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Competent Office Staffing for Minority, Women-Owned, and Local Business Enterprise Contractors via Workforce Development

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Abstract

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MA, Mercy College, 1998

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Project Study Submitted in Partial Fulfillment

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Abstract

Conversations about workforce development in the construction industry are centered around improving the construction trade skills of displaced workers or other unskilled or untrained individuals. Rarely will that conversation focus on the administrative skills necessary for contractor success, particularly in public works construction where administrative oversight is a challenge for the minority, women-owned, and local business enterprise (MWLBE) community. Anecdotal data indicated that MWLBE contractors are skilled at their trades and have little or no problem accessing a skilled labor force. Where these contractors tend to fall short is in the administrative requirements of government contracts. The purpose of this qualitative evaluation study was to determine whether the training provided by the Opportunity Academy prepares workers to provide effective administrative support to construction contractors in the MWLBE community. Deweyan pragmatism provided the framework for the study. Data were gathered from 14 students who participated in the program and MWLBE contractors with whom the students were placed in their internships. Data were analyzed to focus on the efficacy of the training. Findings indicated the students believed the training prepared them for internships. The contractors reported that the students were adequately trained in some areas and inadequately trained in others. Findings may be used to improve the business success of MWLBE contractors and the employment outlook for construction contract administrators in the local area.

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Dedication

This study is dedicated to my mother who instilled in me an appreciation for education and a love of learning; my father who always told me that I could do and be better; each of my siblings who inspired, supported and encouraged me; my countless aunts, uncles, cousins, and friends who expected me to do something special; my daughter, Imani, who never doubted me, and to Maggie who was always confident that I could succeed. Thank you all.

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Section 1: The Problem

Small businesses face a variety of challenges in growing, and there is ample literature addressing barriers to the growth, development, and success of small businesses. Researchers have explored an assortment of hindrances to the success of small business enterprises and have discovered that these hindrances include but are not limited to: a lack of access to finance, the role of government, and other socioeconomic and psychological barriers (Ullah & Smith, 2015). Eggers (2020) noted that small businesses suffer a greater risk of failure because they lack established business models, depend on the cooperation of strangers, and have low levels of legitimacy. In addition, the lack of access to financial resources makes it harder for small businesses to attract and retain talented employees who provide necessary intellectual capital (McDowell et al., 2018). One challenge faced by business owners in the construction industry is a shortage of adequately trained office staff (i.e., contract administrative personnel). These small business employers claim they cannot find candidates with the appropriate occupational training, work-related soft skills, and aptitude necessary for employment in their industry (Hillard, 2013).

Local Problem

The New York City School Construction Authority (SCA), through their mentor program, has identified the lack of adequately trained office staff as one of the primary hindrances to the success of minority, women-owned, and local business enterprise (MWLBE) contractors. Many of the contractors participating in this mentor program reported that it is problematic and unproductive for them to spend most of their work

week dealing with administrative tasks for which they are not properly trained and in which they have little experience (Johnson, 2014). This lack of an adequately trained office staff adds an additional impediment to MWLBE contractors who are already hard pressed to compete successfully for work and to fulfill contracts once they are awarded. This is particularly true in the public works construction environment where detailed contracts are the rule and contract administrative skills are vital in complying with the guidelines under which these contracts must be executed.

Gap Analysis

An exhaustive search of databases including ABI/Inform, Business Source Complete, Emerald Insight, and Sage Journals revealed that although there is abundant research on training office operations personnel, there is little research that addresses industry-specific training programs, such as in the construction industry, and even less research on the MWLBE community. Because there was no research on the efficacy of contract administrative training in the construction industry, I took a broader approach to examine the effects of training in a workforce development program on an industry sector to connect research to practice and build on an existing academic body of knowledge. I sought to build on Rahman, and Monahan's (2014) study that addressed the workforce needs in the Appalachian region via a comprehensive survey. I attempted to determine whether the workforce needs of an industry within a region can be met by the training provided by the Opportunity Academy Program. I endeavored to solve the problem of providing competent contract administrative staff to MWLBE contractors in the construction industry in the New York City tri-state area.

Rationale

According to the United States Bureau of Labor Statistics (2015) estimates, the construction industry will continue to grow at its current pace at least through the year 2022. In addition, the United States Bureau of Labor Statistics (date, as cited in Lockard & Wolf, 2012) stated that the employment of administrative services professionals, which includes the construction industry, is expected to increase by 8% annually through calendar year 2024. Despite the expected industry growth, a growing number of New York state and city employers are facing workforce shortages, especially when it comes to jobs requiring middle skills (Hillard & Gonzalez-Rivera, 2018). Hillard and Gonzalez-Rivera (2018) also cited a May 2016 New York State Department of Labor report on six industry sectors that are projecting future labor shortages, including the science, technology, engineering, and math sector occupations, which include construction contract administration. With industry growth and projected labor shortages, finding and training new employees in many fields is critical, particularly in the MWLBE community. To address the back-office staffing needs of the MWLBE community in the construction industry in New York City, the SCA entered into a collaborative agreement with the New York City Department of Design and Construction (DDC) and LaGuardia Community College of the City University of New York, to launch the Opportunity Academy Program. Through the Opportunity Academy Program, college students, displaced workers, and other qualified individuals complete a 12-week training regimen that provides training in the contract administrative processes of the SCA and DDC.

Upon completion of their training, the program graduates are then be provided with a 6-month paid internship with MWLBE firms doing business with either agency.

Justification

Programs such as the Opportunity Academy require evaluation in their nascent stages because the construction industry is a slow adopter to change . Additionally, the existence of a disconnect between academia and the construction industry is not surprising, particularly because researchers often look far into the future to lead change rather than reacting to challenges faced today (Holt et al. 2015, as cited in Bigelow et al., 2016), I chose an evaluation of the training provided by the Opportunity Academy program for both research and practical reasons.

From the research perspective, Rigby et al. (2012, as cited in Bigelow et al., 2016) argued that without the understanding of construction professionals' needs at the academic level, researchers and industry decision makers will struggle to create constructive change in the industry. Second, Rahman and Monahan (2014) provided in-depth analysis of local industry-specific needs to specific regional needs for workforce development training in the Appalachian region. Rahman and Monahan found that the lack of similar programs and studies in the region suggests a critical void that can be filled, but efforts should be taken to ensure that the training provided meets the needs of the industry as well as of the participating students.

From a practical perspective, there were several reasons for the current project study. First, the Opportunity Academy Program is seeking to become a fully funded and accredited workforce development program. For that to happen, early and periodic

evaluations will be necessary to ensure that the training meets the criteria that have been established for accreditation and funding. Second, efforts should be made to ensure that the program meets the highest standards because it is expected the Opportunity Academy certification will become an industry-recognized credential that certifies the holder of the certificate as being proficient in construction contracts administration. Vigorous assessments and evaluation efforts of the program, as well as the training provided within the program, are a necessity because this program will target an underserved industry and underrepresented classes of workers participating in that industry.

There were research-based and practical reasons to undertake a project study investigating the Opportunity Academy Program. Because this is a new program, there was a local need to investigate the effectiveness of the program, which was designed to meet the office staffing needs of businesses in the industry, particularly the needs of contractors in the MWLBE community. There was also a need to add to the academic body of knowledge on industry-specific training programs, especially for MWLBE companies. I endeavored to provide an impartial and independent evaluation to determine the overall effectiveness of the program to train and provide construction administrative professionals to fill a need within a growing industry. Findings may be used to provide employment opportunities for displaced or otherwise unemployed workers in New York City, as well as provide a blueprint for replication in other areas and industries nationally (see Middle States Commission on Higher Education, n.d.).

Definitions

There were several terms in this project study with which the reader might not be familiar. The definitions of key terms are provided in this section. For a full description of the training provided in the Opportunity Academy Program, see Appendix C).

Minority, women-owned, and local business enterprise (MWLBE): A certification provided to business enterprises that meet the criteria of being either minority owned, women owned, or locally based, which is the equivalent of conducting business in a disadvantaged area. The certifications are given to promote and foster the growth of the city's minority and woman-owned businesses and eligible small construction and construction related businesses (City of New York, 2017).

New York City Department of Design and Construction (DDC): New York City's primary capital construction manager. This agency is responsible for the construction of many of the city's civic facilities such as fire houses, libraries, court houses, police precincts, and senior centers (City of New York, 2021).

New York City School Construction Authority (SCA): A New York City agency established by the New York state legislature in 1988 to build new public schools in New York City and to manage the design, construction, and renovations of capital projects in New York City's more than 1,200 public school buildings (City of New York, 2017).

Office Worker: An employee who works in an office carrying out clerical or administrative work for an organization (Zippia, 2019).

Opportunity Academy Program: A specialized program that provides students with free training in the public works construction contract administrative processes of the New York City SCA and New York City DDC.

Office Administration in the Construction Industry

The administrative challenges in public works construction cannot be overstated. Public sector construction work is funded by either the federal or state government; therefore, firms wanting to participate in the field must address a higher level of administrative accountability than those working for private interests. The contract procurement process, including estimating, bidding, contract completion, and closeout, requires a high level of administrative oversight that can overwhelm the inexperienced contractor. The ability to comprehend and manipulate the processes used in construction contract administration presents a challenge to contractors from the MWLBE community who are attempting to break into public construction work.

Significance of the Study

By conducting the current project study in the Opportunity Academy Program's formative stages, I expected that the research would have a more immediate impact on the construction industry because stakeholders would have a better understanding of one of the pressing needs of the industry. In addition, this study may provide a baseline for subsequent periodic evaluations that will be needed to determine program efficacy, to develop recommendations for changes designed to keep the program current, and to improve performance over time. This may ensure a return on public investment as well as the commitment of students and employers. The decision makers of the program will

want to ensure that the Opportunity Academy Program is effective in graduating people ready to work in construction offices of contractors inside and outside of the MWLBE community, and that program graduates are successful once they are employed.

This study also provided information to educators on how well the Opportunity Academy Program prepares participants for work in the public works construction industry. The findings may be used to guide decision makers in the SCA, DDC, and LaGuardia Community College as they seek to assess the program's effectiveness and refine the program so it can be replicated elsewhere in the City University of New York (CUNY) system and at other New York City agencies engaged in public works construction projects. The training being provided by the program is specific to the public works construction industry. Although the program is being sponsored by the SCA and DDC, the findings from the current study may be of value to other agencies in New York City because of the contract administrative similarities in all areas of public works construction contracting. Other New York City agencies that could benefit from the findings are the Metropolitan Transit Authority, the New York City Housing Authority, and the New York City Parks Department. In addition, the insights gained from the evaluation of this program might be of value in other locales so long as adjustments are made for local conditions.

Research Questions

An evaluation of the Opportunity Academy Program formed the basis for arguments to be made to continue the program and provided guidance to decision making about the possible expansion of the program to other community colleges within the

CUNY system. In addition, this program evaluation provided guidance regarding the possible expansion to other New York City agencies participating in public works construction. The study was guided by the following research questions (RQs):

RQ1: What is the perceived value of the Opportunity Academy Training to those MWLBE contractors with whom students who have completed the program were placed?

RQ2: What is the perceived value of the Opportunity Academy Training to those students who have completed the training and been placed in the offices of MWLBE contractors?

Investigating the perceptions of the training offered by the Opportunity Academy Program was intended to clarify the perceived effectiveness of the program from the perspective of the contractors with whom students were placed and from the students who were provided training. Findings may provide value for the implementation of the Opportunity Academy Program. In the next section, I present a literature review of topics related to the current study.

Review of the Literature

My review of the literature indicated a need to conduct a project study on the Opportunity Academy Program for practical and research reasons. This literature review contains three main sections: an explanation of the literature search methodology, a description of the conceptual framework, and a review of the literature related to the broader problem addressed in this study.

Literature Search Methodology

To identify New York City area colleges or universities offering certificate or degree programs in contracts administration, I searched the websites for the Middle States Commission on Higher Education and the Middle States Association of Colleges and Schools. Both searches returned a finding of "no match found" (see Middle States Commission on Higher Education, n.d.). Therefore, I concluded that the Opportunity Academy Program was filling an educational gap by providing the training designed to prepare individuals for a growing job market.

The search terms used to mine the databases for pertinent information were terms that were expected to yield results of New York City higher educational programs in contracts administration. The search terms used included the following: *NYC institutions of higher education offering degree programs in contract administration*; *contract administration degree programs*; *contract administration certificate programs*; *accredited colleges offering contract administration degree programs*; *accredited colleges offering certificate programs in contract administration*; *New York, New Jersey, and Connecticut colleges offering degree programs in contracts administration*; and *middle-states accredited colleges offering degree or certificate programs in contract administration*. These search terms also returned results of "no match found" for area institutions offering either certificate or degree programs in contracts administration, which further indicated that the Opportunity Academy Program was filling an educational gap by providing training designed to prepare individuals for a growing job market.

Theoretical Framework

The theoretical framework for the study was pragmatism. I chose the pragmatic approach because "pragmatic research is designed to help us to identify what works" (see Lodico et al., 2010, p. 9). The primary goal of the current study was to determine whether the training provided by the Opportunity Academy was accomplishing its goal of preparing program participants to work as contract administrators in the construction industry. Pragmatism defines a process whereby theory is extracted from practice and reapplied to practice, forming what is called intelligent practice (Glasgow, 2013). The intelligent practice of the current study was to determine whether the training offered by the Opportunity Academy Program works and whether adjustments need to be made to the training.

To apply the principles of intelligent practice, I drew on Deweyan pragmatism. Dewey's philosophy on pragmatism holds that research inquiries are interrogations of theory and practice and are also evaluative (Kaushik & Walsh, 2019). A theoretical framework grounded in Deweyan pragmatism seemed appropriate for the current study. According to Johnson (2014), the application of Deweyan pragmatism is also relevant for the following reasons: (a) the study contains a certain synergy between theory and practice that is similar to the pragmatism embedded in Dewey's work, and (b) like Deweyan pragmatism, the main objective is to address societal problems by taking action in an intelligent way.

Intelligent practice is similar to the cross-disciplinary, boundary-spanning approach to the career and technical education (CTE) workforce assessment employed by

Bartlett et al. (2011). Bartlett et al. noted that concepts and theories from the broadly defined area of organizational science could be useful for considering the role of workforce needs assessment as a component of the evaluation. The disciplines crossed in the study were strategic human resource development and needs assessment. Bartlett et al. considered these disciplines relevant because strategic human resource management theory combines a heavy emphasis on the external environment associated with organizational level strategic planning and needs assessment and can be considered a type of evaluation. Similarly, the development and implementation of the Opportunity Academy Program and its relevant training resulted from the combination of a needs assessment with the ways the external environment impacts certain organizations within the construction industry.

The seemingly unreflective "what works" approach tends to threaten the validity of studies grounded in a pragmatic approach (Green, 2007, & Denzin, 2012, as cited in Hall, 2013). An argument can be made that the "what works" philosophy can be combined with qualitative research without sacrificing the aims (Shuffelton, 2014). In addition, Rosiek (2013) noted there has been a relatively recent revision of the pragmatist philosophy that moved beyond a focus on the epistemic and pedagogical theories and located it in a tradition of radical ontological theorizing and political action. This is to say that pragmatism has moved from merely relating to knowledge to showing the relations between the concepts and categories in a subject area or domain. The aim of the current study was to explore whether the training received by the Opportunity Academy

graduates influenced their ability to perform in the offices of the MWLBE contractors with whom they were placed.

To determine whether the Opportunity Academy program is achieving its goals, I collected qualitative data from the contractors with whom the program graduates' students were placed, as well as from the program graduates who were placed in internships with the contractors. The data were analyzed to determine whether there was a relationship between the training and the performance of the program graduates. Rahman and Monahan (2014) undertook a study that was aimed at determining the skill levels and educational needs of workers from various businesses in the Appalachian region. In addition, Rahman and Monahan examined how training workers can lead to a competitive advantage for some businesses. Rahman and Monahan proved two theories relative to their study of the same year. The first was there is a difference in the educational requirements for different workers in different industries in the Appalachian region, and the second was that regardless of the level of education of the worker there is a difference in the amount of time needed for training. I explored whether the training provided by the Opportunity Academy Program prepares program participants to become successful construction contract administrators.

Traditionally, the primary focus of workforce development programs has been on large businesses. However, with the recent surge of small businesses driving economic growth and job creation, city and state workforce development agencies and their educational and industry partners are making smaller companies a greater focus of their workforce development efforts (Bowles & Riche-Druses, 2017). For example, in New

York City in 2014, Mayor de Blasio launched a sweeping new approach to workforce development aimed at harnessing the economic power of small businesses. This decision was due to the fact that in New York City, small businesses had sparked much of the recent job growth. Businesses with fewer than 20 employees have experienced net job growth every year since 2001 and have added nearly 3 times as many jobs per year as companies with more than 500 employees (Messina, 2017).

Education providers and those who fund them are increasingly interested in the evaluation and assessment of student learning (Bartlett et al., 2011). However, despite the growth in the importance of workforce development programs, there is a dearth of research on the efficacy of these training programs. Such research would give education providers and funding sources an understanding of the degree to which the training provided by these programs gives students the needed knowledge, skills, and abilities to gain entry and perform successfully in the specified labor market. These are the issues that the current study addressed. This study was a summative evaluation in which data were collected to measure outcomes and to determine how those outcomes relate to the overall judgement of the program (see Lodico et al., 2010).

Review of the Broader Problem

For this study, literature was reviewed that addressed workforce development from several perspectives. The first perspective was intended to provide historical context as to the origination of workforce development programs and the ways in which these programs have evolved since their inception. Second, literature that addressed the role of community colleges in workforce development was reviewed with the intent of providing

the reader with insights into how higher education institutions, particularly community colleges, have affected the growth, development, and evolution of workforce development programs. The third perspective of the literature review was a strategic perspective that addressed strategies for effective workforce program development and implementation. The fourth perspective included the factors considered by institutions of higher education when determining program necessity. The fifth perspective was an evaluative perspective of workforce development programs. Finally, literature was reviewed that presented an opposing viewpoint.

The literature review was organized according to themes identified for the purposes of this study, and some studies were addressed in multiple themes. The appropriate author was cited for their contribution to the study within each theme, as needed. In addition, I included one article that provided an opposing argument as to the benefits of workforce development to provide some balance to the study.

Historical Perspective

In the United States, union and university-based worker education traces its roots to the 1880s. The worker training programs from these unions and institutions of higher education were designed to improve the English language skills of the learner and provide necessary job-related technical skills to ensure that workers were more employable in the marketplace (Mantsios, 2015). From a public policy or government perspective, the public workforce system resulted as an outgrowth of the U.S. Department of Labor, which was formed in 1913. Some of the goals of the U.S. Department of Labor are to foster, promote, and develop the welfare of wage earners, to

improve their working conditions, and to advance their opportunities for profitable employment (LaRose, 2015). The passage of the Smith-Hughes Act of 1917 began a century of federal investment in secondary vocational education and heralded the beginning of a more formalized system of vocational education across the country (Imperatore & Hyslop, 2017). The more formalized system led to several key programs and legislations that arose from the U.S. Department of Labor. Included among these was the New Deal of 1933 and 1937, which was designed to provide relief, reform, and recovery of the U.S. economy after its collapse in the Great Depression of 1929. The New Deal gave rise to the Workers Progress Administration, the Civil Works Administration, the Federal Emergency Relief Administration, and the Civilian Conservation Corps. There are minimal data available as to the efficacy of these programs, but they represent an initial attempt by government agencies to implement some form of workforce development.

After World War II, the first major employment and training program offered was the Manpower Development Training Act of 1962. Subsequent iterations of workforce development programs included the Comprehensive Employment and Training Act of 1973, the Job Training Partnership Act of 1982, and the Workforce Investment Act of 1998 (Decker & Berk, 2011). As well intentioned as these statutes were, one shortcoming they all shared was they placed little or no emphasis on the needs of the industries or employers for which workers were being trained. It was not until the Workforce Innovation and Opportunity Act of 2014 that language relating to how career services activities should be carried out in the public sector was included in any of the statutes.

The Workforce Innovation and Opportunity Act established, among other things, a commitment to active engagement with employers, that research and information is to be provided to jobseekers in each industry sector, that public workforce systems consider the needs of the job seekers and employers in a broader context, and that more opportunities be provided for learning on the job (LaRose, 2015).

From its inception, the public workforce system and the programs operating within the system have provided a wide range of returns on the resources invested. As a result, policy makers have been hard pressed to arrive at a consensus on the most prudent ways to invest the resources needed to address worker training and retraining, the ever-widening earning gap between more and less educated Americans, and the lack of skills and educational credentials among disadvantaged racial and ethnic minorities and other protected classes of workers (Holzer, 2016). In the 21st century, it is critical to build and maintain a strong workforce capable of providing skilled workers ready to fill employment gaps to keep the U.S. economy strong. There is widespread agreement that worker training and workforce development programs are a necessary component to growing the workforce, expanding the knowledge base and skill set of workers, and retraining workers to meet changing needs (Nickoli, 2013).

Role of Community Colleges

Since the founding of the first community college in 1901, community colleges have been hailed as colleges of democracy that were created to bring postsecondary education to the masses (Swanger, 2013). Unlike their bachelor's-degree-offering counterparts, community colleges were not designed to be traditional institutions of

higher education (J. A. Fletcher, 2018). Many of these junior colleges were established to relieve the larger senior research universities of the effort of educating large numbers of freshmen and sophomores. Simultaneously with the development and implementation of education programs for first- and second-year students, community colleges have developed occupational courses to serve local businesses and industry interests (Jacobs & Worth, 2019). Community college missions and purposes have evolved to include occupational preparation, developmental/remedial education, and community service. As a result, the community college has become the primary educational tool for economic and workforce development (J. A. Fletcher, 2018).

The community college has also played a critical role in the education of our diverse population, providing technical and vocational training to a diverse group of students (Cummins, 2014). And according to Grubb et al. (1997), the community college has functioned as the most responsive academic entity in meeting local and regional economic development needs (as cited in Yarnall, 2013). Recent shifts in the educational paradigm (for example, the recognition of a greater need to speed the transition from the classroom to the workforce, increases in the need for continuing education, and a greater need for the education of non-traditional students) have provided the community college of the 21st century even greater opportunities to lead in the development and implementation of workforce development programs.

There are ample reasons to believe the community college will rise to the occasion and continue to be on the leading edge in helping students transition into the workforce and re-training them to address new opportunities found there. Community

colleges are often the only institutions of higher education in many rural areas (Swanger, 2013). Their college workforce departments fill an important role, exhibiting an understanding of complex business problems and then working collaboratively with businesses on creative solutions to fill needs in the workforce that have become more sophisticated than external agencies may recognize (Nickoli, 2013). It is also significant to note that the seemingly symbiotic relationship that exists between community colleges and local businesses and industry is not a product of federal or local policy that is subject to change with the political winds, nor is it the implementation of an educational blueprint from one educational theorist or the university system. Rather the relationship originated from local community activists who stimulated the fundamental "DNA" of the community college to respond to students and workers in the community who had to obtain skills to meet the needs of local industry (Jacobs & Worth, 2019). By working closely with local businesses and industry, community colleges continue to be the educational leaders in the provision of highly portable, industry recognized credentials. These credentials help individuals demonstrate competency and enable these colleges to fill particular roles in training workers for many areas within the industries they support (D'Amico et al., 2015). In this vein, the aim of the Opportunity Academy administrator is to develop its program to the point where program completion provides a credential that is recognized by students and employers in industry alike.

One of the strengths of the community college-based programs in workforce development is these public institutions are situated throughout various states and provide affordable education offered at times convenient for students and easily accessible to

residents in surrounding areas (Lakes, 2012). In recent years, community colleges have extended themselves farther into communities by establishing extension centers and satellite campuses both in inner city areas and surrounding towns. Westchester Community College, for example, has their main campus in Valhalla, New York, a Campus Center in Yonkers, and several extension centers in surrounding towns such as Mt Vernon, Ossining, and Peekskill (Westchester Community College, n.d.). And Dutchess Community College has extension centers in the surrounding towns of Poughkeepsie and Wappinger's Falls (Dutchess Community College, n.d.).

With their combination of vision, mission, location, and flexibility in programming, community colleges are poised to lead in providing a trained workforce tailored to address the needs of the local community. In states across the country, K–12 education systems, 4-year colleges and universities, and community colleges are working to help their states and regions advance in the new knowledge economy (Shaffer, 2015). Treat and Hagedorn (2013) expand on this vision, noting the community college of the 21st century has an even greater opportunity to engage on a global scale. According to the authors, in a post called the "flat world," the opening of trade and communication leads to conditions in which optimizing the use of talent, technology and tolerance become conceivable if an education system like a community college is available to provide skill development to those entering or transitioning within the workforce.

Strategic Perspective

The argument can be made on a national scale, that the need for workforce development is more an imperative than an option. According to O'Lawrence (2017), the

lack of workforce education for both professional and nonprofessional workers is a major concern, particularly since indicators suggest the United States has the least educated unskilled non/professional workforce among the major economic powers. In addition, studies show workforce development initiatives have well-defined linkages to not only economic development but to innovation and global competitiveness as well (Williams et al., 2018). Consequently, it is incumbent upon decisions makers in industry and education to ensure workforce development programs are based upon sound strategies meeting industry, student, and worker needs.

In our current era of dwindling resources, when community college workforce development programs are experiencing declining financial support from the government (Fletcher, 2018), collaborative efforts between industry and educational institutions can prove to be a sound strategic move. This was the case in the energy sector in the Charlotte, North Carolina Region. According to multiple reports, employers in the energy sector were experiencing the strain of a shortage of skilled workers and would soon be unable to meet industry demands for workers (Vickers-Koch, 2011). In order to adequately address the pending worker shortage, a collaborative effort was undertaken between institutions of higher education in the region and employers from the energy industry. In one case, Siemens Energy, Inc., and Central Piedmont Community College focused on employer workforce development needs and responded with ambitious training programs designed to meet them. The result of this collaboration was one of the largest customized training projects in the state, one that is training more than 850 people who will be hired by Siemens when their training is complete (Vickers-Koch, 2011).

Another example of a business and industry workforce economic development partnership is a program mounted by the State of Nebraska called Building a “Green” Economy: Nebraska State Energy Sector Partnership (SESP) and Training, also referred to as Synergy (Killingsworth & Grosskopf, 2013). The premise behind the Synergy program was that economically displaced workers in Nebraska could be reeducated to gain employment in the emerging green construction market through a proactive training program. To facilitate the training, a prevocational training program was developed to address low adult basic education, followed by a program designed to provide basic labor skills and the necessary experiences required for entry level construction employment. In addition, other courses were developed which provided program participants an opportunity to redevelop the knowledge base and skillsets necessary for success in the green economy. The success of this program is verified by the fact that, as the grant period approaches completion, enrollment trends suggest that training completion and employment will exceed initial program goals (Killingsworth & Grosskopf, 2013).

A career pathway can be defined as a systemic framework for connecting a series of academic credits, credentials, and work experience across the learner continuum for each student. It is the collective term for a workforce development strategy to support workers or students as they transition from education into jobs (Schulte et al., 2017). Career pathways can be a successful workforce development strategy employed by institutions of higher education as career pathways provide both traditional and nontraditional learners with easy to navigate credential and degree programs for in demand jobs throughout their regions. (Buckwalter & Togila, 2019). In addition, career

pathways also provide maturing workers with an opportunity to improve skills, obtain new credentials and change or advance into new employment (Schulte et al., 2017).

An additional benefit of career pathways is they provide an opportunity for rural community colleges to develop and implement programs to serve the needs of both traditional and non-traditional learners (Buckwalter & Togila, 2019). Based upon their deep-rooted relationships with local employers, rural college administrators find they have a unique advantage in building career and guided opportunities based upon a collaborative effort with these local employers.

An example of a successful career pathway program was the Accelerating Opportunity (AO) program. The AO program was a multi-year, multi-college reform initiative developed and managed by Jobs for the Future Inc. (JFF), a nonprofit organization that provides research, consulting and technical assistance on education and workforce development issues to public and private organizations (JFF, 2019). Through AO, over 85 community colleges in the rural areas of seven states, built career pathways that accelerated students to attain high-demand credentials by integrating basic skills instruction and technical education (Buckwalter & Togila, 2019).

As previously stated, funding presents a major strategic stumbling block for institutions of higher education. Thus, colleges offering workforce development programs are continually required to demonstrate the ways in which these programs meet the needs of both the students being trained and the industries they serve. In her article *Six Workforce Development Initiatives that are Laying the Pathway to Success* (Fox, 2014), author Heather L. Fox explores six different workforce initiatives and how they

have contributed to our collective understanding of how to create and sustain successful workforce development programs. The six initiatives explored by Fox are:

1. Bridges to Opportunity (2002–2008).
2. Integrated Basic Education and Skills Training (I-BEST, 2004–present).
3. Breaking Through (2006–present).
4. Shifting Gears (2007–2011).
5. Accelerating Opportunity (2011–present).
6. Completion by Design (2011–present).

The author presented these initiatives as examples of the implementation and sustenance of successful community college-based workforce development programs. The success of these programs can be traced to the way these programs addressed some of the challenges that have habitually affected workforce development programs.

There is a cultural stigma attached to workforce development programs and this stigma may be unavoidable because the target population for the initiatives studied were students whose academic background did not adequately prepare them for college level work. Thus, these students are often not perceived (and/or do not perceive themselves) as possessing the skill sets required for middle-skilled or high-skilled employment when they enter the program (Fox, 2014). In addition to the stigma, Fox's (2014) study also noted problems with funding but argued these can be addressed through private funding sources that only require credible evidence of the efficacy of the program to fill specific workforce needs and sought less curriculum oversight and control. Two additional challenges—those relating to a misalignment of the instruction given with emerging

industry trends and student needs, and disappointing student outcomes could best be addressed via collaborative efforts between different colleges and direct input from participating industries. The author concludes with the assertion that careful investment in innovative practices, backed by periodic evaluations can result in workforce programs with lasting effects.

In addressing the employability gap and the role of community colleges in workforce development, Myran and Ivery (2013) posit that community colleges of the future should position themselves as a combination of a set of workforce development programs and social equity institutions, serving as the primary catalyst and advocate for community-wide efforts to shape a multiracial democracy. The article argues, in the words of Carnevale, director of the Georgetown University Center on Education and the Workforce, that ours is a work-based society, and those not equipped with the knowledge and skills to obtain and retain good jobs are denied the genuine social inclusion that is the real test of citizenship. Those denied the education required for good jobs tend to drop out of the mainstream culture and are marginalized by the economy.

The authors conclude that community colleges should adapt strategies that more clearly define their role in workforce development. As workforce development training continues to evolve from its base in noncredit job skills training programs into a more holistic sets of programs of varying lengths and complexities which are designed to shape a more skilled workforce. This is particularly critical given that 60% of all jobs available nationwide will require at least a college level certificate, associate degree, or some form of license by 2018 (Myran & Ivery, 2013).

Workforce development programs can be of further assistance to the marginalized by the development and implementation of workforce development strategies that focuses on youth who are disconnected from education and work (Solberg et al., 2020). In Solberg et al.'s (2020) article, they argue that, in order to enable high need high opportunity youth to navigate today's volatile and fast changing labor market conditions, career development programs and services should be designed in such a manner as to increase their perceived relevance of the relationship between education, training opportunities and career goals (Solberg et al., 2020).

Based upon several reviewed sources citing a need for effective workforce development as well as evidence indicating the United States education system is not preparing enough of its talented students to work in science and engineering, Bell et al. (2014) recommend a workforce development strategy focused on preparing talented individuals for key entry level jobs in the technical, manufacturing and healthcare fields. The authors describe two workforce development initiatives that are being employed in the state of Tennessee—the Highlands Initiative and the Pathway to Prosperity. The Highlands Initiative was created by a group of business and educational leaders who agreed on the new challenges facing their region and suggested that a regional approach to the development of a sustainable workforce would be in everyone's best interest. The Pathways to Prosperity (also called the Harvard Initiative) was created by several alumnae of the Harvard School of Business who sought to create additional pathways to success by combining rigorous academics with a strong technical education aimed at providing young people with the skills needed to succeed in a challenging and

competitive labor market. Although the article provides no concrete examples of the success of either of these initiatives, it does assert that the development and retention of a competent and qualified 21st century workforce is critical to both regional and national economies.

The Opportunity Academy resulted from the serendipitous response of a government institution to an industry need. The program was developed based upon the agency's recognition that contractors from the MWLBE community struggled with the administrative requirements of government construction contracts. Fortunately, the agency's knowledge of the industry needs coupled with the proximity of LaGuardia Community College resulted in a situation that was tailor made for a strategic collaborative effort between a government agency, an industry, and an institution of higher education.

Determining Program Necessity

The factors higher education administrators consider prior to deeming a program necessary relate closely to the strategies they employ when implementing them. Thus, educational institutions are challenged to be forward thinking enough to respond to the educational needs of those they serve while effectively managing the resources of the institution. The requirement to be responsive to the demands of multiple stake holders i.e., the students, the industries in which these students will be seeking employment, and elected official and policy makers, makes programmatic decision making at the institutional level a critical component of workforce development programs. At the institutional level workforce development program decisions should be made that

respond to emerging student needs, industry growth, contraction or modification and societal expectations.

In certain cases, the program necessity is apparent and is also substantiated by relevant data. According to the U.S. Department of Education (2017), 32 states have current shortages in bilingual, English as a second language (ESL), and dual language immersion teachers (as cited in Garcia et al., 2019). Furthermore, McFarland et al., (2017) states that nearly 10% of K–12 students, and 23% of preschool age children nationwide are English-language learners (ELLs; as cited in Garcia et al., 2019). In addition, Steel et al. (2017), Umansky and Reardon (2014), Umansky et al. (2016), and Valentino and Reardon (2015) all agree with the assertion made in recent studies that the long-term academic and language development of Ells are enhanced in bilingual programs that facilitate the acquisition of English and continued development of the student's home language (as cited in Garcia et al., 2019).

In response to this shortage of bilingual education providers, policy makers in Washington State are taking an intentional approach toward remediating the shortage through alternative routes to teacher certification, and expanded pathways for paraeducators (Garcia et al., 2019). One step taken in their intentional approach was the creation of the Grow Your Own (GYO) Programs. The GYO program as implemented in Washington State is a locally driven approach that expands alternate routes to teacher certification. Since its implementation, several state institutions of higher education including the Western Washington University's Woodring College of Education has

partnered with the Highline Public Schools district to develop career pathways to teacher certification for local paraeducators (Garcia et al., 2019).

Tri-County Technical College, a public two-year community and technical college serving Anderson, Oconee, and Pickens counties in North-West South Carolina uses labor market data as well as business and industry insight to determine program offerings (Booth & DeHay, 2016). In agreement with the assertion that community and technical colleges need to be more nimble in meeting workforce needs, decision makers at Tri-County believe this approach to academic programming decisions can strategically impact curriculum design, enrollment management, and learner support (Booth & DeHay, 2016).

The approach to program development taken by Tri-County is based upon the belief that the community college can serve as the nexus between economic development, business and industry, and education, to bridge the gap between workforce development and economic development (Booth & DeHay, 2016). This approach is in line with the argument that the primary mission of higher education relates to economic development (Swanger, 2013). Swanger (2013) argues from the earliest beginnings of society, formal structures of education arose to provide selected youth (usually the wealthy and elite) with the necessary knowledge and skills to fulfill their roles as leaders of society and this was one of the earlier forms of community and/or economic development. In the 21st century, community and economic development continue to maintain a synergistic relationship, and higher education sits at the center of that relationship. As a result,

leaders in higher education are charged with determining how they effectively participate in and maintain the communities which they serve.

To remain relevant and fulfill their obligation to society, colleges and universities must update degree offerings and continually alter programs of study to incorporate new and emerging knowledge bases to serve new as well as existing industries. By so doing, they advance themselves while maintaining their responsiveness to societal needs (Miller, 2013). However, program management at post-secondary institutions is a complex task requiring a strong grasp of institutional administrative processes and a well-informed approach to program planning. Miller (2013) further argues that institutional leaders must be mindful of the fact that curriculum development is the responsibility of the faculty who are the stewards of their disciplines, while program approval is an administrative function usually involving institutional governance and state regulations. As a result, there are several factors that can and will affect the development and implementation of new programs or any alteration of existing ones.

Research has identified 4 factors that can impact new program development and or the alteration to existing programs, these are: 1) institutional fit, 2) duplication, 3) sustainability, and 4) institutional goals (Miller 2013). According to the author, these factors can be mitigated by establishing early communication between central administration and academic units. In addition to early communication, the process can also be enhanced, and programs stand a greater chance of approval if partnerships between the academic department and central administration are forged as early in the process as possible. Other mitigating factors include a recognition of the importance of

multidisciplinary programs and an understanding of the existing administrative barriers that must be navigated prior to program approval.

Curriculum is typically defined as a process of making decisions about educational goals and how best to achieve them (Roberts, 2015). As a result, higher education curriculum designs are usually based upon an outcomes-based model. The rationale is that, if we define the learning outcomes that students are expected to achieve, and then align them with specific teaching, learning and assessment activities, the desired outcomes are more likely to be achieved. These outcome-based models seem to be tailor made for workforce development programs like those being developed at the Opportunity Academy. The Opportunity Academy program has been developed specifically to prepare participants to perform administrative duties in the construction industry, and the outcome- based model used in its development resulted primarily as a result of discussions with industry partners about their specific needs.

The argument can be made that in collaborative workforce development efforts, decisions on learning outcomes ought to be made by the industry, particularly if the program being developed is a response to mismatches between industrial demand and workforce supply (Hu & Bowman, 2016). The success of the Alamo Academies at the Alamo Colleges in San Antonio, Texas is due in no small part to the institution's embrace of a model that is employer and demand driven where input on curriculum development from the industry is welcomed and assessment and student enrollment adjustments are implemented based upon industry demands. Much like the Alamo Academies, the Opportunity Academy is an example of this kind of cooperation between a college and an

industry and is based on an interest in tailoring training to meet industry requirements based on recommendations of professionals working in the industry.

Closely related to workforce development programs are competency-based education (CBE) programs. Although there is no consistent definition of CBEs, Kelchen (2015) declares that CBEs are programs within institutions of higher education that allow students to progress toward degree completion by demonstrating their competency based on assessments of specific skill sets to show what they know and can do (as cited in Dragoo & Barrows, 2016). Competency-based education programs are the result of an understanding of the pragmatic nature of industry demands for specific skills, and the rise in their availability at various colleges can be attributed to the intense financial pressures, changing student population, increasing global competition, and technological innovations with which today's institutions and the industries for whom they are preparing workers are faced.

In their 2016 study, Dragoo and Barrows concluded that there is little research available to guide institutions in their decision making on the early implementation of their CBE programs. Nevertheless, the results of the study did provide a construct for a partial preliminary framework for decision making on implementation of CBE programs. The authors recommend in making decisions to implement CBE, institutional leaders should consider several broad strategic issues at the institutional level. These are:

- the alignment of program goals with senior administrative support
- the degree of integration of the CBE program with the traditional academic structure

- the potential for opposition

One can conclude that consideration of the afore mentioned issues is critical to the program's success whether it is for a CBE or a workforce development program. Per Vanderlinde (2000), as institutional leaders in higher education continue to seek ways to distinguish themselves, they must come to terms with the fact that the ultimate aim for educational institutions is to become "autonomous, flexible, creative, and responsive agents of change in response to the educational challenges of the day" (as cited in Bevins et al., 2012). In addition, by linking strategic planning and competitive strategy to local and regional degree scanning, campus planners and leaders will have a new method of initiating and sustaining degree program development (Goodchild et al., 2016). The degree and program planning effort in higher education is an ongoing one. And the combination of student, society and industry needs have forced leaders in higher education to view degree and program planning through a variety of different lenses. Whether it is workforce development, BCEs or traditional liberal arts degrees and programs, institutions of higher education are finding new ways of meeting society's educational needs while forming their own niche in the higher education landscape.

Evaluative Perspective

The evaluation of any educational program is critical for multiple reasons. Decisions regarding funding, program expansion or contraction as well as planning for program continuance are best made when based upon the reliable information that can be gathered from an effective evaluation (Sobelson & Young, 2013). In addition, there are state and federal requirements for periodic evaluations of publicly funded programs.

Whether an evaluation is a requirement or not, it is in the best interest of program administrators and those whom the program is intended to serve that the program be assessed periodically to ensure that it is delivering what it promises and what is needed. For example, Sobelson and Young's (2013) evaluation of the Center for Disease Control's (CDC) five-year cooperative agreement with the Centers for Public Health Preparedness program was designed to determine whether the five-year program 1) strengthened public health workforce readiness, 2) strengthened capacity at state, local and tribal levels for terrorism preparedness and emergency public health response, and 3) developed a network of academic based programs contributing to a national terrorism preparedness and response capacity.

Their study was expected to identify the results achieved by the centers, determine the effectiveness of the CPHP program and inform evaluation and reporting requirements for the next iteration of the CPHP program. The authors used a mixed method design in which quantitative data were collected via a series of web-based surveys and qualitative data were generated using semi-structured telephone interviews. The study found all objectives were met but noted that program evaluation performed at the federal level contains some intrinsic challenges and that there are no perfect models by which impact and return on investment can be accurately measured. Nevertheless, the lessons learned from the evaluation of the CPHP program will be applied to its subsequent replication, which will be the development of agencies called Preparedness and Emergency Response Learning Centers (PERLC).

Despite the conventional wisdom that program evaluations tend to be more effective when they measure outcomes, Yarnall et al. (2016) contend in their study that evaluations also ought to address measures of implementation quality which are critical in the scaling up of any innovation, especially when that innovation is a collaborative effort between community colleges and employer partners. According to the authors, evaluations of programs that result from large-scale employer-college partnerships have primarily measured program completion and employment outcomes. And although measures of productivity are helpful, they yield little insight into the implementation processes that influence the productivity of workforce development programs (Yarnall et al., 2016).

In an effort to get a better understanding of how the implementation process affects the measurable outcomes of a collaborative workforce development effort, Yarnall et al. (2016) examined the practices of employers and college educators collaborating on a workforce education program. The authors conducted five case studies that endeavored to answer the following three research questions:

1. How do the structure and dynamics of the relevant labor market shape the potential activities of workforce education partnerships?
2. How do characteristics of different types of community college and employer partnerships shape their responsiveness to workforce development needs
3. What are the type of choices that college educators face when integrating industry standards, materials, and workplace learning in the curricula?

The authors examined their case studies via the Workforce Education Implementation Evaluation (WEIE) framework, which is a framework specifically designed to investigate and characterize workforce development implementation quality (Yarnall et al., 2016). In this study, the WEIE framework identified three layers of workforce program development and set forth specific factors in each layer that help practitioners make decisions about program design, development, and implementation. The first layer addressed by the WEIE framework is the labor market layer. By conducting evaluations at the labor market layer, practitioners obtain information about the structure and dynamics of the industry sectors that hire for the workforce target occupations. This data helps practitioners identify gaps between the skill sets required by the employers and the skill levels of regional workforce.

The second layer identified by WEIE in this study was the partnership implementation layer. Data from the partnership implementation layer can be used to identify the roles played by various education providers ad industry leaders in the workforce program development process. Understanding these roles is critical in the development and implementation of the outreach process. The final layer addressed by WEIE is the instructional implementation layer. This layer assembles the learning design concept(s) and tools. These concepts and tools can then be implemented via an industry advisory panel which guides the collaboration between employers and educational leaders in the development of the curricula for the program (Yarnall et al., 2016). It is unclear if it was by design, but the Opportunity Academy Program seems to have

incorporated these three layers of the WEIE framework into its development and implementation.

Evaluations are even more critical when the program in question involves multiple institutions and/or organizations. According to Diaz et al. (2015), programs supported by partnerships that include multiple organizations and/or institutions are typically evaluated at the final stages of the effort to determine why the collaborative effort did or did not work or to identify indicators of success for subsequent projects. According to the authors, there are three core dimensions (the decision processes; the problem orientation; and the social capital). Divided among these are 10 indicators that are deemed necessary components of any evaluative framework being developed for the purposes of assessing multi-institutional/academic partnerships in workforce development. The decision process includes collaboration, shared responsibility, and widespread involvement. Mutual goals, shared vision, and problem focus all fall under the problem orientation dimension. Under the social capital dimension fall, dedicated leadership, motivated partners, resources, and public support. The authors indicated there is a scarcity of literature addressing collaborative educational efforts at the initial stages and that further study is needed. However, their study uncovered some critical lessons that might be applicable to future collaborative endeavors. Included among these are the need for the clear articulation of partnership roles at the outset of the collaboration, and an alignment of participant's expectations with their respective roles.

The organizational structure in which a workforce development program exists also affects its efficacy. Leer and Ivanov's (2014) case study provides an analysis of the

organizational structure and management practices of the workforce development and lifelong learning program at the University of the District of Columbia Community College (UDCCC). The program was initiated at the institution in 2006 as a part of its Community Outreach and Extension Services. One of the reasons for the commissioning of the study was a concern on the part of the college's deans that the existing. organizational structures did not meet the organization's needs or promote the kind of quality service required to develop and maintain a cohesive interdependent system (Leer & Ivanov, 2014).

Leer and Ivanov's (2014) case study entailed a review of the design of the organization's structure and its management processes. In addition, several possibilities for restructuring, and recommendations for future organizational changes were identified. Much of the information secured for this study came from scholarly research, drawing on the organizational theories of Jacques (1990), Deming (1993) and Ivanov (2013) (as cited in Lear & Ivanov 2014). In addition, program staff were surveyed, and interviews were conducted to provide some historical context. The review of the organizational structure revealed a fragmented and siloed work arrangement at the Workforce Development and Lifelong Learning Program at UDCCC, where the various departments focused on their own activities and there was little or no interdepartmental interaction (Leer & Ivanov, 2014). To address the siloed component of the program, a recommendation was made to restructure the entire program around student outcomes. It was expected that employment opportunities for students would improve if each department would focus on student outcomes rather than simply providing a credential following training, and that approach

would lead to more demand and opportunities for interdepartmental sharing and cooperation at UDCCC.

A closer examination of the organizational structure of the Workforce Development and Lifelong Learning Program at UDCCC reveals several similarities between that program and the SCA/DDC/LaGuardia Community College Opportunity Academy. The fact that both agencies, the SCA and DDC offered their own brand of training could lead to the development of siloed and compartmentalized structures like those found at UDCCC. By assessing the training component of the program, steps can be taken to ensure that training outcomes are met regardless of the agency to which the training pertains. In addition, as the Opportunity Academy program grows, the administrators of the program would be well served by closely examining the UDCCC program to avoid some of the same pitfalls. The Opportunity Academy program must be mindful of the fact that it is comprised of the collaborative effort of two city agencies and one community college. Therefore, there is a great potential for the development of a fragmented and compartmentalized organizational structure that could be detrimental to the program and, ultimately, to the students that it was designed to serve.

Student learning as well as the applicability of knowledge gained, and skills learned are key components in the evaluation of educational programs, in general, and particularly in workforce development programs. In addition, Wentling and Lawson (1974) as well as Rojewski (2002) state that program evaluation has long been recognized as a component of CTE, and occupational training and accountability have become hallmarks of education reform initiatives (as cited in Bartlett et al., 2011). It is,

therefore, incumbent upon workforce program administrators to periodically evaluate their programs to determine if they are meeting the needs of the industry or industries that they have been designed to serve. The administrators of career and technical educational/workforce development programs face some obstacles in the development and implementation of effective evaluations of their programs. One primary concern is the criticism of the criteria and methodology used to collect the data for the evaluation (Bartlett et al., 2011). Copa and Wolf (2002) also recommended employer feedback play a key role in the evaluation of education programs that have a work emphasis. And Gupta et al. (2007) call for needs assessments which can be described as assessment designed to determine if the needs of stakeholders in the program are consistently being met (as cited in Bartlett et al., 2011). Regardless of the challenges and the methods used to address those obstacles, evaluations based on employer needs and satisfaction with the performance of those trained will continue to be a critical component of workforce development programs. In fact, they are becoming increasingly important as the educational paradigm continues to evolve from its more traditional liberal arts basis to one more focused on preparing those being educated to successfully transition from school to work.

Opposing Viewpoint

There are fundamental aspects of capitalism which can cause economic instability (Jacobson, 2016). Thus, education and training programs have only a limited ability to move large numbers of people out of poverty. He also questions the premise that education can be a tool that lifts people out of poverty, arguing instead that the economy

remains the defining location of the class struggle. Jacobson (2016) also asserts the skills gap described by most employers is mostly a rhetorical device used to lull what he refers to as “educrats” into believing what is essentially a false premise. Evidence is cited indicating there is essentially no real shortage of workers, because, if there were, incumbent workers would be asked to work longer hours to make up the difference, and, as of this writing, that is not the case. His findings are substantiated by Carnevale et al. (2010) who makes the argument jobs create training, not the other way around, and people get that backwards all the time (as cited in Jacobson, 2016). Based upon the previous assertion, Jacobson (2016) goes on to suggest that, as a result, the efforts of decision makers in adult education would yield better results if they focused on developing structural analyses of the economic situation and pushed for substantive changes there rather than on education and training. Jacobson (2016) concludes that ending years, perhaps decades, of systemic exploitation of the poor underclass will require a more fundamental transformation of the economy than the small-scale changes presented by educational reform or workforce programs.

This argument runs contrary to the guiding philosophies of the Opportunity Academy program. The argument that jobs create training; training does not create jobs is axiomatic. Nevertheless, there is overwhelming evidence in the case of the construction industry in the New York City Tri-state area that there are not enough trained candidates for the many well-paying jobs that are available, and training can make it easier for applicants to transition into those jobs. Training individuals may not solve the global problem of poverty, but programs of this sort will immediately help displaced workers

and the unconventional student to better their circumstances in the short term and give society time to address the strategic needs outlined by Jacobson (2016).

Implications

The value of this study will be proven in its contribution to the development and growth of the Opportunity Academy program and its capacity to positively impact the construction industry and those working within it. In its first iteration, the program has proven to be an unqualified success. Per data gathered from research done by the SCA's Business Development Division, 65% of the contractors with whom interns were placed planned on hiring them full-time when their internships end, and this has been viewed as a clear measure of success. The enthusiasm for this success must, however, be tempered by the reality that the SCA and DDC are but two public organizations within a multibillion-dollar industry, and LaGuardia Community College is but one community college within the multi-campus CUNY system. The true test of success for this program will come when other public and private agencies within the construction industry and other CUNY colleges join the program. It is for this reason that this study represents an important step forward. This evaluation of the Opportunity Academy will identify the strengths and weaknesses of the program and provide data that can be used to exploit the former and address the latter.

Many of its stakeholders would like to see the Opportunity Academy become a fully accredited degree program within the CUNY system. For this to happen, the entire industry must be made to understand the value of the program. While one or two organizations can be catalysts in the development of a certificate program, clear evidence

as to the strength of the program should be developed in its nascent stages if the program is to expand further. A transparent assessment of the program of the kind offered in this study can provide some of that evidence. The clearest evidence is likely to be the impact of the program on the back-office capacity of MWLBE firms engaged in the construction industry. As previously stated, one of the primary challenges faced by these firms, particularly those engaged in public works contracting, is the availability of trained professional staff to handle their back-office duties. This study evaluated the Opportunity Academy Program to train people to meet this challenge to determine whether it can succeed in encouraging growth and expanding the capacity of MWLBE firms in the construction industry.

Social Change

The social changes associated with the study are directly associated with the success or failure of the Opportunity Academy Program. Social change can be affected through an evaluation of the training provided by this program. This program is designed improve the administrative performance of contractors in the MWLBE community as well as to provide jobs for displaced workers, workers who are new to the job market, or those seeking a career change. An assessment of the training can be expected to produce findings relating to the success of that program or recommendations for improvement. In so doing, the program can spur job growth and provide a secure future for workers while providing quality, trained personnel to meet industry needs.

The initial iteration of the Opportunity Academy Program is replete with stories of individuals whose lives have undergone significant changes as a result of their

participation in the program. There is a Nigerian Engineering Student named Salomi Bolaggi who was unable to find work in his field for the first five years that he resided in this country. However, after completing this program, he was hired by TDX, one of the larger SCA construction firms as an Associate Project Officer. There are other anecdotes of firms that have expanded their capacity into other public agencies after having an Opportunity Academy intern for only two months. Nevertheless, understanding the true social impact of both the program and the training provided requires more systematic data gathering. Data that is needed includes assessments of the employability of graduates of the program in the industry at large, as well as an assessment of the capacity for growth that those employees provided to the contractors with whom they were placed.

Summary

This study was designed and grounded in a pragmatic theoretical framework. Its aim was to determine whether the training provided in the Opportunity Academy workforce development program works to prepare the program participants to make immediate contributions in an administrative capacity to MWLBE contractors participating in public works construction contracting. In addition, the study sought to determine the strengths as well as any inherent weaknesses to the training program now being offered. The expectation is that, after the evaluation is completed, the strengths can be expanded upon, and the weaknesses of the program can be either minimized or eliminated.

The study produced independently sourced data on the effectiveness of the training provided by the Opportunity Academy Program. That data can be used by Opportunity Academy Program administrators in their decision making and recommendations regarding the program's viability. There is no questioning the need for workers in a booming industry, but special care should be taken that graduates of this and other educational efforts match industry needs.

Section 2: Methodology

In the New York City public works construction industry, there is a lack of adequately trained back-office staffing that prevents MWLBE contractors from fully participating in and benefiting from the lucrative construction industry in New York City. I addressed this problem by investigating the Opportunity Academy Program and its perceived value to the students who completed in the program and to the MWLBE contractors with whom the students were placed in their internships. In Section 2, the methodology for this case study is presented along with a discussion of the participants, data collection techniques, data analysis and triangulation, and limitations for this study.

Research Design and Approach

There were three methodological approaches considered for this project study: qualitative, quantitative, and mixed methods. Each methodology has specific designs and applications in social science research, and no one method is better than another; rather, each methodological approach is used to investigate a phenomenon or relationship with prescribed methods and designs. According to Lodico et al. (2010), educational researchers employ two basic types of reasoning: inductive reasoning, which is most closely associated with qualitative research methodologies, and deductive reasoning, which is most closely associated with quantitative research methodologies. In addition to qualitative and quantitative methodologies, Lodico et al. explained there are also mixed methods approaches in which qualitative and quantitative methods are applied in the same study. The mixed-methods approach becomes more applicable when neither numeric data nor narrative data by themselves provide the necessary information to

answer the research questions. In the following sections, the merits and uses of each of these types of methodological designs are explained, and a rationale is provided for the selection of qualitative methodology for this study.

Qualitative Research Methodology

Qualitative studies are best suited to address a research problem in which the literature yields little information about the phenomenon of study and more needs to be learned from the participants through exploration (Creswell, 2012). According to Jamali (2018), qualitative researchers collect data from the context in which the events occur in an attempt to describe the occurrences. For the current study, although there was ample information on workforce development programs, there was a gap of information on the efficacy of workforce development training in the construction industry in general and in the MWLBE community in particular. In this qualitative study, I relied on the experiences of the participants as well as the context in which the experience occurred to answer the research questions.

Quantitative Research Methodology

To examine relationships between two or more variables, a quantitative methodology is more appropriate. McCarthy et al. (2017) described quantitative research as a method of inquiry that is predicated on the assumption that objective truths can be quantified and measured. To quantify these truths, researchers begin by formulating a hypothesis, which can then be tested by the collection and analysis of data (Lodico et al., 2010). However, not all truths are objective, and in those cases in which the truth is more subjective, the quantitative approach is not applicable. Because the current study

addressed experiences and not relationships between variables of interest, quantitative methodology was not a good fit.

Mixed-Methods Research Methodology

Mixed-methods research is a more complex methodology that evolved in response to the limitations of qualitative and quantitative designs (Caruth, 2013). Despite assertions by Pelto (2015) that social scientists have used mixed methods in field work for the last 80 years, the consensus reached by Lund (2012, as cited in Caruth, 2013) was that mixed-methods research was established around 2000. The core argument for a mixed-methods design is that the combination of both types of data provides a better understanding of the research problem. There are numerous cases in the social sciences in which numeric data alone cannot provide information to answer the research questions.

Rationale for Selection of Research Methodology

There is ample evidence to use each of these methodologies; however, given the academic rationale for each methodology, there was only one logical choice for the current study. As Abowitz and Toole (2010) suggested, because people play such key roles in the construction process, effective research in this industry requires the proper application of social science research methods. Therefore, a qualitative method was appropriate for the current study for the following reasons: qualitative approaches are ideal for investigating and evaluating feedback in a particular context, and the data must be collectible and of a sufficient depth, breadth, and scope to explore the research question and fulfill the aim of the study (Tai & Ajjawi, 2016). Second, despite a pragmatic approach to the current study, the study was undertaken with the full

understanding that in education research, it is not only the “does it work?” that matters but also the “how does it work?” “For whom does it work?” and “in what context does it work?” Moreover, the research questions could not be answered using analysis of numeric data. Third, qualitative research provides the researcher the opportunity to gain in-depth, textured insight into educational phenomena (Jin & Bridges, 2016). Having met these conditions, the current study provided the rich in-depth descriptions of the experiences and perspectives of the Opportunity Academy students and the contractors with whom the students were placed (see Lodico et al., 2010).

Selection of Design

There are five primary designs in qualitative studies: phenomenology, case study, grounded theory, narrative, and ethnography. In some respects, these methodologies are related; for example, phenomenological and case studies share some common aspects, yet they each have different contextual values (Willan, 2016). The challenge that this presents is to ensure that during data collection and analysis the researcher is applying and staying true to the principles of the design chosen.

Phenomenology

An approach to research that turns to people’s experiences to better understand something is phenomenology (Hopkins et al., 2016). Phenomenologists recognize that there are different ways to interpret the same experience and understand the meaning of an experience from the participant’s perspective (Lodico et al., 2010). To gain insight into the participant’s perspective, phenomenologists collect data via a series of in-depth interviews with their subjects. The purpose of the interviews is to describe the meaning of

the phenomenon that the individuals shared (Yüksel & Yıldırım, 2015). Phenomenological studies are recommended in situations in which researchers are seeking to understand human experiences and how those experiences are interpreted differently by different people (Lodico et al., 2010). Because I sought to examine the experiences of participants in the Opportunity Academy, but not the meaning of those experiences, a phenomenological design was not applicable.

Case Study

A case study is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, program, or system in real life (Simmons, 2009, as cited in Starman, 2013). The case study has been used in the social sciences and has been found to be valuable in practice-oriented fields such as education, management, public administration, and social work (Starman, 2013). Case studies can be differentiated from other forms of qualitative research in that the case study focuses on a single unit or bounded system (Lodico et al., 2010). The bounded system is determined by whether there is a limit to the number of people participating in the study. If there is a limit, then the system is bounded; if there is no limit, then the system is unbounded and therefore not suitable for a case study. Case studies are applicable in those instances in which the researcher wants to get close to the subject and collect data via interviews, observations, and examinations of artifacts or historical data. Therefore, a case study was an appropriate design for the current study.

Grounded Theory

Another possible design was grounded theory. Artinian 2014 (as cited in Ivey, 2017) stated that grounded theory is a qualitative method used to identify the "main concerns of subjects and the behaviors that they use to resolve their main concerns" . Consistent with the key feature of qualitative research, grounded theory researchers use the inductive approach and collect data using multiple techniques over a long period of time (Lodico et al., 2010). The foundation of grounded theory analysis is constant comparison—a statement is compared with a statement, story with story, participant with participant, and theme with theme (Lingard, 2014) until an explanation grounded in the views of the participants can be generated (Creswell, 2012). Grounded theory methods are used when a broad theory or explanation of a process is needed. Therefore, grounded theory was not a good fit for the current study because I was not looking for theories or explanations of processes in the Opportunity Academy Program.

Narrative Design

Narrative research designs are used to describe the lives of individuals, to collect and tell stories about people's lives, and to write narratives of individual experiences (Creswell, 2012). The narrative is typically organized chronologically and according to a single organizational structure as participants communicate real-life scenarios and shared stories of human experiences (Lundine et al., 2018). According to Creswell (2012), despite substantial interest in narrative research as a relatively new design, its methods are still being developed. Typically, narrative research is used when there are individuals willing to share their stories and the researcher wants to hear the story (Creswell, 2012).

The narrative design has been shown to be practical for educational researchers who want to explore the personal experiences of individuals in a school setting, but this was not the purpose of the current study.

Ethnographic Design

Ethnographic designs are qualitative research procedures used for describing, analyzing, and interpreting culture-sharing groups, shared patterns of behavior, and beliefs and languages that develop over time (Creswell, 2012). This type of research is used to gather observations, interviews, and documentary data to produce detailed and comprehensive accounts of different social phenomena (Reeves et al., 2013). Ethnographic research designs are most applicable when the study of a group will provide greater understanding of a larger issue, which was not the purpose of the current study.

Rationale for Case Study

A case study was the best design for the evaluation of the Opportunity Academy for several reasons. First, case studies focus on a single unit or bounded system (Lodico et al., 2010). The current study focused on the first iteration of the Opportunity Academy and the contractors with whom the graduates from the academy were placed in their internships, as well as those contractors who received remote assistance from Opportunity Academy graduates because they lacked adequate office space from which an Opportunity Academy graduate could work. Therefore, the study was conducted in a bounded system. Second, the first evaluation of the Opportunity Academy Program was an intrinsic case study because the case was of interest on its own (see Creswell, 2012).

Because additional studies will be necessary, I expect that a future multiple case study might be done to build on the body of knowledge generated by this study. Third, case studies highlight a developmental factor, and the Opportunity Academy program as well as the participating students and contractors would continue to grow and develop and need to be studied.

Setting and Sample

In qualitative research, participants are chosen based on their characteristics, experiences, and knowledge related to the research question (Creswell & Plano Clark, 2011). The population for the current study was students who completed the Opportunity Academy Program, as well as all of the contractors with whom Opportunity Academy interns were either placed or who had access to interns working from a remote location. This type of sampling is known as purposeful sampling because the researcher intentionally selects participants who have experienced the central phenomenon or key concept being explored in the study (Creswell & Plano Clark, 2011).

There are several types of purposeful sampling techniques that can be used: (a) convenience sampling in which researchers mine data from the most convenient source; (b) critical sampling in which researchers mine data from those who can make a point, (c) intensity sampling in which researchers mine data from individuals with the strongest feelings about an issue, and (d) homogeneous sampling in which researchers mine data from individuals with similar attributes (Lodico et al., 2010). For the current study, the sampling technique that was applied was homogeneous sampling because homogeneous sampling involves individuals with similar attributes (see Lodico et al., 2010). In the

current study, the similar attributes were participating in the Opportunity Academy Program for the students and either hosting an intern or having remote access to an intern for the contractors.

Securing the purposeful samples of participants for this study was relatively easy. Thirty students were chosen to participate in the initial iteration of the program, and approximately 35 contractors requested interns from the program. Of the 30 students who began the program, two left to pursue other employment opportunities, and two others did not complete the training and were not provided internship opportunities. As a result, 26 students completed the training and were provided internship opportunities as follows:

- Eighteen program graduates were placed with MWLBE contractors from the SCA Mentor Program.
- Four program graduates were provided remote locations from which they provided contract administrative assistance to MWLBE contractors from office space within the SCA.
- Four program graduates were provided internships and subsequently hired by either the SCA or DDC upon graduation from the program.

The homogenous sample of participants for the study consisted of 26 students who completed the training and 35 contractors who had access to the students either as in-office interns or from a remote location.

Research indicated that rich qualitative findings can be discovered with relatively small sample sizes (Young & Casey, 2018). Furthermore, Boddy (2016)noted that in qualitative studies, data saturation occurs at samples of 12 among a homogenous

population. In an effort to ensure adequate depth of inquiry and get input from as many contractors and students as possible, I recruited all 26 students who completed the program and all 35 contractors who had access to the students. Of the 26 students who completed the program 14 participated in the study, and of the 25 contractors who had access to the program graduates, 14 participated in the study.

Ethical Assurances and Confidentiality

Access to the participants will be gained from the SCA. Although the Opportunity Academy program is a collaborative effort between the SCA, DDC and LaGuardia Community College, the SCA has administrative and fiscal oversight of the program. In addition, not all 35 contractors who applied for interns work with DDC, but they all are SCA mentor contractors. Upon receipt of approval from the SCA written invitations to participate in the study will be sent via email as well as U.S. Mail to all Opportunity Academy graduates as well as to the contractors with whom program graduates were placed or received remote assistants from program graduates.

Qualitative educational research is defined as discovering meaning and understanding through the researcher's active involvement in the construction of meaning (Kim, 2014). As such it is often possible and easy for researchers to blur the lines required for the maintenance of professionalism that is required to conduct the study. In blurring these lines, researchers run the risk of their study becoming a vehicle and target for ethical, political, or methodical attack (Karagiozis, 2018).

In order to ensure that a high level of professionalism is maintained researchers are expected to establish a researcher participant relationship that ensures the protection

of the research participant as well as the integrity of the study. The steps that were taken to ensure a proper and effective researcher participant relations ship for this study are as follows: 1) All study participation will be voluntary and verified by the signature of signed consent forms; 2) All participants will be treated with respect; 3) Participants' identities will be protected, and no personal information of the participants will be made public as a result of their participation in the study. The questions for the focus group discussions as well as the semi-structured interviews will be provided before-hand to give the participants an opportunity to think back to their experiences and come up with their responses. Although values and moral conflicts surface in even the most systematically organized study (Karagiozis, 2018), every effort will be made to maintain the integrity of the study.

The primary responsibility of any legitimate researcher is the protection of the rights of the participants in his or her study. Therefore, for this study, measures will be implemented to ensure the protection of the rights of the participants, and that the study is undertaken in ethically appropriate manner. According to Houghton et al. (2010), there are many challenges that have ethical implications for qualitative research, these include but are not limited to, informed consent procedures, the relationship between the researcher and the participants, the ratio between risk and benefit and confidentiality. This study will address the measures that will be undertaken to address the challenges posed by informed consent, confidentiality, and protection of the research participant.

Before any data was collected signed informed consent was obtained from all participants. According to Lodico et al. (2010), informed consent means that research

participants have been given information about the procedures and risks involved in the study and have been informed that their participation is voluntary and that they have the right to withdraw from the study without any repercussions. The informed consent was obtained by securing the participants signature on an Informed Consent form. There was two different Informed Consent forms: one for the Opportunity Academy Graduates participating in the study (Appendix H), and one for the contractors who are participating in the study (Appendix I). The informed consent was enhanced by what Houghton et al. (2010) called informed process consent. The authors explain the informed process consent arose from the emergent and sometime unpredictable nature of qualitative research. The ongoing process consent can be accomplished by frequently asking if the participant was comfortable, and constantly reiterating the right of the participant to withdraw from the study at any time.

In qualitative research, maintaining respondent confidentiality, while presenting rich detailed accounts of social life presents a unique challenge (Kaiser, 2009). The research practitioner should balance the drive for providing the rich detailed information mined from the research with maintaining the confidentiality of his or her research participants. In maintaining this balance, the researcher should be mindful of deductive disclosure or internal confidentiality. Tolich (2004) defines deductive disclosure as what occurs when the traits of individuals or groups make them identifiable in research reports (as cited in Kaiser, 2009).

There are a variety of methods that can be employed to maintain the confidentiality of research participants. Researchers must, however, be mindful that

confidentiality issues should be addressed in relation to individual participants as well as sites in which the research was conducted (Houghton et al., 2010). Polit and Tatano Beck (2006) suggests that with regards to individual participants, researchers might need to use pseudonyms and to be selective when describing defining characteristics of participants that could reveal their identity (as cited in Houghton et al., 2010). Kaiser (2009) also suggests addressing confidentiality during data cleaning when the researcher removes any personal or contextual identifiers while maintaining the thick rich descriptive nature of the findings.

In qualitative research it is often difficult to predict the balance of risks to benefits. Orb et al. (2001) advises that researchers are obligated to anticipate the possible outcomes of an interview or observation and to weigh the benefits against the potential harm (as cited in Houghton et al., 2010). In an effort to ensure that the participants of this study are protected from harm, all participation will be discontinued if the participant becomes distressed or informs the researcher of any feelings of discomfort. In addition, despite the perceived benefits of data sharing and the expectations that funding entities are increasingly asking that data be made available for use by others (Ross et al., 2018), the participants in this study were informed of the fact that the data collected in this study might be shared but their identities will be protected.

Data Collection

The data collected for this study was the shared experiences and perceptions of both the Opportunity Academy graduates and the contractors with whom they were either placed or from whom they received remote assistance. From these shared experiences

and perceptions, the study attempted to determine the efficacy of the training offered in the Opportunity Academy Program.

Two techniques were employed for the collection of the qualitative data for this study. The data from the Opportunity Academy Interns was gathered via semi-structured interviews and the data from the contractors with whom the interns were placed or those contractors who had remote access to the Opportunity Academy Intern was gathered via focus group discussions. The use of different data gathering techniques will be in keeping with Lodico et al.'s (2010) assertion that in case studies, no one qualitative method is used; instead, multiple techniques including interviews, observation, and at times, the examination of documents and artifacts are employed. Because the study was conducted while the program is in its nascent stages and there is a limited population of Opportunity Academy graduates and contractors as well as limited historical documents to be examined, the decision was made to employ only the two data gathering techniques of semi-structured interviews and focus group discussions. Educational leadership scholars have been exploring dynamics, phenomena context and perceptions using qualitative research since the mid-twentieth century (Brooks & Normore, 2015). This study sought in a pragmatic way to determine the efficacy of the training provided by the Opportunity Academy Program. In order to make this determination the study endeavors to determine the perceptions of the program graduates, as well as the perceptions of the contractors with whom the graduates were placed. Interviews were selected as a data gathering instrument for this study for the following reasons:

- Interviews provide the opportunity to generate rich data.

- Contextual and relational aspects of the study were seen as significant in understanding the perceptions of the participants depth of meaning is important for this study, as its primary focus is on gaining insight and understanding of the perceptions of the research participants (Newton, 2010).

The interview instrument (Appendix D) is self-developed and includes key questions that were grouped thematically (Newton, 2010). For example, interview questions collected some demographic data, prior work experience data, prior training, or education data and finally data about the participants experiences and perception of the training offered in the Opportunity Academy program.

Focus groups are advantageous and will likely yield the best information when the interviewees are similar to one another and are used to cooperating for common benefit (Creswell, 2012). Hennink (2014) states that the essential purpose of focus group research is to identify a range of perspectives on a research topic, and to gain understanding of the issues from the perspective of the participants themselves. Furthermore, Hennink (2014) goes onto declare the group environment enables a broad range of insights on the research issue to be gathered in a single setting. For these reasons, the focus group discussions will rely on the bonds of familiarity between the mentor contractors. It is expected that in such a familiar atmosphere the contractors will feel relaxed and comfortable enough to provide insight into their perceptions of the quality of the training provided by the Opportunity Academy to their interns as well as any perceived deficiencies in the training. The focus group discussion instrument was researcher produced. Due to the lack of pre-existing data on contract administration

workforce development programs the decision was made to develop an original instrument, but the format of the interview will adhere to the following guidelines from Bogdan and Biklen (2007) and communicated to the participants.

There will be no right or wrong answers, the purpose of the interview was to get perceptions of the Opportunity Academy Program Participants should not feel pressured into agreeing with anyone else in the room. We expect a wide range of opinions and perspectives and will respect everyone's views. Participants should feel comfortable providing positive as well as negative feedback. Participants should respect each other's opinion by not shouting or speaking over each other. Participants should identify themselves before speaking, when you say something please say your name first so that the transcriber transcribing the tape will know who is saying what.

In addition to the informed consent participants will also be asked to sign a promise of confidentiality (Appendix G). All interviews and focus group discussions will be held at the SCA. Upon receipt of SCA approval, invitations to participate in the interviews and focus group discussions will be sent via email to the prospective participants. Included in the invitations will be the consent forms (Appendix H and Appendix I) as well as the promise of confidentiality form (Appendix G) for those participating in the focus group discussion.

The participants in the focus group will be limited to only those mentor contractors with whom an Opportunity Academy graduate was assigned as an intern, or those contractors who received remote assistance from an intern. Prior to their participation in the focus group discussion, signed consent forms will be secured from the

contractors (Appendix I). There will be three different focus groups, each consisting of eight to 10 contractors, to ensure maximum participation and to allow each contractor to voice his or her opinions. The contractors will be given some latitude in the discussions, but the discussion will be centered around the questions offered in an interview guide specifically designed to ensure that critical topics are covered and that contractor insights are collected in an organized way (Appendix C).

For this study data was tracked, using four of the six steps of the Framework Method for the analysis of qualitative data in multidisciplinary health research (Gale et al., 2013). This method of tracking the data was chosen because it is most commonly used for the thematic analysis of semi-structured interview transcripts and can be also applied to other types of textual data. The first step in this process will be the recording of both the interviews and focus group discussions. Secondly the recordings will be transcribed, the transcripts will have large margins and adequate line spacing for later coding and note taking (Gale et al., 2013). The third step in the process is becoming familiar with the interview. This will be accomplished by reviewing the transcripts of the entire interview and discussion as well as contextual or reflective notes that were recorded by either the interviewer or moderator of the focus group discussion. Finally, after familiarization the researcher carefully reads the transcript line by line applying a paraphrase or label that describes what was interpreted in the passage as important.

As the primary technician for this study, it was my duty to design the study and select the participants. Because of my previous role as Assistant Business Development Manager, and now Graduate Mentor Project Manager, my involvement in the focus group

discussion with the contractors will be limited. I created the questions but in order to avoid potentially conflicting roles and in order to allow the contractors as much freedom of expression as possible I withdrew myself from this role (Karagiozis, 2018). According to Seidman (2013) and Fontana and Frey (2000), qualitative research treats the interview as negotiated text (as cited in Karagiozis, 2018). Because I had no interactions with the students during the training and limited input on the development of the curriculum, I believe that I conducted the interviews with no bias and no influence on the interview subjects.

Data Analysis

Transcription is a process that is theoretical, selective, interpretive, and interpersonal. And thus, it is reasonable to acknowledge transcribing is far from being an objective, impersonal and mechanized task; it rather consists of the apprehension of what is said and how it is said in order to understanding the meaning (Bailey, 2008, Stuckey, 2009, as cited in Azevedo et al., 2017). Therefore, in order to ensure that no details of either the interviews or the focus group discussion are missed, and the entire social interaction and extended conversations between the subjects who have lived the experience and the researcher are captured in their entirety (Simon & Goes, 2013), both forms of qualitative data gathering, the focus group discussion and the interviews will be recorded.

The transcription of the data was conducted by hired professionals who were directed to complete the task by following the ensuing process as prescribed by Azevedo et al. (2017). The first step is to prepare. During the preparation phase back-up copies of

each recording were made and kept on a separate storage device. In addition, an identifying system was created to allow associating the recording file with the transcription document. The second step is “Know.” At this stage, interviewers field notes if any, were reviewed and analyzed to see if they contain any useful clues or information relative to transcription. The third step is to write. This phase is the act of transcribing itself. With a view of maximizing the writing process, the purpose here was to listen to the recordings and write the transcript. The fourth step is to edit. At this stage the attention went to editing the writing done at the previous step. Although the editing should include punctuations and distinguishing between upper case and lower-case letters; the transcriber was mindful of retaining emotional and nonverbal aspects of the transcript as well as maintaining the initial interpretation of a text segment. The fifth step is to review. During the review process the transcription was compared to the recordings to check for accuracy. The sixth step is “Finish.” After the review of the transcripts, it was important to be mindful of what is to become of the recordings. These recordings contained some sensitive data which was kept in a safe place with restricted access for a specific timeframe.

The core feature of qualitative data analysis is the coding process (Creswell, 2012). According to Lodico et al. (2010), coding is the process of identifying different segments of data that describe related phenomena and labeling these parts using broad category names. Because the qualitative data will be textual the most likely analytical tool for such data is content analysis. Krippendorf (2004) stated content analysis is

dependent upon creating labels or codes that can be applied to data to develop the data into meaningful categories to be analyzed and interpreted (as cited in Blair, 2015).

The content analysis approach was applied to the coding of the qualitative data was emergent coding. Emergent coding is an open coding technique drawn from a grounded theory methodology (Blair, 2015). I was drawn to this technique because, according to Blair (2015), when open coding techniques are employed, theory is developed from the data rather than imposed upon it. In addition, according to Elliot (2018), researchers with a deeply held philosophical commitment to qualitative research are likely to prefer emergent codes.

The coding process mirrored Strauss and Corbin's (1998) three suggested stages for coding: open coding, axial coding, and selective coding (as cited in Blair, 2015). During the open coding process, codes that emerge from the transcribed texts are applied as opposed to the creation of preselected codes. My initial intention was to review the text line by line though I was mindful of Blair's (2015) admonition that doing so increases the difficulty of coding in a detached manner, as in reading through the transcript I would be hearing the voices of the participants of the study and will imagine myself to understanding what they were meaning. During the axial coding, categories are related to their subcategories to create a clearer explanation of the data. It is during the selective coding process when the theory emerges. My expectation was that either one of two theories would emerge. Either the training adequately prepared the program's participants for their internships, or it did not.

Limitations

The primary limitation to this study is the relatively small population size used for the collection of quantitative data. The first class of the Opportunity Academy began with thirty participants and concluded with twenty-six. Of the original thirty, two students dropped out of the program to pursue other opportunities, and two completed the entire training but could not pass the final exam. When the four students to whom the program will be piloted are subtracted, the population on which the quantitative portion of the study will be based is further reduced to twenty-two students; however, while this number is small, the population surveyed will be the entire class, so the expectation is that the results will adequately reflect the views of the group. The study focuses on a training program that is industry specific and is currently restricted to only two city agencies. Therefore, the small population size should be mitigated by responses from a large percentage of the participants in the Opportunity Academy class. The aim of the study was not so much to generalize findings back to a larger population as it is to get the students' perceptions of how much they learned in this program and how applicable the subject matter covered in the classroom related to the work which they performed on the job.

Data Analysis Results

This qualitative study was developed and implemented to evaluate the value of the training provided in the Opprotunity Academy Program, by seeking to determine how well trained and prepared for their internships the students beleived they were. Moreover the study also evaluated how well-trained the contractors with whom the students were

either placed in internships or who received remote assistance from the students believed the students were.

Changes to Data Collection Plan

The initial plan was to conduct in person interviews of the Opportunity Academy program graduates, and conduct a series of three or four focus group discussion interviews of the contractors with whom the program graduates were placed in their internship or who received remote assistance from the program graduates. But in response to the COVID-19 pandemic and per email correspondence from Walden IRB dated March 12, 2020, "All researchers who currently have IRB approval to collect data were approved to replace face-to-face contact with email, phone, video conference, or online format if they wish" (Walden University IRB, personal communication, March 12, 2020). As a result, a determination was made to collect the qualitative data via semi-structured telephone interviews with both the contractors and the program graduates. With the permission of the participants each interview was recorded, and a professional transcriber was retained to convert the recorded interviews into written text.

Cleaning the Data

Before proceeding with the analysis, steps were taken to ensure the data reflected only the lived experiences of either the students or contractors, and to ensure that my own personal biases and opinions neither influenced nor was reflected in the data. This objective was accomplished via the implementation of a two-step process. First, there was a member check transcript review, and then bracketing.

Member checking is the process of providing research participants with an opportunity to check the accuracy of, expand on, amend, or comment on raw data or research results (Brear, 2018). After the interviews were transcribed, a complete transcript was emailed to each participant, asking them to vet the document, for veracity of content. The responses to the member check transcript review fell into one of the following two categories: 1) the participant indicated that the information in the transcript accurately captured their thoughts and experience and was in full agreement with the information in the transcript, or 2) the participant raised some issues on minor grammatical errors that had no bearing on either context or information. Twenty-five of the participants fell into Category 1. Of the rest, two contractors and one student had minor grammatical errors they wished corrected. For example, a transcription error of "I never sent my intern to the side" was revised to correctly read "I never sent my intern to the site" at the request of Contractor 1. With member checking and transcripts deemed to be accurate, then bracketing ensued to ensure further accuracy.

Bracketing was applied to the process in an effort to mitigate the potentially deleterious effects of preconceptions that may taint the research process (Tufford & Newman, 2010). As defined by Gearing (2004), bracketing is a scientific process in which the researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the phenomenon being studied (Weatherford & Maitra 2019). Because it is a scientific process, researchers must be purposeful in their approach to bracketing as it applies to data coding and analysis. As the researcher I made a conscious effort to approach the interviews, as well as the coding

of the resultant data in as neutral a mindset as possible. While I noted similarities, I refrained from judgement and stayed away from the commonplace way of seeing things (Weatherford & Maitra, 2019).

During the bracketing process my thoughts focused on two issues. The first was how well-trained I believed the students were, and the second was how well-trained I believed the contractors to be. Despite my knowledge and experience in the industry, and to my disappointment, my involvement in the development of the curriculum for the Opportunity Academy students was limited, and I constantly wondered if the students had been taught enough. As applies to the contractors, my role as the training coordinator resulted in a significant involvement in their training, from curriculum development to instructor selection and content delivery. For these reasons I considered it extremely important that a conscious effort be made to ensure the study was guided by the data and not have my thoughts influence the interview process.

Descriptive Data

During the NVivo coding process, the interview questions fell into three groups or categories: 1) questions that spoke directly to the respondents' level of satisfaction with the training, 2) questions that spoke to the efficacy of the training, and 3) a group of generic questions that were designed to provide insight into the operational status of the contractor as well as the mindset of the interns.

Two data sets were collected and analyzed for this study. One data set was generated by the program graduates. Some program graduates were placed in the offices of the contractors on their internships and others provided assistance to the contractors

remotely from office space within the SCA. The second data set was generated by either contractors with whom program graduates were placed or those contractors who received remote assistance from the program graduates. Interviews (N = 28) were conducted with program graduates (n = 14) and contractors (n = 14) who participated in the program.

The first data grouping examined was the data gathered from the generic group of questions that either provided insight into the mindset of the interns prior to their training or the operational status of the contractor prior to reception of the intern. Table 1 reflects the industry and construction contract administrative experience of the interns as well as their reasons for participating in the program.

Table 1

Descriptive Data for Interns (Generic Information)

Code	n = 14	Percentage
Industry experience		
No industry experience	10	71.5%
Some industry experience	3	21.4%
Extensive industry experience	1	7.1%
Construction contract admin experience		
No experience	10	71.5%
Some experience	3	21.4%
Minimal experience	1	7.1%
Reason for program participation		
Family or friend	11	78.6%
Independent advertising	3	21.4%

As indicated in the table, the majority of the interns had no industry experience (n = 10) and no contract administrative experience (n = 10). One student who claimed to have had extensive industry experience turned out to be a former apprentice in the

bricklayer's union who was trying to affect a slight career change. Equally the same number of students (*n* = 10) had no contract administrative experience except for one who had done similar work with another city agency. In determining the reasons for program participation, the majority of the students (*n* = 11) had heard about the program from a friend or family member, no data was collected to reflect where that friend or family member had gotten the information about the program.

The data gathered from the generic questions that addressed the contractor's operational readiness prior to receiving the intern is reflected in Table 2 below.

Table 2

Descriptive Data for Contractors (Generic Information)

Code	*n* = 14	percent
Intern hosting location		
Hosted intern in office	10	71.5%
Received remote assistance	3	21.4%
Both in office and remote assistance	1	7.1%
Intern improved office functions.		
Yes	12	85%
No	2	14%
Reason for Program Participation		
Need of admin help	14	100%
Company growth	8	57%
Free Help	6	43%
Combination free help & growth	3	21%

A close examination of the data reveals that the intern hosting location spoke more to contractor issues than to the efficacy of the training of the intern. Despite the high number of contractors (*n* = 10) who hosted interns in their office as opposed to the low number (*n* = 3) who received remote assistance. The qualitative data gleaned from

the interview revealed that the three contractors who received remote assistance did so for the following reasons: (a) One contractor's office was 65 miles outside of the city and not easily accessible via public transportation, (b) another contractor was transitioning between office spaces and was operating from home, and (c) the last contractor did not have what the SCA considered adequate access to bathroom facilities to accommodate the intern. In addition, there is other qualitative data suggests that those contractors who received remote assistance from the interns used them in a more focused manner. This generic data also reveals that the entire population participated in the program because of a perceived an administrative need within their individual businesses.

However, though, the majority of the population (n = 8) participated in the program as a result of organizational growth and also believed that the intern improved their office operations (n=12). A smaller number (n = 6) participated in the program to take advantage of free help and an even smaller number (n = 3) participated as a result of a growth and taking advantage of the availability of free help.

Coding

Content analysis is a method that may be used with different kinds of recorded communications such as transcripts of interviews, protocols, or observations (Mayring, 2000, as cited in Haaranen & Sarti, 2020). In addition, according to Holsti (1969) as quoted by Karanja and Grant (2020), content analysis entails making inferences through objective and systematic identification of specific patterns or characteristic in a message. As a result, the transcribed interviews were initially coded using in vivo coding techniques where the actual words of the interviewees created the categories and sub-

categories into which the data was inserted, in an effort to answer the research questions. As the in vivo process progressed I came to the conclusion that the research question could be best answered if the interview questions were divided into three categories and coded as follows.

The first category of interview questions emerged during the initial round of coding where the prominent theme that emerged spoke to various levels of satisfaction or dissatisfaction with the training provided in the Opportunity Academy. For example, when asked how they felt about the training or if they felt that the training adequately prepared their interns for their internships, contractors replied by speaking to a level of satisfaction or dissatisfaction with how well trained they perceived their interns to be. Similarly, when asked to describe how they felt about their training, i.e., did they believe the training adequately prepared them for their internships, the students also made reference to a level of satisfaction or dissatisfaction with the training provided. As a result, the first round of coding of these data indicated whether or not the contractors and the students were satisfied or dissatisfied with the training. During the second round or axial round of coding of this data, subcategories of levels of satisfaction with the training overall and the training in each subject matter emerged from both the contractor's and the student's point of view and was coded accordingly.

The second category of interview questions was a singular question that I believed spoke directly to the efficacy of the training. That question asked the contractors if they had hired their intern after the internship period was over and asked the program graduates if they were hired by their firms after the completion of their internship period.

The data from these questions were coded in the open coding process as a simple yes or no response. During the second round of coding however the qualitative nature of the study allowed for the coding of additional narrative from the responses that could further explain the response and answer the research question.

The final category of interview questions were questions that were unique to each group of participants, the contractors, and the students. These questions were of critical importance in helping to answer the relevant research questions. During the NVivo coding process of these questions multiple responses emerged from the coding of these data. During the secondary or axial coding stages these data were categorized based upon how closely related the responses were to each other.

Research Question 1 Results

The first research question sought to determine the perceived value of the Opportunity Academy Training to contractors with whom program graduates were placed in their internships or who received remote assistance from the program graduates. In an effort to answer this question each contractor was asked to respond to a series of questions that indicated how well trained they believed their intern was based upon the intern's ability to complete a variety of contract administrative tasks. In addition to the training specific question, the contractors were also asked questions that were more unique or specific to them and or their companies, that would also provide insight into how well trained they believed the Opportunity Academy intern to be. Finally, contractors were asked whether or not they hired their intern and to elaborate on why or why not.

Most of the contractors responded to questions pertaining to their overall satisfaction with the training provided, by saying that they considered their intern to be either adequately or well-trained. A minority of the interviewees considered their interns to be not so well trained. Some of the terms most often used in the favorable responses were, “the training was there,” “the training was ok,” “I would rate them a 6 umm make that a 7,” “she was wonderful,” “I would give her a 10,” “pretty knowledgeable.” On the negative side the comments ranged from “I don’t really feel like the training was there,” to “I didn’t really feel like they were that well-trained.” Table 3 below reflects the contractor’s level of satisfaction with the overall training of the interns.

Table 3

Contractors’ Level of Satisfaction With the Overall Training of the Intern

Code	*n* = 14	percent
Satisfaction with overall training of intern		
Considered intern to be adequately trained	11	79%
Did not consider intern to be adequately trained	3	21%

In addition to the data that reflects the contractors’ level of satisfaction with the training provided to the intern, it was believed that an examination of the data demonstrating how the intern was used would be valuable in demonstrating how well trained the contractors believed the intern to be.

Opportunity Academy Interns received training in the following subject areas: 1) agency overview, 2) how to do business with the agency, 3) the procurement process, 4) change orders, 5) requisitioning, 6) construction project management, 7) labor law/prevailing wages, and 8) project closeout. With the exception of agency overview

each of these subjects represent a specific task or duty that can be assigned to a construction contract administrative professional.

Table 4 below reflects the percentages in which the contractors engaged their interns in the eight subject areas. To make this determination, the contractors were asked to indicate the duties and responsibilities that were assigned to their interns. Contractors were asked to indicate all areas in which the intern was engaged which resulted in the provision of multiple coded responses from each contractor. As indicated in the chart, the most often assigned duties in which the intern was engaged was in project management as each contractor assigned some type of project management duties to their interns. That was followed by procurement and then requisitions. For the most part, this falls in line with the administrative needs reported by contractors. The outliers are the percentage usage reported in change orders where only 14% of the contractors engaged their interns and labor law, where 28% of the contractors engaged their interns. The low usage of the interns in these areas can possible attributed to several variables which were unaccounted for in the study, i.e., the cyclical nature of the industry, contractors might not have had a high number of contractual changes, and as the wage rates relative to the labor law are constantly in flux, contractors might have been reluctant to assign this duty to staff that they did not know or fully trust.

Table 4

Duties and Responsibilities Assigned to Intern

Code	*n* = 14*	percent
Duties and Responsibilities Assigned to Intern		
Doing Business with the Agency	1	7%
Change Orders	2	14%
Closeouts	2	14%
Requisitions	9	64%
Construction Project Management	14	100%
Labor Law	4	28%
Procurement	12	85%

Note. More than one code per interviewee is possible.

The final component of RQ1 was whether or not the contractor hired their intern and why or why not. Table 5 below reflects the number of contractors who hired their interns (*n* = 5, 35%), those who were unable to do so (*n* = 4, 30%) and those who did not (*n* = 5, 35%).

Table 5

Contractors Who Hired Their Interns

Code	*n* = 14	percent
Was the Intern Hired After the Internship?		
Yes	5	35%
We Tried but were unsuccessful	4	30%
No	5	35%

Research Question 2: Results

The second research question sought to determine the perceived value of the Opportunity Academy training to those students who completed the training and were either placed in internships or provided remote assistance to the contractors. Similar to

RQ1, program graduates were asked to respond to a series of questioned that indicated how well-trained they were based upon their ability to complete a variety of contract administrative tasks. In addition to the subject specific questions, I sought a response to RQ2 by asking program graduates questions that were unique to their internship experience but would provide insight into how well-trained they thought they were. Program graduates were asked whether or not they were hired by their host firm, hired by another firm, or had left the industry altogether.

As applied to the question regarding satisfaction with the training overall, the program graduates were unanimous in their belief they were adequately trained for their internships. The comments used to describe their feelings on the topic ranged from "extremely satisfied" to "very satisfied" to "on a scale of 1 to 10 I would rate it a 9.5." Table 6 below reflects the Opportunity Academy Graduates perception of how well-trained they believed they were.

Table 6

Interns' Perception of How Well-Trained They Were

Code	*n* = 14	percent
Overall level of Satisfaction with training received.		
Satisfied with the training	13	93%
Not satisfied with the training	1	7%

In addition to the data that indicated perceived adequacy of the training, the study also examined data that addressed the program graduate's perception of how industry relevant the intern believed the training to be, how applicable to their internships the

intern believed the training to be and what were the subjects on which they were trained that the interns used most and least during their internships.

Table 7

Program Graduates' Perceived Relevance of Training to the Industry

Code	*n* = 14	percent
Industry relevance of training		
Considered the training industry relevant	14	100%
Did not consider training to be industry relevant	0	0%

The data for Table 7 above was calculated based upon the responses from the interns to the questions of how relevant to the industry did they find their training. Despite almost 80% of the interns having minimal or no industry experience, they all found the training to be industry relevant based upon their experiences on their internships.

The interns were also asked to indicate their perception of the level of applicability of the training to their internships. As indicated in Table 8, below 72% of the interns found the training applicable to their internships while 28% did not. The relatively high number of interns 28% who did not consider the training to be applicable to their internships can be attributed to the ways in which they were used by their contractor hosts and the duties and responsibilities assigned to them. In the analysis of the data relative to the duties and responsibilities assigned to the intern, the contractors provided over 30 duties and responsibilities that were assigned to the intern for which the program provided no training. These ranged from customer service, to making phone calls, copying, and filing and data entry.

Table 8

Program Graduates' Perception of the Applicability of the Training to Their Internships

Code	*n* = 14	percent
Applicability of training to internship		
Training was applicable to internship	10	72%
Training was not applicable to internship	4	28%

According to the program graduates, the subjects on which they were trained that they used the most during their internships was a tie between change orders and closeouts at 42%. This data might seem misleading considering that change orders was one of the least assigned duties by the contractors. But this question was asked only of the interns and there was no preset relationship between contractor and intern for participating in the study, meaning that there was no requirement that the study participants be interns and the contractors to whom they were assigned in their internships.

Table 9

Most and Least Used Subject During the Internship

Code	*n* = 14	percent
Most used subjects on internship		
Change orders	6	42%
Closeouts	6	42%
Requisitioning	5	36%
Construction Project Management	4	28%
Doing Business with the Agency	4	28%
Labor Law	2	14%
Procurement	1	7%

An answer to RQ2 was sought by gaining insight into the Opportunity Academy graduates perception of how well trained they believed they were in the contract

administrative subjects to which they expected to be assigned on their internships. During the interview process the intern was asked to expound on how well trained they believed they were based upon their ability to execute the different contract administrative tasks. In an organic manner, each intern responded by speaking to a level of satisfaction or dissatisfaction with the training received in each subject. Table 10 below reflects the intern's level of satisfaction with the training received in the different contract administrative subjects. The results of this data are reflected in Table 10 below.

Table 10

Interns' Level of Satisfaction With Training in Different Contract Administrative Subjects

Code	*n* = 14	percent
Satisfied with training in Change Orders.		
Yes	12	86%
No	2	14%
Satisfied with training in Closeouts.		
Yes	13	93%
No	1	7%
Satisfied with training in Requisitioning.		
Yes	8	58%
No	6	42%
Satisfied with training in Construction Project Management		
Yes	7	50%
No	7	50%
Satisfied with training in Doing Business with the agency		
Yes	12	86%
No	2	14%
Satisfied with training in Labor Law.		
Yes	8	58%
No	6	42%
Satisfied with the training in the Procurement Process.		
Yes	13	93%
No	1	7%

The final interview question that helped to provide a response to RQ2 was whether or not the intern was hired by their host firm. Table 11 below reflects the number of interns that were hired by their host firms and the number that was not, also included in this data set are those interns who found employment with other construction firms. As indicated 36% of our interns were hired by their host firm and 43% were hired by another firm in the program. A combination of those two data points provides a hiring rate of 79% which speaks highly of the training provided to the interns in the Opportunity Academy Program.

Table 11

Interns Who Were Hired by Their Host Firms or Other Construction Firms

Code	*n* = 14	percent
Was the Intern Hired After the Internship?		
Yes	5	36%
Hired by other firm	6	43%
No	3	21%

Project Deliverable

The project deliverable for this is an Evaluation Report. An evaluation report was decided upon for two reasons. First an evaluation report can provide more in-depth answers to both RQ1 and RQ2 by analyzing the data that speaks to the levels of satisfaction with the training of both the students and the contractors with whom they were placed, or who received administrative assistance remotely from the interns. Secondly, the evaluation report will examine the purported benefits that can be gained when workforce development programs result from a collaborative effort between

industry and education. The data gleaned from both RQ1 and RQ2 will be analyzed and used to form any recommendations that the report deems necessary.

Summary

The research questions for this study generated two data streams from which data was gathered and analyzed to determine the efficacy of the training provided in SCA's Opportunity Academy Program. The onset of the COVID-19 pandemic caused a variation in the data collection plan, as researchers were advised to avoid face to face contact in their qualitative data collection efforts. As a result, the initially planned face-to-face semi structured interviews and focus group discussions were substituted with one-on-one semi-structured telephone interviews, which maintained the qualitative design of the study. The data that was collected and analyzed, ranged from generic/demographic information about the participants to more specific questions about their level of satisfaction with the training and whether or not the contractor hired their intern, the intern was hired by their host firm or another firm and why or why not. As is the case with most studies of an educational nature, further studies are indeed a requirement. But the data from this study tends to trend in the direction that indicates that the Opportunity Academy graduates were adequately trained for their internships.

Section 3: The Project

Section 3 includes a detailed discussion of the project that was generated by the findings of the study. The section includes the project description and goals, implications, a literature review, and an evaluation of the training provided in Opportunity Academy. An evaluation report was the selected project (see Appendix A). The purpose of the report was to inform the reader on the efficacy of the training provided in Opportunity Academy and to illustrate the benefits derived when workforce development efforts are the result of a coordinated effort between industry and education.

Rationale

Program evaluation reports are critical for the validation of organizational efforts and expenditure of resources. These reports can demonstrate whether organizational goals have been met and whether changes need to be made to ensure that goals are attainable and can or will be met on future endeavors. An effective evaluation report presents the findings and conclusions from a particular evaluation, including recommendations for how evaluation results can be used to guide program improvement and decision making (Guide, 2013). The primary goal of the current study evaluation report (see Appendix A) was to inform the reader regarding the efficacy of the Opportunity Academy training and to illustrate the benefits derived when workforce development efforts result from a collaboration between education and industry.

Evaluation reports can be used to justify either the continuation or discontinuation of a program or policy. In addition, these documents can be a critical component of accreditation efforts that might be undertaken by the institutions. Because the

Opportunity Academy Program represents a collaborative effort between higher education and an industry leader, I expected that the decisions made about the program would be best guided by an analysis of relevant data.

Review of the Literature

The literature review for this project was conducted via the Walden University library. Peer-reviewed journal articles were searched from education databases such as Education Source, ERIC, and SAGE. In addition, the following business databases were also used: ABI Inform, Business Source Complete, and Sage Journals. The search terms used included but were not limited to *collaborative workforce development efforts between education and industry*, *industry lead workforce development efforts*, and *workforce collaboration between industry and education*. Because the industry contribution was a critical component of the evaluation report, I endeavored to find literature that addressed the relationship between various industries and workforce development efforts.

Writing an effective evaluation report calls for a reflection on the program's accomplishments and areas for improvement within the context of continuous quality improvement (Halstead, 2019). Therefore, literature was reviewed that addressed workforce development in several different contexts: (a) curriculum development in workforce development/CTE programs, (b) policy changes and challenges in workforce development, (c) collaborative efforts and sustainable partnerships in economic and workforce development, and (d) student success and emerging trends in workforce

development. Studies in these four categories were reviewed and synthesized to assist in the development of the project evaluation.

Curriculum Development in Workforce Development/CTE Programs

Vocational education in the United States emerged in the early 1900s in an environment in which job skills and work expectations were somewhat standardized (Rojewski & Hill, 2017). In this era, curriculum development was the responsibility of the faculty. Faculty at institutions of higher education were tasked with the development of the appropriate curricula that would adequately prepare students for employment (Tracy et al., 2014, as cited in Hahn & Gangeness, 2019). Often this mode of curriculum development lacked industry input into course content and design, which resulted in a gap between industry needs and the knowledge base and skill set of the graduates (Hahn & Gangeness, 2019).

Current occupational prospects seem far less defined and predictable than in the past. Emerging conditions pose difficult challenges for secondary career and technical educators and other workforce development professionals (Kelly, 2016, Ross, 2916, and Susskind & Susskind, 2015, as cited in Rojewski & Hill, 2017). Additionally, in the current environment it is critical that faculty be in touch with the needs of students and industry because both stakeholder groups often lack direct input into the course/curricular design (Hahn & Gangeness, 2019).

The training provided in Opportunity Academy reflects the emerging trend in curricular design and development in workforce development/CTE training. The program and the training afforded by the program were the result of an exploration of current

workforce need in the construction industry. As a result, decision makers within the program were able to evaluate opportunities and engage partners within higher education and the business community to formulate an educational option that met the requirements and needs of a particular workplace environment (Hahn & Gangeness, 2019).

Policy Changes and Challenges

As employers and their talent-sourcing partners respond to an evolving economy, there is growing debate on how federal education and workforce development policy can best support innovative approaches to closing the skills gap (Schray & Sheets, 2018). Early federal policies created to address the talent needs of the new industrial economy promoted separate tracks for college and vocational education and training. Policymakers who recognize the imperative of ensuring that education and training are connected to jobs are forging stronger connections between education, workforce, and employers at state, regional, and local levels. The resulting conflict is one in which systems and initiatives are not always fully connected and access to meaningful, job-related postsecondary education remains out of reach for many people, especially individuals from a lower socioeconomic status (Pechota et al., 2019).

Since the late 19th century, the U.S. government has invested in educational initiatives for the adult population as a matter of national interest (Roumell et al., 2019). The efficacy of these policy initiatives can best be determined after substantial evaluation and analysis. However, systemic policy analysis regarding the area of adult and workforce education in the United States is limited in the literature (Roumell et al., 2019). Balsas et al. (2018) evaluated the impacts of the new Capital Region Workforce

Investment Board's program on the federally funded Workforce Investment Act of 1998 Adult Program Priorities. The study was partially driven by the assertion that there is often an inadequate understanding of how well local and regional labor markets benefit from workforce development programs.

A major policy challenge revealed by Roumell et al. (2019) was the inherent structural issues associated with the process of putting a workforce development plan into action. Per the study, the Workforce Investment Act lacked the means required to build the extensive collaborative networks necessary for regional success. As a result, collaboration and division of responsibility among the varied partners proved to be difficult and time consuming (Oshae & King, 2001, as cited in Balsas et al., 2018). The current study revealed that a comprehensive metropolitan/regional workforce infrastructure would include two elements that were incorporated into the development and implementation of the Opportunity Academy: (a) an employer-driven workforce infrastructure policy and (b) a policy that pays attention to the workforce needs and opportunities in an industry sector.

As the United States progresses into the new millennium, it is imperative that elected officials continue to advocate for policies that benefit workforce development and CTE programs. The collapse of the youth labor market and exploding college costs and debt have reinvigorated the debate about the college-for-all approach to the detriment of vocational training (Giloth, 2019). For maximum effect, new policy initiatives are needed that include efforts to align education and training curricula with real-time employer needs (Giloth, 2019). In addition, according to a National Skills Coalition (2020) report,

the impact of technology, automation, and artificial intelligence will only exacerbate current workforce development challenges, as in the coming decades hundreds of thousands of workers will need to be either upskilled or retrained.

Collaborative Efforts and Sustainable Partnerships in Workforce Development

There are consistent data illustrating that workforce development efforts benefit from a sustainable partnership between industry and education. The benefits range from improving graduation rates (McLaverty et al., 2015) to creating a competent workforce and advancing the economic prospects of both job seekers and employers. As a result, national and state leaders are now invested in increasing the percentage of workforce with not only postsecondary degrees and certificates but also industry and professional licenses and certifications (“ Connecting Industry Recognized Certification Data to Education and Workforce Outcomes: Measuring the Value Added to Skills. Employment and Wages. Challenges, Lessons Learned, and Recommendations from the Certification Data Exchange Project.” 2017).

McLaverty et al. (2015) highlighted some of the benefits and some of the deficiencies of CTE to the education system in Philadelphia. The first deficiency was a strong indication that business and industry need to be more engaged in the shaping of the educational landscape. Included in the benefits was not only the improvement in graduation rates but also improved economic prospects and the potential for the breaking of the cycle of poverty in which many young people can get trapped. To forge sustainable partnerships, the decision makers in education in Philadelphia sought to redefine education in the city and to restructure the committees advising CTE programs. Along the

way, certain valuable lessons were learned and applied to the CTE development and application process. These included but were not limited to educating local leadership in education, government, and industry on the unifying nature of CTE and focusing CTE improvement on the big picture, which is an educated and flexible workforce. What could not be overstated was the realization that the business community must be connected to the other stakeholders who share an abiding interest in the improved outcomes of the city's CTE program (McLaverty et al., 2015).

Similar to McLaverty et al. (2015), DeWitt (2018) recognized that employers are critical partners for CTE programs at the local level, and those partnerships need to be addressed in a meaningful way. DeWitt advocated for the formation of business and industry advisory groups that would provide resources that could better connect business and industry with CTE. In addition to the advisory groups, DeWitt also discussed career pavilions, which are periodic meetings in which CTE educators can gain greater insight into the breadth of a particular industry to better understand the career needs and opportunities within that industry.

Maxwell et al. (2019) asserted that evaluations of publicly funded workforce development efforts tend to show modest, if any, positive impact while many private sector workforce development efforts provide companies with positive returns. Their research of eight employment social enterprise models provided findings that suggested that by applying private sector business principles to a workforce development program, social enterprise can provide participants with meaningful and valuable work experience while offsetting program costs. Much like the Opportunity Academy program, the

employment social enterprise models use program participants as a major source of labor for a business that faces stiff competition (Maxwell et al., 2019). According to Altstadt (2007, as cited in Maxwell et al., 2019), the competitive environment changes the incentive for structuring transitional employment by helping participants gain more realistic work experience, skill, and behavior to perform to the standards of the job market.

Despite the fact that there is no single source of information on what makes for a quality CTE program (Hyslop & Imperatore, 2015), Association for Career & Technical Education (ACTE) embarked on a multistep project to identify, test, and integrate a comprehensive, research-based quality CTE program framework. In their undertaking, ACTE identified several principles and programmatic and policy actions for the field to take to develop and implement a quality CTE program (Hyslop & Imperatore, 2015). The two most prominent of these principles were (a) to actively create partnerships with employers to design and provide high-quality dynamic program and (b) to deliver the CTE via comprehensive programs of study aligned to the National Career Clusters. The theme of better results from CTE via greater cooperation between industry and education was echoed throughout the study as Hyslop and Imperatore (2015) pointed to some key quality elements that ought to be embedded in CTEs. These elements included but were not limited to a stronger link between labor market needs and education programs and an enhanced role in CTE programs for employers. There were other elements of quality presented, but the overarching theme of the study was the notion of greater cooperation between education and industry.

Despite the evidence and availability of data, some states and regions have been less receptive to the benefits of a partnership between industry and education in workforce development. For example, in the state of California employers in key industries are having difficulties filling job openings because workers with the required skills and aptitude remain in short supply (Ton-Quinlivan, 2016). Efforts are now underway to improve the state's ability to close the skills gap and deliver a strong workforce (Ton-Quinlivan, 2016). These steps include the creation of a task force on workforce development. The purpose of the task force is to develop and recommend policies and practices designed to meet anticipated workforce shortages. According to Ton-Quinlivan (2016), the work of the task force has already sparked some inhouse conversation that has led to changes in how several community college districts address their CTE program development needs. For example, the Yoruba Community College District is taking steps to ensure that the school offers training skills that align with industry needs, and the Golden West College Huntington Beach District is seeking to develop partnerships between faculty and industry representatives that may lead to more relevant student work experiences. These steps are a clear indication that although the state was late in recognizing the benefits, California is now on board with the benefits that can be realized when workforce development/CTE training programs are closely aligned with industry needs.

On the opposite end of the spectrum, there are those states and regions where institutions of higher education are receptive to the benefits of partnerships between education and industry. These regions are led by educational institutions that include in

their mission statements a commitment to being responsive to the needs of the community through ongoing partnerships and collaboration with the economic development corporations and chambers of commerce (Mejia, 2012). One example is South Texas College, which was created in 1993 as South Texas Community College. Over the years, South Texas College has provided their students with specialized baccalaureate degree programs that were developed in partnership with business and industry as a direct response to regional workforce needs (Mejia, 2012).

Despite the fact that young adults are migrating from smaller communities toward more metropolitan areas to pursue social and economic opportunities, a strong talent pool is still important to supporting the economic vitality of any community (Achenreiner et al., 2019). One of the ways that these declining communities can combat the talent drain is by fostering partnerships between institutions of higher education and local industries to ensure that educational opportunities are offered that match the job skill needs of the local communities. One of the three recommendations cited by Versland (2016) was the need for institutions of higher education to design internship opportunities with local industries that provide opportunities to develop collegial relationships so interns can experience meaningful social persuasion and support.

There are a variety of other literature that supports the notion that CTE/Workforce development efforts tend to be more effective when supported by industry partnerships. In the 2018 article, “Building Sustainable and Strategic Partnerships with Business and Industry: A Step-by-Step Guide for Community Colleges,” prepared by Achieving the Dream Inc., the authors point out that as part of their mission to prepare students for

careers, community colleges are being called upon to deepen their relationships with business and industry. The article goes on to illustrate that the benefit of the deepened relationship is two-fold. First partnerships with industry will ensure that colleges remain attuned to the ever-changing skill needs of regional employers. And second, the partnerships will also ensure the availability of internships and other work-based experiences that are critical to student success in workforce development and CTE programs (Achieving the Dream, 2018).

In addition to the articles supporting the collaborative effort between industry and education from the institutional perspective, there are articles from the industrial perspective. Per Miller (2018), in order to meet the employer needs in the industrial and manufacturing sector academia needs to be a part of the solution and not continue to do the same old things. The author goes on to say that legislation must be developed and implemented that gives employers input as to how federal funding for CTE is spent.

In the Bio Health Capital Region encompassing parts of Maryland, Virginia and Washington D.C. current educational approaches and business recruitment tactics are not drawing sufficient talent to sustain the bioscience workforce pipeline (Thompson et al., 2018). According to the authors the gap between graduates and skillsets is caused by a variety of issues. Chief among these is the fact that undergraduate programs generally lack any focus on workforce development and there are few industry/academic partnerships with undergraduate institutions in the region.

In order to bridge the skill gap between graduates and industry sector needs, the authors made several recommendations. The recommendation includes but are not

limited to (a) students are properly informed of opportunities in bioscience before entering college, (b) students are adequately mentored and in the field as a part of their undergraduate experience, and (c) a direct integration of workforce technical and professional skills into the undergraduate science curricula.

Student Success and Emerging Trends in Workforce Development

Despite a decline in the number of CTE programs within institutions of higher education, student enrollment within those programs have remained constant. This can probably be attributed to the fact that CTEs are one of the tools being employed by educational leaders to offset the inadequacies in college and career preparedness of the K–12 environment (Fletcher & Gordon 2017). CTE's are also faced with a number of both positive and negative trends, and student success rates fluctuates between regions and institutions.

In Fletcher Jr. and Gordon's (2017) article, the authors examined undergraduate and graduate enrollment, course delivery modes and curricula trends in CTE programs. The challenges that the authors indicated CTE programs are currently facing included 1) the changing education landscape and 2) mounting pressure on instructors. Career and technical education curricula is delivered in the traditional in-person format, but as education trends change, the authors indicate that CTE faculty needs to embrace online instructions in order to reach a broader audience. Additionally, because K–12 CTE teachers are charged with expanding roles and responsibilities associated with ensuring that their students are equipped with a much broader range of skills CTE teacher training

and preparations ought to be expanded to ensure that the CTE teaching workforce can maintain high quality CTE programs.

An emerging trend in CTE has been the implementation of CTE programs at the secondary or high school level of education. Traditionally CTE/workforce development was relegated to training provided to displaced workers or other college level students who were either being prepared to enter the labor force or were in the midst of a career change. Highschool vocational training was long thought of as something for the students who could not cut it anywhere else in academia (Arnett, 2018). As more high schools have entered the CTE environment, it has been realized that there is a lot of rigor to high school CTEs, and government is now proposing legislation that increases collaboration between secondary and post-secondary institutions as well as between educational institutions at both levels and industry and community organizations.

Because CTE programs are designed to provide students with the academic skills, technical skills, knowledge and training necessary to succeed in future careers and become life-long learners, CTE parents and students are more fulfilled in terms of general satisfaction, quality of their classes and opportunities for career exploration (Howell et al., 2019). This stands in stark contrast to the typical liberal arts educated student for whom a recent Gallup poll revealed that only 26% of those adults strongly agreed that their education was relevant to their work (Anderson & Keily, 2018).

There are also trends in CTE that addresses curriculum development. Per Haynes et al. (2018), curriculum development is best done intentionally with a focus on how to engage students purposefully in their learning. The authors recommend that decision

makers and faculty within the CTE environment follow the three following steps when seeking to create the most engaging curriculum: 1) consider the endgame, 2) determine what they want their students to know and be able to do as a result of the training, and 3) scaffold the needed content to build sequenced courses. In considering the endgame in curriculum CTE faculty and decision makers are encouraged to consult with those who know what is needed the potential employer(s). This consideration in curriculum development brings us back to the over-arching theme of this review and the accompanying program evaluation report. Which is that workforce development programs can better serve the needs of their intended participants when the effort is the result of a collaboration between education and industry.

Project Description

The program recommendation was a proposal to initiate an annual evaluation of the Opportunity Academy Program. The proposal will be submitted to the Chief Diversity Officer of the SCA who will then distribute it to the other decision makers within the SCA, LaGuardia Community College and the DDC. In addition, the proposal will also be distributed to the Diversity Board of both the SCA and DDC. It is expected that the Opportunity Academy will be an agenda item at one of the quarterly meetings of the diversity board and the evaluation will form the basis of an informed discussion about the future of the program.

The proposal will address the importance of an annual evaluation of the program under the following prisms:

1. As SCA and DDC administrative policies change, changes need to be made in the training that reflects those changes. Therefore, the program must be evaluated annually to ensure that the training is reflective of current agency policy and procedure.
2. As our mentor and graduate mentor contractors grow and increase their capacity their administrative staffing needs change. The program must be evaluated annually to ensure that program graduates are contributing to the growth of our contractors.
3. The construction industry is a dynamic entity that reacts to a variety of socio-economic stimuli. The program must be evaluated on an annual basis to ensure that program graduates are provided the necessary tools to survive and thrive in the industry.

As the program will be entering its fourth iteration, the proposal will recommend that the next evaluation be passed upon a mixed method longitudinal study that measures both the efficacy of the training as well as the impact of the Opportunity Academy Grads on the growth or increase in capacity of the firms with whom they either interned or by which they were hired. Because of the relatively small sample size of between 25 and 30 students at each iteration and 18 to 25 contractors, the proposal will recommend that the second evaluation collect both qualitative and quantitative data from both populations. That data can then be analyzed to determine the efficacy of the training as well as the growth in capacity of those contractors who participated in the program.

One of the issues not explored by this current study is what were the expectations of the students and the contractors who participated in the program. The proposal would recommend that future evaluations also explore these concerns qualitatively as well as quantitatively. By doing so greater insight would be provided into the exact administrative needs of the contractor as well as the educational needs of the student. The need for the exploration of this issue arose from the resultant data from the current study that demonstrated that the students were used in a variety of fields by the contractor for which they were not formally trained.

Needed Resources and Existing Support and Potential Barriers

There are ample resources and supports available for the implementation and continued annual evaluation of the Opportunity Academy program. The first available resource is the Mentor Technical Assistance Program (MTAP) team of which I am a member. The MTAP team is a group of consultants to the Business Development Division of the SCA who are charged with providing financial, technical, and administrative assistance to the contractors in the SCA's mentor program. My role as the lead researcher and author of this study coupled with my duties and responsibilities within the MTAP program ought to prove an invaluable resource in the proposed annual evaluations of the Opportunity Academy Program.

Existing support for the annual evaluation is also in existence at the SCA. Lorraine Grillo, President and CEO of the SCA has claimed increased MWLBE participation in SCA construction contracts and subsequent growth as a part of her legacy, and she has often cited the importance of the Opportunity Academy program to

that legacy. In addition, Miss Suzanne Veira the Senior Director of the SCA's Business Development Division and the very first Chief Diversity Officer of the SCA is equally committed to the success of this program. The program is run out of the offices of the SCA's Business Development Division, and this department relies heavily on data as Miss Veira believes strongly in data driven decision making. Finally, the contractors who are the primary end users of this service are fully in support of the annual evaluation as they more than anyone would want to ensure that these interns receive optimum training.

Potential Barriers

The first barrier to the implementation of the annual evaluation would be budgetary. The SCA operates on a five-year budgetary cycle and leadership must make efforts to ensure that the annual evaluation of the Opportunity Academy program receives a line item on the budget to ensure that the funds are made available to the MTAP team which will be responsible for the evaluation. Another barrier will be continuity. Currently the program receives broad support from the President and CEO down through all of the relevant departments from which support is solicited. Steps ought to be taken to ensure that the support remains in place regardless of personnel changes due to attrition or departure for any reason. The benefits of the program to the SCA, its mentor contractors and society in general must be on continual display in order to ensure its longevity.

Project Evaluation Plan

The most efficient implementation of the annual evaluation of the Opportunity Academy program would be to make the evaluation a contract deliverable of the MTAP team. The MTAP team is responsible for the development of the training that is provided

to the mentor contractors. And the training provided to the Opportunity Academy student is based in large part on that same training that is provided to the contractors. In addition, the MTAP team knows each mentor and graduate mentor contractor and they are knowledgeable about the different aspects of each of their businesses. Based upon our annual assessments the MTAP team knows each contractor's administrative staffing needs, their financial needs, their project management needs, as well as the physical infrastructure from which the contractors operate. The MTAP team also works closely with SCA Business Development to place the Opportunity Academy graduates into their internships. Finally, the MTAP team are not SCA employees, they are independent consultants who are uniquely positioned and qualified to evaluate the efficacy of the Opportunity Academy training on an annual basis.

The annual evaluation of the program should begin in May of each year and be complete by July of the same year. The reasons are as follows: Opportunity Academy training begins at the start of the fall semester and lasts until January of the following year. At the completion of the classes in January, it generally takes between 4 and 6 weeks to place each intern with an interested contractor or get them set up to provide remote assistance. Data that speaks to the efficacy of the training cannot be collected until the interns have been on the job for a minimum of three months. That time frame provides a body of work from which an assessment can be made as to the efficacy of the training. Because of the relatively small sample size, data can be collected and analyzed. within a two-month time frame which leaves ample time for any recommended revisions to the training.

The individuals involved in this evaluation will be the Opportunity Academy graduates from the most recent iteration of the program, the contractors with whom they were placed, or who received remote assistance and the lead researcher from the MTAP team. The MTAP team will be responsible for designing and development of the research instrument. They will make decisions relative to the whether or not quantitative or qualitative data will be collected, how the data will be collected an where it will be stored. The MTAP team will also be responsible for data analysis and the production of a report on which the evaluation will be based. The students and contractors will be responsible for providing information relative to the efficacy of the training provided in Opportunity Academy.

Project Implications

Social Change Implications

This project study can promote social change by demonstrating that it is time for small businesses to take a larger role in workforce development. While small businesses are becoming increasingly important job creators, relatively few small firms are benefiting from job training and placement programs (Miller, 2018). While it is undeniable that smaller companies, i.e., those with less than 20 employees have been at the forefront of any economic recovery. When consideration is being given to a collaborative workforce development effort between industry and education, thoughts naturally run to larger more well-known or well-established firms. What the SCA has done via Opportunity Academy is demonstrate that small companies can both impact and benefit from the workforce development effort.

Local Community Implications

As has been previously stated, the lack of competent back-office staffing has been one of the many barriers to participation faced by members of the MWLBE community in the public works contracting environment. This study demonstrates that on a local level, an investment in a workforce development program has the potential for solving two problems. First, such an investment would help in removing a barrier of participation to the MWLBE community. Second, it would create jobs that fill an existing industry need. In addition, the recommendation of an annual evaluation of the program would address an existing gap between academia and construction. As stated by Bigelow et al. (2016), research often does not immediately add value to the construction industry because researchers do not generally have a grasp of the pressing needs of the industry. By instituting an annual evaluation of the Opportunity Academy program there would be at least one local example of research providing a timely response to the needs of the construction industry.

Far-Reaching Implications

It is possible that the benefits of this study could extend beyond the construction industry and the New York Tri-state area. In a variety of states and regions industry and educational institutional workforce development efforts have either been implemented or are being implemented. The annual evaluation of the Opportunity Academy program could be the template upon which annual evaluations of such programs are built. The outcome of these evaluations could serve to inform decision makers on what if any

changes might be needed to the different programs in order to render them more effective.

Summary

This research study resulted in a recommendation for an annual evaluation of the Opportunity Academy Program. That recommendation was based upon an analysis of the data collected for this study as well as a review of relevant literature on similar studies over the past five years. Based upon data collected from both the students and the contractors who were interviewed for this study the training does prepare the students for the industry. The literature revealed that the collaborative effort between the SCA/DDC and LaGuardia Community College is keeping with the current more successful trend in workforce development programs. It is my opinion that the annual evaluation will be critical to the success of the Opportunity Academy program.

Section 4: Reflections and Conclusions

Project Strengths and Limitations

The purpose of this study was to determine the efficacy of the training provided in the joint SCA/DDC/LaGuardi Community College Opportunity Academy workforce development program. The findings from this study are inconclusive. Students who participated in the study indicated they believed that the training prepared them for internships. The contractors who either hosted interns in their office or recieved remote assistance from the interns indicated the students were adequately trained in some areas and inadequately trained in others. Based on these results, a recommendation has been made that a periodical evaluation of the progrm be conducted to determine the efficacy of the training.

Project Strengths

Similar to most workforce development programs, the curricula for Opportunity Academy is industry specific. In programs like this, the curriculum must reflect the most current policies, procedures, and needs of the industry and organizations it intends to serve. Therefore, periodic evaluations have become a critical component of effective curriculum oversight (Goldman et al., 2012). The strength of the proposed evaluation lies in the fact that the evaluation will allow for the required curricular oversight while ensuring that the students who participate in the training and the contractors whom they are being trained to serve will receive the maximum benefit of the program.

This study revealed a direct relationship between the training and the contract administrative abilities of the the program graduates. This relationship was evidenced by

two data points. First, 79% of program graduates reported having either minimal or no experience in construction contract administration prior to their enrollment in Opportunity Academy. However, 85% of the contractors who participated in this study reported that the interns improved the contract administrative functions of their office. Despite this direct relationship between the training and the intern's ability, the study also revealed that the contractors were selective in the use of the intern. The program evaluation could be used to ensure that the interns are more efficiently employed by the contractors to whom they are assigned.

Project Limitations

The primary limitation to the proposed program evaluation lies in the fact that the SCA is not an educational insittution. The SCA is a New York City agency whose primary reason for existence is to build and renovate public schools. Despite the fact that the SCA has been the primary stimulant that led to the development and implementation of Opportunity Academy, the SCA has a greater committment to building New York City schools and the contractors who build those schools than they do to an academic or workforce development program.

One other limitation of the project is the cyclical nature of the construction industry. Prior to the onset of the COVID-19 pandemic, the construction industry was poised to exceed all finacial projections for 2020 in both public and private expenditures. The economic downturn that resulted from the pandemic has seen significant cuts to the capital improvement budgets across all city agencies and many private organizations. As

a result, contract administrative needs within the construction industry are not at the premium they were as recently as January and February of 2018 and 2019.

These limitations do not mean that the Opportunity Academy should be discontinued or that the proposed evaluation should be halted. The construction industry is cyclical by nature, and the time will soon return when contractors from the MWLBE community will be in need of trained and knowledgeable staff for their back offices. In addition, for the past 4 years there have been significant conversations at the state and federal level about the rebuilding of the infrastructure of the United States. It would be in the best interest of the United States if a workforce development program that addressed the needs of the adminstrative requirements of the construction industry were at the forefront of those discussions.

Recommendations for Alternative Approaches

One recommendation is the development and implementation of an evaluation of the Opportunity Academy to ensure that the training provided in Opportunity Academy delivers on its promise of providing competent office staffing to contractors from the MWLBE community. From the evaluation a report would be generated that would be disseminated to the program stakeholders within the SCA and DDC. I decided on a report because the decision makers within the SCA and DDC are city employees who are more likely to grasp the findings in a report than a curriculum plan. In addition, city emloyees are more receptive to policy recommendations from a position of authority than from a consultant. As a result, the only other project for this study would have been a professional development/training and materials. A professional development/training

and materials project would have examined the training provided in Opportunity Academy and presented training and material that would enhance the program.

The current study addressed the local problem of the shortage of adequately trained office staff faced by small contractors in the public sector of the construction industry. An alternative definition of that problem would have been how to train workers in construction contract administration, or removing adminstrative barriers of participation for small and MWLBE contractors in the construction industry. The first solution that comes to mind, and the solution that is most often mentioned anecdotally, is to ease the administrative restriction on public works contracts for small contractrors and those in the MWLBE community. The limitation of that solution is that if the restrictions are eased, the contractor does not grow, they do not build capacity, and they will not expand their business beyond its current capacity. By providing the training via a workforce development program, two problems are solved. First, a contractor is provided an opportunity to grow their business. Second, training and necessary job skills are provided to qualified individuals.

Scholarship, Project Development and Evaluation, and Leadership and Change

In conducting the research and development of this project, I was exposed to a significant body of literature relevant to my topic. The exposure to the literature informed me on the history, growth, and development of workforce development projects as well as the importance of the evaluation of these efforts. In addition, I learned to develop an appreciation for scholarly research. In my current position, I am often requried to develop surveys that are used to collect information on a variety of training and business

development issues. This project study afforded me an opprtunity to improve the quality of the research done on my job by striving to develop and implement research instruments with greater reliability and validity.

This project has also fostered significant personal growth as a scholar/practitioner. I must admit that there were times during the process when felt like the mythical character Sisyphus. This project felt like an enormous rock that I would never get to the top of the hill. During those times I focused on two things: the process and what I was learning from the process. This process has taught me to interview, transcribe, code, and analyze data. I am fortunate that I am able to apply these skills in my current psoition.

Reflection on Importance of the Work

In addition to the concerns being raised about the inadequacies of the K-12 education paradigm, the collapse of the youth labor market has reinvigorated the debate about the benefits of a liberal arts college educationf for all approach to the detriment of vocational training (Giloth 2019) . In addition, demographics from employment and labor statistics indicated that workforce development programs will become increasingly prominent as the world tries to maintaint the workforce of the 21st century (Fletecher Jr. & Gordon, 2017). These factors contribute to the importance of this study and those of a similar nature. This study provided evidence that workforce development and CTE efforts work best when the effort results from a collaboration between education and industry. Furthemore, the study provided an evaluation of the program that should drive future decision making about the program, and demonstrated the importance of periodic evalaution of educational programs.

Implications, Applications, and Directions for Future Research

This study could validate an ongoing workforce development program. Opportunity Academy already has the support of two New York city agencies, the SCA and DDC, and one local community college. Despite their sizeable budgets, these two agencies represent only a fraction of the construction expenditure for the New York City tri-state area. Based upon the efficacy of the program demonstrated by this study, it is possible that Opportunity Academy could be expanded to other New York City and state agencies as well as city and state agencies in neighboring states.

There is also an opportunity for this study to provide positive social change in the area of education. Federal data indicated that public and private institutions of higher education have added 41,466 degree or certificate programs since 2012 (Marcus, 2018). Despite this overwhelming number, contract administration is not offered as a stand-alone major at any U.S. institutions of higher education. Rather, degree programs to become a contract administrator are offered at the bachelor‘s and master‘s level in the fields of business administration, human resource management, or contract management (Woods, 2010). The current study could be the impetus for contract administration being offered as a stand-alone degree starting at the associate’s level at many community colleges.

Methodological, Theoretical, and Empirical Applications

There are significant methodological implications to this study. Because educational research seeks to either build on existing studies or fill in information gaps in existing bodies of knowledge, consideration could be given to a mixed-methods

longtitudinal study of the Opportunity Academy. The program has been in existence since 2016, and this sudy could measure the efficacy of the training of the first iteration. A longtitudinal mixed-methods study of the efficacy of the graining over the intervening 3 years (2017 to 2020) would build on this existing study and provide insight into the efficacy of the program. Empirical and theoretical implications are less relevant because eduational research is reliant on both observation and theory, and researchers are encourarged to apply any relevant theories to their research studies.

Conclusion

I began my doctoral journey in January 2012. At that time, I worked as a construction project manager for the SCA. Prior to that, except for my time in the military, my career alternated between two industries: higher education and construction. Growing up in a family of plumbers, I learned construction and contracting almost through osmosis, but higher education was my passion. Unfortunately, when I began my doctoral pursuits, I was so far removed from my career in higher education that I struggled relating my studies to any current real-time career scenarios.

In January of 2014, I was afforded an opportunity to work as a business development consultant in the SCA's mentor program. I believe this to be my calling because as a former minority contractor I am well aware of the the challenges, administrative and otherwise, that minority contractors face. In addition, my duties as the training coordinator for the mentor program afforded me an opportunity to combine my knowledge of construction and my passion for education.

My initial reaction when I heard about the Opportunity Academy was that the program would only be as effective as the training it provided. I believed that the key to this program was in curriculum development and that steps had to be taken to ensure that the curriculum adequately prepared students for their internships and beyond. I believe that the current study is the first independent step in that direction. I call this an independent step because the powers that be at the SCA Business Developent Division are data driven. The value of this study is that it is the only study conducted by someone outside of the program. This is a first step because it represents the first iteration of the program, but this study may elicit future studies that inform decision making about the program.

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Appendix A: The Project

Executive Summary

This program evaluation was undertaken in an effort to determine the efficacy of the training provided in the Opportunity Academy Program. Opportunity Academy is a workforce development program that was implemented via a collaborative effort between two New York City agencies, the New York City School Construction Authority (SCA), the New York City Department of Design and Construction (DDC) and LaGuardia Community College of the City University of New York (CUNY).

The impetus behind the development of the program was the recognition by both agencies that a significant number of contractors from the MWLBE community lacked the back-office operational personnel and skillsets necessary to successfully complete public works construction contracts, in an effort to address that barrier to participation the Opportunity Academy program was implemented. The program provides training in the contract administrative policies and procedures of both agencies to selected students. Upon completion of the training those students who completed the training were offered paid internships with the contractors, with the expectation that the internships would lead to permanent jobs.

This report will inform on the analysis of qualitative data collected from the students and contractors who participated in the first iteration of the program. In order to evaluate the efficacy of the training semi-structured interviews were conducted with 14 of the students who completed the training in its first iteration and 14 contractors with

whom the students were either placed or who received remote assistance from the program graduates. The intention of the data collection and analysis was to determine the efficacy of the training from the perspectives of both the contractors and the students.

Purpose of the Evaluation

The purpose of this evaluation was to produce a summative record of the perceptions of both the students who participated in the first iteration of the program and the contractors with whom they were either placed in their internships or those contractors who received remote assistance from the interns. A summative evaluation was chosen because summative evaluations are best suited for measuring outcomes and determining how those outcomes relate to the overall judgement of the program (Lodico et al., 2010). In addition, summative assessments involve getting the bigger picture and assessing the overall experience of a finished product (Joyce, 2019). Therefore, in an effort to determine the full efficacy of the training provided in the program this summative evaluation was conducted.

There are a variety of stakeholder relative to the Opportunity Academy program. Included among these are the students who participated in the program, the contractors with whom they were placed or who received remote assistance, the SCA's Business Development Division which has complete programmatic oversight, the NYC DDC, and LaGuardia Community College. It is expected that the findings provided in this report that was generated via an independent evaluation could help to guide current and future decision making about the program.

Methodology/Criteria

Evaluative Research Questions

The research design applied to this evaluation was a case study of the first group of graduates from the program and the first group of contractors who either hosted an intern in office or received remote assistance. It must be noted that some contractors were unable to accommodate interns in their offices for a variety of reasons. Therefore, a decision was made to have four interns operate remotely with from office space provided within the SCA. These remote interns were not assigned to a single contractor, rather they provided administrative assistance on an as needed basis to a variety of contractors depending on that contractor's needs. Participation requests were sent to all 26 graduates of this first iteration of the program, of which 14 opted to participate in the study. Similarly, participation requests were submitted to all 35 contractors who either hosted an intern or received remote assistance and 14 contractors opted to participate in the study.

The qualitative data that was mined and analyzed for the study was the lived experiences of both the students who completed the program and was placed in internships and the contractor with whom they were placed or who received remote assistance from the program graduates. Data was gathered via individual semi-structured telephone interviews with each contractor and each program graduate. The questions in the interview were designed to provide answers to the following evaluative research questions:

1. What is the perceived value of the Opportunity Academy training to those contractors with whom students who have completed the training were placed or who received remote assistance?
2. What is the perceived value of the Opportunity Academy training to those students who completed the training and were placed in internships or who provided remote assistance to the contractors?

The recorded interview data was professionally transcribed and then coded in a three-step process. The first step was the NVivo coding process to see what if any themes in the data might emerge. After the NVivo coding an emergent coding analysis approach was applied which examined the emergent themes within the data and finally a descriptive analysis was applied which attempted to describe the various data themes.

Findings/Evaluation Results

Findings from educational research studies tend to be inconclusive. One prevalent axiom found in the results/ finding section of most educational research studies is "additional studies will at least be recommended." However, the fact that this is a locally relevant internal evaluation consisting of data collected from a homogenous sample, more timely information will be provided that answers questions about whether the educational tool or strategy is meeting the local need (Holland & Escueta, 2020). While there is ample evidence indicating the benefits of the training provided in Opportunity Academy, there is also evidence that suggests that the program ought to be continued and evaluated periodically in order to ensure that the training does measure up to its intent.

The first data point that was analyzed was data that reflected both the contractor and the student's level of satisfaction with the training that was provided. Table A1 below reflects how satisfied the contractors were with the overall training of the intern and Table A2 reflects the intern's perception of how well trained they believed themselves to be.

Table A1

A Contractor's Level of Satisfaction: Overall Training of the Intern

Code	n = 14	percent
Satisfaction with overall training of intern		
Considered intern to be adequately trained	11	79%
Did not consider intern to be adequately trained	3	21%

Table A2

Interns Perception of How Well Trained They Were

Code	n = 14	percent
Overall level of Satisfaction with training received.		
Satisfied with the training	13	93%
Not satisfied with the training	1	7%

A comparative analysis of this data indicates that while the students overwhelmingly believed themselves to be well trained for their internships 93%. Only 79% of the contractors shared that sentiment.

In order to examine the efficacy of the training more closely, data was collected that reflected how well trained the contractors believed the students to be in certain administrative tasks and how well trained the students believed themselves to be at those

tasks. This data is reflected in Table A3 below for the contractors and Table A4 for the program graduates

Table A3

Contractors' Level of Satisfaction: Training in Different Contract Administrative Subjects

Code	n = 14	percent
Satisfaction with training in Change Orders		
Yes	3	22%
No	4	28%
Task not Assigned	7	50%
Satisfaction with training in Closeouts		
Yes	12	85%
No	2	15%
Satisfaction with training in Requisitioning		
Yes	10	70%
No	2	15 %
Task not Assigned	2	15%
Satisfaction with training in Construction Project Management		
Yes	6	43%
No	7	50%
Task not Assigned	1	7%
Satisfaction with training in Doing Business with the agency		
Yes	8	58%
No	6	42%
Satisfaction with training in Labor Law		
Yes	12	86%
No	1	7%
Task not Assigned	1	7%
Satisfied with the training in the Procurement Process.		
Yes	6	42%
No	4	29%
Task not Assigned	4	29%

Table A4

Interns' Level of Satisfaction: Training in Different Contract Administrative Subjects

Code	n = 14	percent
Satisfied with training in Change Orders.		
Yes	12	86%
No	2	14%
Satisfied with training in Closeouts.		
Yes	13	93%
No	1	7%
Satisfied with training in Requisitioning.		
Yes	8	58%
No	6	42%
Satisfied with training in Construction Project Management		
Yes	7	50%
No	7	50%
Satisfied with training in Doing Business with the agency		
Yes	12	86%
No	2	14%
Satisfied with training in Labor Law.		
Yes	8	58%
No	6	42%
Satisfied with the training in the Procurement Process.		
Yes	13	93%
No	1	7%

The comparative analysis of this data indicates a continuation of the theme of the students having a greater level of satisfaction with the training than the contractors. In every instant the student's level of satisfaction was higher than that of the contractors and as reflected in Table A3, there are several instances where the contractor did not assign the task to the intern.

The third data point that was examined to determine the efficacy of the training was the duties and responsibilities assigned to the interns. Each contractor was informed on the various subject matter on which the intern was trained, and the contractors were

expected to use the interns accordingly. Table number A5 below reflects the tasks that were assigned to the interns.

Table A5

Duties and Responsibilities Assigned to the Intern

Code	n = 14*	percent
Duties and Responsibilities Assigned to Intern		
Doing Business with the Agency	1	7%
Change Orders	2	14%
Closeouts	2	14%
Requisitions	9	64%
Construction Project Management	14	100%
Labor Law	4	28%
Procurement	12	85%
Other**	34	

* *Note.* More than one code possible per interviewee

***Note.* Multiple codes per interviewee

In addition to informing the reader on the frequency with which a particular contract administrative duty was assigned to an intern, this chart also reveals that an additional 34 duties were assigned to these interns.

Data point number four that was analyzed to determine the efficacy of the Opportunity Academy training spoke to the intern's perception of the relevance and applicability of the training to their internships and the construction industry overall. That information is reflected in Tables A6 and A7 below.

Table A6

Interns Perceived Relevance of Training to the Industry

Code	n = 14	percent
Industry relevance of training		
Considered the training industry relevant	14	100%
Did not consider training to be industry relevant	0	0%

Table A7

Interns Perception of the Applicability of the Training to Their Internships

Code	n = 14	percent
Applicability of training to internship		
Training was applicable to internship	10	72%
Training was not applicable to internship	4	28%

Based upon our analysis of this data, all of the students saw the subject matter in which they were trained as relevant to the industry, but fewer only 72% considered the training applicable to their particular internship.

Data point number five spoke to the degree to which, or whether or not the intern improved the administrative office functions of the firms to which they were assigned or to whom they provide remote assistance. The data from this question is reflected in Table A8 below.

Table A8

Did the Intern Improve Office Administrative Functions?

Code	n = 14	percent
Intern improved office functions.		
Yes	12	85%
No	2	14%

The next data point that was examined to determine the efficacy of the training was data that indicated what was the most and least used subjects by the program graduates on their internships. That data is reflected in Table A9 below.

Table A9

Most and Least Used Subjects During the Internship

Code	n = 14	percent
Most used subjects on internship		
Change orders	6	42%
Closeouts	6	42%
Requisitioning	5	36%
Construction Project Management	4	28%
Doing Business with the Agency	4	28%
Labor Law	2	14%
Procurement	1	7%

It is no coincidence that the three subject areas in which the interns were most used are the three administrative areas where our contractors have reported to be their greatest administrative challenges. The outlier is in the Labor Law training as this is also an area where our contractors have reported significant administrative challenges, yet this was one of the least used subjects by the interns.

The final data points that were analyzed to determine the efficacy of the Opportunity Academy training, was whether or not the intern was hired. In order to answer this question, we solicited data from both the contractors and the interns. Table A10 below reflects the data from the contractor's response to the question and Table A11 reflects the data from intern's response to the question.

Table A10

Contractors Who Hired Their Interns

Code	n = 14	percent
Was the Intern Hired After the Internship?		
Yes	5	35%
We Tried but were unsuccessful	4	30%
No	5	35%

Table A11

Interns Who Were Hired by Their Host Firms or Other Construction Firms

Code	n = 14	percent
Was the Intern Hired After the Internship?		
Yes	5	36%
Hired by other firm	6	43%
No	3	21%

Based upon this metric, the data is not overwhelming, particularly the data from the contractors. According to that data, five contractors hired their interns, and another four made an unsuccessful attempt to hire their interns. But a look beyond the numbers where the to the narrative from the interviews reveal that all of the firms wanted to hire their interns but were unable to for a variety of reasons many of which were unrelated to the training. One contractor said that their intern saw the Opportunity Academy program as only a stop gap as he was trying to make some extra money while others cited that their interns had different career aspirations, or that they simply were not a good fit. On the part of the interns while only 36% of them were hired by their host firm, an additional 43% were hired by another firm within the program which speaks more to the firm/intern matching process than to the training.

Limitations of the Evaluation

The limitation to this study is the time lapse between the first iteration of the of the program and the evaluation. Opportunity Academy was launched in April of 2016 and the interns were matched with their contractors or began providing remote assistance and placed int their internships by October of the same year. For a more effective evaluation of the training, data collection and analysis must be done no more than 12 months after the interns have completed their internships. It is critical that data from the evaluations be used to form the decisions making for subsequent iterations of the program.

Conclusions and Recommendations

The focus of this study was the training provided by the Opportunity Academy program. The overarching question that the study endeavored to address was whether or not the training provided by the Opportunity Academy program delivered on its promise of providing adequately trained contract administrative staff for contractors in the MWLBE community. The data from this study is at best inconclusive. Students who completed the training and were either sent on internships or provided remote assistance to the contractors considered themselves well trained and prepared to work in the back offices of the MWLBE contractors. In addition, many students believed that the training that they received could translate into contract administration jobs with larger more established construction firms. The contractors who either hosted interns or received remote assistance from the interns were a little less convinced and tended to be more deliberate and selective in the tasks that they assigned to the interns. There is however a possibility that the contractor’s reasons for fully engaging the intern could me more

related to the contractor's human resource management challenges than the training provided to the interns.

Unfortunately, educational research is hardly ever conclusive. Therefore, before Opportunity Academy is declared an unqualified success additional research which takes into consideration other variables are recommended. The annual evaluation of the program that is recommended by this study must be enacted as soon as possible. Future evaluations must also be of the mixed method design whereby qualitative and quantitative data can be gathered that measures quantitatively the impact of the interns on the productivity of the firms with which they are matched. Future evaluations must also consider such variables as, student selection, the viability of the firm with which the student was placed in their internships, and any changes in agency policy that has affected the training. In addition, as we continue to navigate the challenges posed by the recent COVID-19 pandemic efforts must be made on two fronts. First, any new policy or policy revisions that results in changes to the contract administrative process must be worked into the curriculum. And second, effort must be extended to find ways to provide this training from a remote or electronic platform.

The final recommendation of this study is a fiscal/legislative recommendation. As the study has demonstrated, workforce development efforts tend to be more successful when those efforts are the result of a collaboration between industry and education. Furthermore, workforce development efforts require funding. Therefore, as we emerge from the economic challenges of the COVID-19 Pandemic where an investment in the rebuilding of our infrastructure as an economic driver is pending, funding for workforce

development programs such as Opportunity Academy ought to be part and parcel of that infrastructure investment. Contract Administrative challenges has already been documented as a barrier to participation for many MWLBE firms vying for public works construction contracts. Programs such as Opportunity Academy have proven to assist MWLBE contractors to overcome that barrier, we ought not wait to provide solutions for a problem that we know exists.

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Appendix B: Project Sequence

NYC Department of Education | SCA School Construction Authority

Project Sequence

Phase I: Pre-construction

- **Bid & Award**
  1. Invitation to bid
  2. Pre-bid walk through
  3. Bid opening
  4. Bid analysis
  5. RTA
- **NTP**
- **Loan Recommendation/Application**
- **Submittals/Shop Drawing**
  1. Product submittals & shop drawings
  2. Baseline schedule
  3. Site Safety Plan (SSP)
  4. Sub-contractor Approval Form (SAF)
  5. Permits
- **UFT Protocol Meeting**
- **Pre-construction Meeting**
- **Mobilization**

UFT Protocol Meeting

- **CMPO**
- **Mentor Contractor**
- **Asbestos Sub-contractor**
- **Air Monitor Consultant**
- **SCA Environmental Hygienist**
- **School Principal**
- **Teachers Union**
  (United Federation of Teachers)
- **Custodian**
- **SCA Project Support**
  (Community Relations)
- **Design Consultant (AOR/EOR)**

Procurement

- **Supplies & materials**
- **Equipment**
- **Training, demonstration & testing services**

Mobilization

- **Kick-off/Pre-construction Meeting**
- **Safety Meeting**
  1. Hot work
  2. Scaffold installation
  3. Trench & excavation
  4. Demolition
  5. Steel erection
  6. Review of site safety plan
- **Permits**
  1. Asbestos abatement work
  2. Custodial permits
  3. DOB work permits (PW-2)
  > Scaffold
  > Fence
  > Shed
  4. After hours work permits/variance (PW-5)
  5. Plumbing
  6. HVAC
  7. DOT permits
- **SAF, OCIP & Contractors' Insurances**
  Off Site Insurances
  1. Workers compensation
  2. Auto insurance
  3. General liability
  4. Disability

Phase II: Construction

- **Progress Inspections**
- **Special Inspections**
- **Progress Schedules**
- **2-Week Look-Ahead Schedules**
- **Schedule of Values (SOV)**
- **Payments**
- **Safety**

Construction Activity

- **Bulletin Board**
  > SCA's commitment to safety message
  > Site Safety Plan
  > Site specific evacuation plan
  > Competent person form
  > Tool box meeting minutes
  > Permits
  > Daily sign-out logs
  > Emergency contact list
  > OSHA 10-hour cards
  > OSHA 30-hour cards
  > OSHA 300 logs
  > OSHA "Right to Know Posters"
  > MSDS sheets
- **Site preparation**
- **Demolition**
- **Construction activities**
- **Inspections**
  > Special inspections
  > Progress inspections
  * QA/QC Architectural
  * QA/QC Plumbing
  * QA/QC HVAC
  * QA/QC Electrical
  * QA/QC Masonry
  > Safety inspections
  * Excavation
  * Scaffold & ladders
  * Dust control
  * Roofing & waterproofing
  * Personal protective equipment
  > DOB inspection
  > FDNY inspection (fire alarm only)
- **Progress Schedules**
- **2-Week Look-Ahead Schedules**
- **Schedule of Values (SOV)**
- **Payments**
- **Progress Photos**
- **Daily Sign-Out Logs**
- **Certified Payrolls**
- **Daily Progress Reports**
  > Mentor Contractor
  > CM PO
- **Demobilization**
- **School Occupancy**
- **95% Completion**
  > Certificate of substantial completion
  > Preliminary punch list
  > Progress inspections
  > Progress photos
  > Progress payment
  > Testing, training & demonstrations

Phase III: Close Out

- **Beneficial Use/Occupancy**
- **Training and Demonstrations**
- **Testing and Turn-Over**
- **Guarantees and Warranties**
- **Test Reports**
- **Affidavits and Certifications**
- **Final Inspections**
- **Project Sign-Off**
- **Project Transfer**
- **Final Payments**
- **As-Built Drawings**
- **Final Amendments**

Regulatory Close Out (CID/BCC)

- **Final QA - QC Inspections**
- **Final Code Inspections**
- **Final Special Inspections (TR's)**
- **Final Affidavits**
  > Steel
  > Masonry
- **Final Test Reports**
- **BEC Certification**
- **PW-3 (Final Cost Affidavit)**
- **Letter of Completion/Memorandum**
- **Final Punch List**

Project Transfer - DOE

- **Preparation of Transfer Package**
- **Custodian's Acceptance of Documents Transmittal**
  > Guarantees
  > Warranties
  > Material certifications
  > Affidavits (firestopping)
  > Letter of Completion/Memorandum
  > Training, testing & demonstration
  Attendance Sheets
  > CDs & DVDs for trainings
  > Operations & maintenance manuals
  > As-built drawings
  > Final surveys
  > BEC certifications
- **Final Contractors and Sub-contractors Evaluations**
- **Final Payment**

Appendix C: Description of the Training Provided by the Opportunity Academy

The training provided by the Opportunity Academy was designed to provide program participants with the knowledge base and skillsets necessary for them to be immediately employable by contractors working with either agency. The training was comprised of three parts delivered over a 12-week period in the following manner. Part 1 of the training was offered over the first nine weeks. Classes were held on Mondays and Wednesdays from 2 p.m. to 5 p.m. Monday classes were dedicated to the administrative processes of the DDC, and Wednesday classes were dedicated to the contract administrative processes of the SCA. In the following sections, I discuss the topics covered in the classes dedicated to the administrative processes of the DDC.

Part 1 of the Training

DDC/SCA Agency Overview

This class introduced the student to the agency, and covered such topics as the agency's mission, its impact on the city's infrastructure, the agency's business development program and the agency's organizational structure. The importance of this class is that it provided the student with insight into the agency, its mission, its goals and the ways in which the agency in pursuit of its mission affects the infrastructure of the city as well as the agency's effect on the construction industry and the MWLBE community.

Doing Business With the DDC/SCA

This class focused on procurement procedures, the generation of a capital project, discovering opportunities within the agency, completing the Vendex application, and obtaining bid documents from the agency. The importance of this class is that it provided

the student with an overview of how the agency operated on the departmental level and the contract procurement processes applicable to this particular agency.

The Procurement Process

This class covered the entire competitive sealed bid process as done by the DDC or SCA. This class is arguably the key learning component of the training offered. In this class students learn most of the contract administrative processes associated with securing and fully executing a contract for the agency involved.

Labor Law Compliance

This class covered the DDC prevailing wage rate for different trades, and the SCA prevailing wage rate for the different trades. In addition, the class covered the penalties for not abiding by prevailing wage labor laws, and the current Project Labor Agreement and its effect on the prevailing wages.

This class is important because agency contracts are funded by federal and state tax dollars and are therefore subject to prevailing wage rules and regulations. The prevailing wage requirements are complicated by the fact that the Project Labor Agreement (PLA) which governs the prevailing wage rates differs from one trade to the next and from one city agency to the next. This class teaches students the importance of reporting the remittance of the required wage rates for the different trades at the different agencies and how to properly document this process.

Introduction to Construction Project Management Parts I and II

This class covered the construction project management processes and procedures required for the successful completion of an SCA or DDC construction project. The class

was divided into two parts as the course content could not be adequately covered in a single session.

This class works through the complexities of the management of a construction project and how best to address requirements for such things as safety, permitting, project sequencing and scheduling, mobilization and construction activities will differ from one project to the next and from one agency to the next.

Payment Processing

This class covered the administrative tasks associated with the DDC's requisitioning process. Even though it is mostly anecdotal, there is overwhelming evidence that the area of requisitioning for payments is an area in which MWLBE contractor struggle mightily. This class addresses this challenge.

Change Order Processing

This class covered the elements of the standard SCA/DDC contract and the steps that the contractor needs to follow at those times when a contractual change becomes necessary. This class focuses on the requirement that contractors fully understand their contractual obligations and understand their rights and responsibilities when satisfactorily completing this project means going beyond the contract. It addresses the steps required to ensure that they are properly compensated for doing work that was beyond the scope of what the original contract.

Project Closeout

This class covered the capital project closeout process and how the DDC determines the date of final completion and acceptance of a construction project. In the

public-sector construction industry, everything must be inspected, documented and signed off. Closing out a construction project can be an administrative nightmare if proper procedures and protocols are not established by the agency and adhered to by the contractor. This class addresses this need.

Class Review

The class review provided the program participants an opportunity to review the topics covered in all of the classes. The purpose of the class review is to prepare the students for the comprehensive final exam that is administered after Part 1 of the training to test the student's knowledge on all of the subjects covered.

Part 2 of Training

Part 2 of the training is a three-day seminar based upon the construction project life cycle (Appendix A). The topics covered in this three-day seminar were 1) understanding the invitation to bid; 2) completing the bid package; 3) project submittals; 4) completing the SAF (Subcontractor Approval Form); 5) the site safety plan, schedule of values, baseline schedule, and two-week look ahead; 6) The Department of Buildings (DOB) permitting process; 7) document management; 8) the requisitioning process, and 9) project closeout.

Part 3 of the training lasts two weeks and consist of OSHA Safety Training which qualifies program participants to secure their OSHA 30 Hour Construction Site Safety Certificates and includes a visit to an actual SCA construction site. The apparent redundancies in Parts 1 and 2 of the training were built in as Part 1 of the training is more focused on the different departments of the two agencies and Part 2 focused on how and

when the contractor interacts with the different departments based on where they were in the project cycle. Upon completion of the program, graduates are awarded their Opportunity Academy Certification.

Appendix D: Focus Group Questions for Mentor Contractors

The purpose of the focus group discussion is to get the mentor contractors' insights and perceptions of how well prepared they believe that their interns were to make an immediate contribution to the contract administrative processes in their company. These questions are designed to stimulate a conversation around the preparedness of the opportunity academy interns as related to their training.

- Describe your office staff and the various functions prior to receiving the opportunity academy intern.
- Describe the effectiveness of your office in administrating public works/government contracts.
- What did you think of your Opportunity Academy Intern?
- How well trained in SCA and DDC administrative policies and procedures would you say that your intern was?
- Did you get the sense that your intern was knowledgeable about construction prior to entering the program or did you get the sense that they were a novice? In your opinion, what differentiates a novice from someone who is knowledgeable?
- Describe your office operations after you were assigned the opportunity academy intern.
- If you had office staff prior to being assigned an opportunity academy intern, would you say that your office staff was better trained in SCA/DDC contract administrative policies and procedures, or would you say that the opportunity academy intern was better trained?

- If you could make one suggestion that you believe would improve the training provided to the opportunity intern what would that recommendation be?

Define/describe the capacity of your business based upon the following criteria:

Appendix E: Interview Questions

The questions for the semi-structured interview will include but not be limited to the following:

- What was your experience in the construction field before participating in the Opportunity Academy Program?
- What did you know about contract administration prior to participating in the Opportunity Academy Program?
- What did you think about the training that you received in the Opportunity Academy Program?
- What new information did you learn that you applied on your internship?

Appendix F: Request for Written Consent From New York City School Construction Authority

New York City School Construction Authority
Office of Business Development
30-30 Thomson Avenue 1st Floor
Long Island City New York
11101
Attention Miss Suzanne Veira

Dear Miss. Veira

I would like to inform you that I have recently received approval from the Walden University IRB (Institutional Review Board) of my research proposal. Per our earlier conversation my research study is an evaluation of the training provided in the Opportunity Academy program offered in conjunction with the DDC and LaGuardia Community College. I will need formal written consent from the SCA before I can begin gathering the data. Please see the attached form letter that will only need your signature in order to provide such consent.

Thank you very much.

Ralston O'Connor

Appendix G: Written Consent From New York City School Construction Authority

To Whom It May Concern'

Please be advised that the SCA Business Development Division along with The New York City Department of Design and Construction and LaGuardia Community College, welcome Mr. O'Connor's proposal to evaluate the training provided by the opportunity academy program as a part of the requirements for his doctoral studies. However, prior to the collection and analysis of any data we require signed consent forms from all program participants, students as well as the mentor firms indicating their willingness to participate in the process.

Yours Truly

Suzanne Veira

Appendix H: Promise of Confidentiality

This form is intended to protect the confidentiality of what members of this discussion group say during the course of this study. Please read the following statement and sign your name, indicating that you agree to comply.

I promise that I will not communicate or talk about information discussed during the course of these focus group discussions with anyone outside of my fellow focus group members and the facilitators.

Name_____

Signature_____

Facilitator Signature_____