents the knowledge and skills that individuals provide to the company directly enhances productivity for the organization. Becker further posits that through an increase in productivity, the potential

for increased business earnings may exist. The findings of this study align with Becker's HCT, in that business leaders who can successfully recruit skilled workers bring the knowledge and skill to the company that directly enhances the productivity for the organization. It is through an increase in productivity that manufacturing organizations could realize increased business earnings.

Researchers conducting studies in other industry sectors could reveal new and successful recruitment strategies to improve company performance. Because this study was done in a relatively small geographical circle, further research is recommended to explore areas of more extensive or different geographical and socioeconomic participants. Additionally, the need exists to research how *knowledge networks* could potentially contribute to increasing manufacturing skilled worker success and improved economic performance of organizations.

Reflections

Completing a terminal degree has been a professional and personal goal of mine for several years. As a lifelong learner, I understand the value of education and the many doors that will open for me as a DBA graduate. The past three years have been a challenge, both physically and emotionally, for me. Often times, I was so frustrated that I had to step back and reassess my goals. One of the most frustrating pieces of this process was the IRB. I was so excited to get approval to begin my fieldwork. However, my progress was set back by complications with the Letter of Cooperation guidelines. I persevered, followed the guidelines, and completed the process. The IRB process taught

me how to choose my battles wisely. I also learned how following the research process contributes to the validity of one's work. At the beginning of this work, I had no preconceived notions regarding the answers to the *Research Question* (RQ). I relied on the data to provide the answers and maintained an unbiased position throughout the study.

Throughout this doctoral journey, one thing that kept me moving forward was the cohesiveness and support of my fellow classmates and Chair. I have made lifelong friendships with highly educated peers from all over the world. It was also rewarding to work with transparent business leaders and employees who expressed high levels of interest in my study and viewed my work as a valuable contribution to the field of manufacturing. Because of this positive experience, I plan to continue my work researching innovative recruitment strategies to recruit skilled manufacturing workers.

Conclusion

Today's manufacturing business leaders face the challenge of successfully recruiting skilled workers. The purpose of this qualitative multiple case study was to identify successful strategies that manufacturing business leaders use to recruit skilled workers in the South Carolina region. Data for this study were collected from individual interviews with manufacturing business leaders, a focus group of recently hired (during 2018-2019) skilled workers, and a review of company documents. The use of these multiple data sources demonstrated methodological triangulation. After careful hand analysis of the data using Yin's (2017) five step model, six themes emerged that aligned

with the HCT and literature review. The six themes were: (a) competitive wages and benefits, (b) clean, safe, and stable work environments, (c) employee investment and on-the-job training, (d) the use of recruiting agencies and skilled recruiters, (e) strong community relationships and image, and (f) local industry competition. The findings of this study add to the existing body of literature on successful recruitment strategies for skilled manufacturing workers and provide business leaders with additional resources they could use in identifying successful recruitment strategies to increase organizational profitability, productivity, and contributions to social change.

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Appendix A: Individual Interview and Focus Group Protocol Form

Interview Title: Closing the Manufacturing Skills Gap Through Innovative

Recruiting Practices

Interviewer: <u>Jeffery L. Combs; DBA Candidate, Walden University</u>

I. The individual interviews and focus group sessions began with the exchange of introductions.

II. I explained the interview or focus group process, along with the title and objective of the study.

III. I presented the Informed Consent Form, answered any questions, and obtained the interviewee's or individual focus group member's signature on both forms. I retained one copy and gave the other copy to each participant.

IV. I confirmed the necessity of confidential, uninterrupted conversation, and the length of time allotted for the process with the interviewee or focus group.

V. I explained the transcript review and member checking process that would follow each session.

VI. I reconfirmed participant permission for the use of an audio recording device to ensure transcription accuracy. the interviewee and focus group participants were assured of confidentiality and the destruction of data at the end of the study. Each recorded session began by noting the date, time, and location.

VII. Interviewees and focus group participants were informed that his/her participation was on a voluntary basis, and they had the option to stop the interview/ focus

group at any time. Participants also had the option to withdraw from the study at

any time.

VIII. Individual and focus group sessions began with introductory questions on

gathering additional background information on each participant.

IX. Introductory questions included:

    a. How long have you been with the company?

    b. What do you think is the greatest benefit of working for this company?

X. My focus group questions were:

1. What about your company was the largest influencer in your decision to accept

    the position?

2. Without naming a specific company, did you have any recruitment experiences

    that stopped you from moving forward in the process? Please explain.

3. Was the pay rate the primary factor in your employment decision?

4. Did you relocate for this job?

5. Did the company culture influence your acceptance decision in any way, and if

    so, how?

6. Was the continuing education, tuition reimbursement, or professional

    development presented to you as a benefit?

7. Describe your initial encounter with the company. Was it positive, neutral, or

    negative, and why?

8. How did you find out about the job?

9. Did the community perception of the company influence your decision to apply in any way?

10. In your opinion, what makes your company more attractive to work at than another competitor organization?

11. Describe the recruitment process. Did the company initiate contact with you promptly after you submitted your application? What is your opinion of how you were treated as a potential employee?

12. Is there any additional information you would like to add regarding the recruitment process you experienced?

XI. My individual interview questions were:

1. What are your current recruitment strategies for attracting skilled workers?

2. What specific strategies are the most successful in recruiting skilled workers?

3. What are the external and internal factors that challenge your success in recruiting skilled workers?

4. What additional information would you like to contribute to the conversation that will lead to a better understanding of your success in recruiting skilled workers?

Appendix B: Focus Group and Individual Interview Questions

Focus groups and individual interviews offer different perspectives on a common phenomenon (Carter et al., 2014). As sole methods of inquiry, either can provide rich data for the qualitative researcher. However, because qualitative studies do not provide the numerical data of quantitative studies, it becomes necessary for a qualitative researcher to demonstrate the triangulation of data (Morse, 2015). When combined as tools of methodological triangulation, the focus group, and individual reviews can well support the validity and credibility of a qualitative study (Carter et al., 2014; Yin, 2017).

Focus Group Questions

The use of a focus group can be a good option when establishing methodological triangulation. Over the past ten years, focus groups have been increasingly used as an element of data triangulation (Cyr, 2016). Focus groups contribute useful data not only from the group perspective but also within the focus group individual and interactive data can be gleaned (Cyr, 2016; Strout, DiFazio, & Vessey, 2017). Because the onus of reliability and validity is placed upon the qualitative researcher, it is important to accurately and adequately report their study findings (Cyr, 2016). Focus groups generally consist of 4-12 participants who come together to discuss a common topic. Cyr (2016) suggests leading off the focus group with general introductory conversation before getting down to the questions relating to data collection. Dawson et al. (2017) encourage creating a more social environment where participants feel they can engage with other members of the group.

My focus group questions were:

1. What about your company was the largest influencer in your decision to accept the position?

2. Without naming a specific company, did you have any recruitment experiences that stopped you from moving forward in the process? Please explain.

3. What was the one factor that made you accept the job offer?

4. Did you relocate for this job?

5. Did the company culture influence your acceptance decision in any way, and if so, how?

6. Was the continuing education, tuition reimbursement, or professional development presented to you as a benefit?

7. Describe your initial encounter with the company. Was it positive, neutral, or negative, and why?

8. How did you find out about the job?

9. Did the community perception of the company influence your decision to apply in any way?

10. In your opinion, what makes your company more attractive to work at than another competitor's organization?

11. Describe the recruitment experience with your company. Did the company initiate contact with you promptly after you submitted your application? What is your opinion of how you were treated as a potential employee?

12. Is there any additional information you would like to add regarding the recruitment process you experienced?

Interview Questions for Business Leaders

Data collection using one on one interviews with study participants offers an additional method to establish data triangulation (Yin, 2017: Gelhorn, 2016). By making the data collection and analysis process transparent assists the researcher in boosting the verification of trustworthiness and reliability (Arriaza, Nedjat-Haiem, Lee, & Martin, 2015). Roche, Vaterlus, & Young (2015), discuss the importance of applying member checking to all synthesized data to ensure the intention and content of the interviewee's participation. For this study, individual interviews with manufacturing business leaders followed up by timely member checking will contribute to the methodological triangulation of this study. The interview questions will be:

1. What are your current recruitment strategies for attracting skilled workers?

2. What specific strategies are the most successful in recruiting skilled workers?

3. What are the external and internal factors that challenge your success in recruiting skilled workers?

4. What additional information would you like to contribute to the conversation that will lead to a better understanding of your success in recruiting skilled workers?