Youth Apprenticeship Pathways to Career:

Leveraging Community Social Capital for Workforce Development

A Dissertation Presented for the

Doctor of Philosophy

Degree

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DEDICATION

I dedicate this work, first, to my family—many of whom, like me, are proud alumni of the University of Tennessee, Knoxville. From an early age, I was held, encouraged, and shaped by Volunteers who believed in the power of education and modeled a life of purpose and service. Through their words and their example, I learned that a well-educated mind and a Volunteer heart can accomplish anything.

I am also indebted to the hundreds of UTK faculty and staff who nurtured my academic growth, supported me through challenging seasons, and walked beside me throughout the pursuit of three degrees over four decades. Two mentors from this most recent endeavor deserve special recognition. Dr. Angelle, thank you for taking a chance on me. It was with much trepidation that I embarked on the pursuit of a PhD, especially given the GRE requirement for admission. Your subtle remark in my interview that two statistical courses would be a challenge was an understatement; and your advice in my first class with you was proverbial: find someone in your cohort to lean on and walk with. I did. Thank you, Loren, for your persistence with me through those two stats classes and every preceding and subsequent course: We did it! To my wise and extraordinary, patient and gracious committee chair, Dr. Hayes, you were a steady light during moments of uncertainty. Your guidance and support meant so much as I sought to keep an authentic voice within the bounds of scholarly work. My Harlan County roots run deep!

Most importantly, I dedicate this work to the most precious resource our nation holds—its youth. It has been the honor of my professional life to serve them. From Gen X to Gen Z, they have challenged, inspired, and motivated me to hold fast to my philosophy of education and my principles of life. Whether in my classroom or at my administrative office door, each student left an imprint on me. While the passing of time may dim names or faces, their stories remain vivid

and enduring. It is for them—for their futures and for the families they will build—that I undertook this study. I remain their servant, always, because I believe, as President Ronald Reagan once affirmed, that the American Dream is achievable through hard work, dedication, and opportunity. May this work stand as part of my legacy to those who trusted me to walk beside them on their own paths to that dream.

ABSTRACT

This qualitative single case study investigated how interagency collaboration contributed to the development, implementation, and sustainability of a youth apprenticeship program near the eastern coast of the United States. Informed by Woolcock's (2001) bonding, bridging and linking social capital and qualitative methods, two research questions were used to guide this study: One, how do stakeholders in education and workforce development collaborate with employers to develop, advance, and sustain YA programs? Two, how can interagency collaboration aid the refinement of policy governing youth apprenticeship implementation? Findings showed that effective implementation depended on three interconnected factors: sustainable intermediary leadership, employer-driven sector partnerships, and sustained relational trust. Bonding capital supported mentor relationships and internal cohesion; bridging capital enabled cross-sector alignment in program design and logistics; and linking capital facilitated engagement with state agencies and policy systems to address structural barriers. Participants emphasized the importance of building institutional capacity within intermediary organizations to manage recruitment, compliance, and stakeholder coordination. This study affirms that interagency collaboration, when driven by trust, guided by intermediaries, and informed by social capital, can transform youth apprenticeships from isolated programs into a sustainable strategy for education-to-career alignment. The findings offer practical implications for youth apprenticeship-expansion and provide a foundation for future research into long-term outcomes and system level transformation.

Youth Apprenticeship, Youth in the Workforce, School to Career Education, Apprenticeship Pathways, Educational Ecosystems that Promote Positive Outcomes for Youth

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CHAPTER I

INTRODUCTION

Significant research is dedicated to determining what drives young people's decisions about education and career choices (Byun et al., 2012; Carrell & Sacerdote, 2017; Gándara & Li, 2020; Knaggs et al., 2018). The consensus of the research is clear: economists, educators, and policymakers all advise the best route to a living wage[1] is through a college degree. Indeed, statistics do lend economic validity to the advice. Weekly earnings for an individual with a bachelor's degree exceed that of their cohort with a high school degree by $594.00 (U.S. Bureau of Labor Statistics, 2024). For those with no high school degree, the statistics show an average weekly salary of $708.00. Yet, despite consistent rhetoric to encourage high school graduates to seek postsecondary education, first-time college enrollee rates have consistently remained under 70% of annual high school graduates for over a decade (National Center for Education Statistics, 2022-a). Given a current living wage weekly salary calculation of $1000.75[2], this means approximately 30% of American youth are headed into adulthood on a path of financial instability.

Other worrisome statistics also confound the economic outlook for today's youth. The correlation between a bachelor's degree and wages has remained constant, while the cost of college has steadily risen (Abel & Deitz, 2014; Wescher et al., 2019). Contrasting the rising cost of college against a currently rising minimum wage contributes to the hesitancy of potential college enrollees. High school graduates must now weigh the potential economic gain of a costly

[1] A living wage is "usually defined as remuneration commensurate with a worker's needs as citizen, breadwinner, and consumer" (Glickman, 1999, p. 3).

[2] The estimated weekly salary was derived by using MIT's living wage calculator and is based on a U.S. dollar amount of 25.02 per hour or $104,077.70 per year in 2022, before taxes for a family of four with two working adults and two children (Kagan, 2025).

4-year degree against the immediate return of entering a job market with a rising minimum wage (Wescher et al., 2019). Researchers who study views on the value of college find many Americans question the value of college and favor immediate earnings in the workforce over incurring the debt of a college degree (Parker, 2019; Wescher et al.,2019; Zaloom, 2019). A survey of young people between the ages of 18 and 24 revealed increased interest in alternative paths to careers, especially if the path is more cost-effective than a traditional four-year degree (Educational Credit Management Corporation, 2021). Fifty percent of the respondents answered they were concerned about graduating with debt and 47% agreed it makes more sense to pursue a path that can be completed within two years.

These labor market trends and shifting mindsets of young adults are occurring simultaneously with troublesome workforce development concerns arising from increased percentages of an aging workforce, under-skilled workers, and unemployed adults (Collins & Casey, 2017; Ferguson, 2023; Giffi et al., 2015). The intersection of young career seekers choosing to forgo college and an aging workforce has prompted a resurgence of interest in the apprenticeship model. As a path to a career, apprenticeship capitalizes on both the wisdom of an experienced worker and the needs of the young career seeker (Decker, 2019; Meyer, et al., 2017).

Apprenticeship as a Career Pathway

Apprenticeship as a pathway to a career existed in the United States (U.S.) long before a formal education system emerged. From the colonial era forward, apprenticeships served as a means for unskilled workers to learn a skilled trade from a master craftsman (Jacoby, 1991; Mokyr, 2018). As the American education system began to emerge and evolve, so did the U.S. economically driven society begin to experience a need for more skilled workers (Anderson & Nieves, 2020). Apprenticeship opportunities alone could no longer provide the supply of workers

an increasingly industrial workforce demanded. By the late 1930s, the shortage of skilled workers led to the enactment of the "Fitzgerald Act" (National Apprenticeship Act, 1937). This act formalized apprenticeship standards, specified the kinds and quantity of training to be provided, and assigned the administrative responsibilities of its governance to the United States Department of Labor (Jacoby, 1991).

The Fitzgerald Act served as the foundation for the United States Department of Labor (USDOL) registered apprenticeship program and is frequently cited by policymakers, legislators, and workforce development advocates who favor apprenticeship as a career pathway. Today, USDOL defines a registered apprenticeship as "an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally recognized credential" (Apprenticeship.gov, n.d.-a). Since its inception under the Fitzgerald Act in 1937, the Office of Apprenticeship (OA) in the USDOL has provided education and support to employers and apprentices.

Economists and policy influencers have long recognized the utility of apprenticeship for workforce development. In times of recession, when college-going rates increase due to lack of job availability, apprenticeship discourse has repeatedly resurfaced. Each presidential administration since George H. W. Bush has promoted apprenticeship through executive orders, policy initiatives, and government funding (Lerman, 2009). Clark (1992) reports the administrations of Presidents Bush, H. W. and Clinton both pushed apprenticeship as an attractive workforce development strategy through policy briefs and grant programs offering funding streams to states. President Obama and President Biden both promoted apprenticeships as workforce development initiatives. In President Trump's first administration an executive

order aimed at the expansion of apprenticeships (Exec. Order No. 13,801, 2017) called for the development of Industry Recognized Apprenticeship Programs (IRAPs), but one of Biden's earliest executive orders (Exec. Order No. 14,016, 2021) revoked Trump's order. The Biden administration argued that IRAPs weakened labor standards and lacked the rigorous oversight afforded through the Department of Labor's Registered Apprenticeship (RA) system (The White House, 2021). Biden later endorsed the National Apprenticeship Act of 2021, a legislative effort that included specificity to expand registered apprenticeships, pre-apprenticeships, and youth apprenticeships across various sectors (National Apprenticeship Act, 2021).

While federal administrations have shaped the national apprenticeship landscape through executive and legislative actions, states have played an equally pivotal role in advancing apprenticeship through targeted investments and employer incentives. States such as Iowa, Connecticut, and California have proven that investing in apprenticeships is a powerful multiplier for employers who serve as primary financiers for apprenticeship programs as they not only pay wages but also fund the cost of classroom materials and paid mentors (Hanks & Gurwitz, 2016). Thirty-four other states and Guam offer tax incentives and tuition assistance to employers as an enticement to implement and grow apprenticeships (Apprenticeship USA, n.d.). For example, New York dedicated $50 million of its 2017-2018 budget to fund apprenticeships in emerging industries. Known as the Empire State Tax Credit, it offers "employers a progressively increasing tax credit per apprentice per year" (Sharp & Dvorkin, 2018, p. 6).

Youth Apprenticeships

Some educational policymakers see a promising role secondary and postsecondary institutions could offer by developing and advancing registered Youth Apprenticeships (YA) (Parton, 2017). Career and Technical Education (CTE) legislation calls for embedding the

opportunity to earn industry-recognized credentials in apprenticeship programs. The reauthorization of the federal Perkins Act (20 U.S.C. 44), now renamed as The Strengthening Career and Technical Education for the 21st Century Act, acknowledges the value of integrating CTE into elementary, secondary, and postsecondary education. Researchers who study the impact of technical skills training agree with this integration and further tout CTE's contributions to a healthy economy (Imperatore & Hyslop, 2017; Wonacott, 2001).

Observers of American apprenticeship movements see relevancy in the addition of YA to the high school experience (Parton, 2017; Tatum et al., 2019). Economists, educators, and policymakers see value in enabling students to both gain the advantage of earning while they are learning a skill and also simultaneously learning professional and soft skills as they work alongside more experienced mentors (Ryan & Lőrinc, 2018; Sharp & Dvorkin, 2018). Additionally, YA programs offer opportunities to earn valuable industry credentials that may increase earning power as students progress through apprenticeships (Steva, 2017).

For today's generation of youth, the interplay between earning and learning became sharply apparent during the COVID-19 pandemic. Many were thrust into the workforce to help support their families while simultaneously managing remote academic responsibilities. In this post-pandemic context, the opportunity to earn while learning may not only appeal to school-weary youth[3] but also restore a sense of relevance to continuing their education after high school.

Anderson and Nieves (2020) and Remington (2018) cite evidence that YA decreases skill mismatches, addresses wage inequality, and reduces high youth unemployment. Lerman and Packer (2015) cite the successes of countries that use apprenticeship as a component of a

[3] The term 'school-weary' has been ascribed to youth at risk for dropping out (Glover R. W. as quoted in Clark, 1992, p. 3). I use this term to describe youth who are disenchanted by school as validated by a Harvard national survey of high school youth. When asked how school made them feel, top descriptors were tired, stressed, and bored (Moeller et al., 2019)

vocational education and training program (VET). Approximately 30 countries around the globe employ some form of VET in their secondary education system (Cedefop, 2019). Delivery systems vary but follow three basic formulas: school-based education; dual school-based curriculum combined with firm-based training; or some other method of informal training (Bonoli & Wilson, 2019). The strength of these combined education and training models is further enhanced by the economic value apprenticeships lend to youth employment rates in these countries (Muja, et al., 2019). For example, Swiss youth represent the labor force equal to the rate of the "25- to 64-year-old population, likely due to the seamless transition of almost all youth from apprenticeship to a full-time job" (Hoffman & Schwartz, 2015, p. 1).

Robert Lerman writes extensively on the topic of apprenticeship and its viability for creating a skilled workforce. Lerman established the American Institute for Innovative Apprenticeship (AIIA) in 2012. AIIA's operational belief "is that a large apprenticeship system can increase youth employment, improve the matching of skills and jobs, lower inequality, enhance skills and productivity, and diversify routes to rewarding careers" (American Institute for Innovative Apprenticeships, 2022, n.p.). As an economist, Lerman believes increasing apprenticeships could enhance the economic health of the U.S. as the practice could offer promising career preparation to Americans who do not intend to pursue a college degree (Lerman 2019). Guvenen (2018) suggests apprenticeship could strengthen the connection between education and workforce development entities. Like Lerman, Guvenen sees value in apprenticeship becoming more prominent in the U.S. educational system.

Economists and legislators agree that forward momentum in the advancement of apprenticeships is a promising practice worthy of inclusion in K-12 and postsecondary education policy. Representative Joseph Courtney, who hails from the Fitzgerald Act's namesake home

state of Connecticut, co-sponsored H. R. 8294, the National Apprenticeship Act of 2020. The first-ever reauthorization of the 1937 Fitzgerald Act, H. R. 8294, proposes aligning youth apprenticeships and high school graduation requirements, and it includes plans to scale up pre-apprenticeship and YA programs. In addition, this act proposes to:

> offer related instruction through dual and concurrent enrollment programs and other accelerated learning programs, as described in section 4104(b)(3)(A)(i)(IV) of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7114(b)(3)(A)(i)(IV)); facilitate transitions for youth apprentices who have completed their youth apprenticeships into further education, including an associate, baccalaureate, or advanced degree, and related apprenticeship opportunities; and align activities carried out under this Act with eligible funding from, and planning processes for, the Carl D. Perkins Career and Technical Education Act of 2006 (20 U.S.C. 2301 et seq.), the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6301 et seq.), the Individuals with Disabilities Education Act (20 U.S.C. 1400 et seq.), the Rehabilitation Act of 1973, and the Higher Education Act of 1965 (20 U.S.C. 1001 et seq.). (H.R.8294, 2020)

By strategically aligning federal education and workforce policies, the reauthorization of the National Apprenticeship Act offers an opportunity to reimagine the high school experience for school-weary youth. It also holds promise for advancing equity, expanding access to postsecondary opportunities, and reducing youth unemployment through structured, work-based learning like youth apprenticeship.

Problem Statement

George-Jackson and Gast (2015) found that perceptions related to college affordability directly impacted students' decisions to choose college as a pathway to a career. According to Sallie Mae's annual report, *How America Pays for College*, "81% [of families] say they eliminated a school from consideration based on cost at some point in the college application process" (Sallie Mae, 2022, p. 3). The report also reveals a 20% rise in the cost of college for families over the past ten years. Parton (2017), Lerman (2013), and Meyer et al. (2017) believe the rising cost of college offers new relevance to the value apprenticeship offers as a pathway to a career.

While researchers (Akkerman & Bakker, 2011; Jorgensen, 2017; Lehmann, et al., 2013) have studied the benefits of registered Apprenticeships, much of the work stems from studies of European models of apprenticeship. Research on registered apprenticeships in the U.S. is focused on outcomes and earnings, and it lacks analysis of policies, procedures, and processes that lead to successful programs (Goger & Sinclair, 2021; Trutko et al., 2022; U.S. Department of Labor, 2022). Furthermore, the body of research on U.S. apprenticeship is heavily focused on the benefit, or lack thereof, apprenticeships offer adult workers (Reed et al., 2012).

A smaller body of policy papers exists about YA programs in the U.S., but when these authors cite research, the research is limited in scope and is isolated to the perspective of educators, students, and parents. Much of the research is limited to quantitative studies of program characteristics. For example, Smith (1997) conducted a study of Georgia's first youth apprenticeship program. Data is described as consisting "of descriptions and analyses of initial youth apprenticeship programs, rather than measurements of program impacts and outcomes" (Smith, 1997, n.p.). Conversely, Evanciew's (1994) qualitative study of youth apprenticeship

presents the isolated perspectives of individual stakeholders' views on the success or failure of the experience. Evanciew's (1994) research explored the relationship between workplace mentors and their youth apprentices through situated cognition theory. Evanciew's results focused on "providing information on how participants feel about learning in a workplace" (Evanciew, 1994, p. 5).

Lerman (2013, 2016, 2019) and Hamilton (2017) cite successful apprenticeship programs in other countries to make the case for expanding apprenticeship models to high schools in the U.S. A policy brief from New America's Center on Education and Skills offers the success of European models validates apprenticeship as a solution that might fix employers' workforce woes and lessen or eliminate college debt for apprentices (Parton, 2017). Lodovice et al. (2013) present a quantitative analysis of apprenticeships in Italy and the United Kingdom that validates apprenticeship as a cost-effective way to improve employment and wage outcomes for workers.

Decker (2019) posits mindset as the reason U.S. educational institutions fail to integrate apprenticeships as a pathway to a career. Despite evidence of the longstanding success of European apprenticeship models, the "prevailing mindset is that the only way to succeed economically in the United States is to pursue a bachelor's degree" (Decker, 2019, p. 1). Even in Europe there is concern that many apprentices fail to transition to higher education (Decker, 2019: Powell et al, 2012). Jorgensen (2017) raises perceptual associations that "early tracking increases social selection in education, and because apprenticeships do not offer eligibility for higher education" (p. 77), young people are diverted away from pursuing advanced degrees.

Denmark's standard apprenticeship program serves youth from ages 16-24 through a dual system of vocational education training (work-based learning) and school-based learning (Bonoli, 2019; Jorgensen, 2017). As fewer students elect to pursue the dual path, Danish

policymakers see an "urgent policy problem, because it is believed to lower the esteem of and enrollment in apprenticeships" (Jorgensen, 2017, p. 65). The Danish research correlates with the philosophical quandary in the U.S. as fast-tracking to a good career often both negates the immediate need for postsecondary education but also limits future wage increases tied to higher education degrees.

According to Lerman (2019), Hamilton (2017) and Parton (2017), workforce woes, declining college enrollment, wages that do not keep pace with cost-of-living increases, and alarming numbers of college non-completers could be abated by YA programs. Policymakers at New America call for researchers to delve into well-designed YA programs that offer students in the U.S. the best of a fast track to a debt-free career and options for higher education and wage advancement throughout a person's life (Berkowitz, 2022; Palmer, 2018). Recommendations include the call for policymakers to outline YA program requirements, including the roles and responsibilities of industry and education and legislative policy to fund and codify registered youth apprenticeship programs.

Statement of Purpose

Using qualitative methods, I explored the perceptions of key stakeholders in educational institutions, workforce development agencies, and workplace settings to identify the collaborative practices employed in the development, implementation, and evaluation of a thriving youth apprenticeship (YA) program. Because collaboration is a hallmark of social capital in action (Putnam, 1993; Neal & Neal, 2019; Woolcock & Narayan, 2000), I used social capital theory to guide data interpretation. Building on Woolcock's (1998) definition of social capital as "a broad term encompassing the norms and networks facilitating collective action for mutual benefit" (p. 155), I applied his (2001) typology of bonding, bridging, and linking social

capital to interpret the collaborative dynamics among stakeholders. This theoretical framework supported my study's central aim: to understand how collaborative strategies enable interagency stakeholders to facilitate YA as a viable educational pathway to career.

Research Questions

Using a framework based on the theory of social capital, I employed qualitative methods to address two research questions:

1. How do stakeholders in educational institutions and workforce development agencies collaborate with employers to develop, advance, and sustain YA programs?
2. How can interagency collaboration aid the refinement of policy governing YA implementation?

Significance of the Study

While research on apprenticeship as a career pathway exists, much of the research is focused on the practices, experiences, and outcomes of apprenticeship models in countries other than the U.S. Lodovici et al. (2013) and Rauner and Smith (2010) highlight the quantitative benefits of apprenticeship models to the economic well-being of the country under study with emphasis on the quality and profitability of programs. Poortman et al. (2011), Ryan and Lőrinc (2018) and Simms (2017) explored perceptions of the value of training apprentices using company-specified standards developed by employers. These studies focused on the engagement of youth through workplace learning. Given the research based in largely focused on international apprenticeship models, further research is needed to examine the effectiveness and impact of apprenticeship pathways in the U.S. context.

Proponents of apprenticeship as a pathway to a career in the U.S. cite economic indicators as cause for its resurgence in both political and educational discourse. Unemployment

indices, poverty rates, an under-skilled workforce in the skilled trades, stagnant high school graduation rates, and steady declines in college enrollment and persistence repeatedly appear in the literature calling for apprenticeship as an educational pathway (Amoyaw & Brown, 2018; Anderson & Nieves, 2020; Apprenticeship Expansion Taskforce, 2018; Decker, 2019; Holzer & Lerman, 2014). Most of this literature is narrative in nature and unsupported by any formal research on the viability of apprenticeship as a pathway for U.S. youth to pursue a career.

The preponderance of international research and literature on apprenticeship acknowledges the minor role apprenticeship has held as a career pathway for youth in the U.S. (Rauner & Smith, 2010). International research often asserts apprenticeship increases both human and social capital. However, extrapolating these assertions to the less regulated economy of the U.S. could prove misleading due to the nature of the economies. Fortwengel et al. (2019) explain the difference in how firms in Liberal Market Economies (LMEs), such as the U.S., differ from firms in Coordinated Market Economies (CMEs), such as Germany. Primarily, "firms in LMEs rely largely on recruiting skilled workers, such as trade, technician, and certain services occupations from the external labor market and/or training recruits in firm-specific skills on-the-job. By contrast, firms in [CMEs] rely more on apprenticeships to recruit and train their workforce" (p. 1). Through this study, I will contribute to the research on YA programs in the U.S. by examining the collaborative efforts of stakeholders engaged in program development, implementation, and evaluation of a thriving YA program.

Definition of Terms

Unless otherwise cited, the terms below are adopted from *Michigan's Registered Apprenticeship Process Guide,* a grant-funded publication produced by the Workforce Intelligence Network of Michigan (Workforce Intelligence Network, 2019).

Appendix A – the appendix to the Apprenticeship Program Standards that defines the apprenticeship program's work process, required RTI (Related Technical Instruction), and wage scale.

Apprenticeship -- a formal relationship between a worker and a sponsor that consists of a combination of on-the-job training and related occupation-specific instruction in which the worker learns the practical and theoretical aspects of an occupation. Apprenticeship programs are sponsored by individual employers, joint employer–labor groups, and employee associations. Apprenticeship programs usually provide at least 144 hours of occupation-specific technical instruction and 2,000 hours of on-the-job training per year over a 3- to 5-year period (U.S. Bureau of Labor Statistics, n.d.).

Apprenticeable Occupation – an occupation recognized by the DOL (Department of Labor) OA as being "apprenticeable," in other words, an apprenticeship program can be registered to train individuals in that occupation.

Apprenticeship Program Standards – sometimes called simply "the standards;" the document that describes how the program will be managed and is officially signed by the DOL OA and the apprenticeship sponsor to register the program.

Competency-Based Apprenticeship – CB Apprenticeship – an apprenticeship where apprentice progress is measured by their attainment of competencies rather than time spent on the job; the required competencies are defined by the employer and approved by the DOL OA.

Department of Labor Office of Apprenticeship – DOL OA – The DOL OA is the government agency that is responsible for registering and overseeing registered apprenticeship programs in the U.S.

Hybrid Apprenticeship – HY Apprenticeship – an apprenticeship where apprentice progress is measured by a combination of hours worked on the job and competencies achieved.

RAPIDS (Registered Apprenticeship Partners Information Database System) – the online registration system used by the DOL OA to register and track new apprenticeship programs and apprentices.

Registered Apprenticeship Program -- a proven model of apprenticeship that has been validated by the U.S. Department of Labor or a State Apprenticeship Agency (SAA) (appretinceship.gov, n.d.-a).

Related Technical Instruction – RTI – the classroom learning component of a registered apprenticeship; may occur at a college, union, internally at a company, private training provider, etc.

RTI Provider – an organization that delivers RTI in an apprenticeship program; there can be multiple RTI providers utilized in one apprenticeship program.

Sponsor – the sponsor of an apprenticeship program is the organization that is responsible for ensuring that the program is being run properly and according to the program standards and federal regulations.

Time-Based Apprenticeship – TB Apprenticeship – an apprenticeship where apprentice progress is measured by the number of hours the apprentice has spent working during their apprenticeship in a variety of Work Process categories that are defined by the employer.

Wage Scale – the minimum wage rates for apprentices at various points in their apprenticeship program; must include at least one wage increase; included in the program Appendix A.

Work Process – can be TB, CB, or HY; describes the on-the-job learning that the apprentice must complete to complete their apprenticeship program.

Youth Apprenticeship -- Programs for high school students that combine academic and technical classroom instruction with work experience through a Registered Apprenticeship Program (RAP). It provides the foundation for students to choose among multiple pathways after high school – to enroll in college, enter an apprenticeship program, begin full-time employment, or a combination (apprenticeship.gov, n.d.-c).

Limitations, Delimitations, and Assumptions

The limitations, delimitations, and assumptions of this study are identified and noted.

Limitations

One of the limitations of this study is that access to YA program participants in the U.S. is limited to a participant pool defined by the administrators of the program. Therefore, the number of participants choosing to participate may be limited to certain gatekeepers' biases. For example, administrators may exercise intentional or unintentional biases when sharing contacts with potential participants. A second limitation may be the degree to which participants vary in ethnicity, gender, socio-economic status, or other demographic traits as these may also be skewed (intentionally or unintentionally) by gatekeepers' biases. A third limitation is that access to interviewees may be limited by their professional time constraints.

Additionally, the case study approach imposes inherent limits on external validity and researcher subjectivity. The use of a single case in this study will limit the extent to which findings may be generalized from a particular YA program in a particular state to the broader scope of YA in the U.S. Merriam and Tisdale (2016) explain these limitations as shortcomings and biases related to the researcher's nature as the instrument. Because of this, "it is important to identify them and monitor them in relation to the theoretical framework and in consideration of the researcher's own interests, to make clear how they may be shaping the collection and

interpretation of data (p. 16). As a former CTE Director, I helped develop a school-sponsored YA program. Thus, I bring biases developed through the successes and challenges that the program has experienced since its inception in 2019.

Delimitations

I focused on one YA program near the eastern coast of the U.S. Participants in this study included representatives of the associated educational institutions, workforce development agents, employers, and other invested community members. Field observations were conducted at one employer's site. A sampling of documents for review were culled from policy manuals, registration documents, and other internal or published protocols related to the program.

Assumptions

I anticipated three assumptions would be encountered: (a) I assumed that interviewees were honest and forthcoming with their responses; (b) I assumed the participants' apprenticeship experience yielded some outcome (academically, monetarily or socially, or economically) that would not have otherwise occurred absent an association with a YA program; and (c) I expected my interpretation of the data accurately captured the perceptions of the interviewees, the authenticity of workplace observations, and the veracity of the inspected documents.

Organization of the Dissertation

This dissertation is comprised of five chapters. In Chapter I, I discuss the purpose and the problem, explain the significance of the study, state my research questions, and define key terms. In Chapter II, I present my critique of the literature on apprenticeship programs and build a theoretical framework based on social capital theory as it relates to youth apprenticeship and its potential impact on the U.S. secondary school experience. Chapter III details my methodology and explains participant selection, instrumentation, data collection, data analysis, reliability, and

validity. Chapter IV provides a discussion of the findings of my study. Chapter V presents a summarization of the study, propositions for collaborative practices as a means for advancing YA programs and refining YA policy, and recommendations for future research.

CHAPTER II

CRITIQUE OF LITERATURE

In Chapter I, I provided an overview of the purpose, research questions, and significance of this study. The purpose of this study was to discover ways in which communities leverage social capital to define policy, develop programs, and implement key components of youth apprenticeships (YA). The following research questions guided study:

1. How do stakeholders in educational institutions and workforce development agencies collaborate with employers to develop, advance, and sustain YA programs?
2. How can interagency collaboration aid the refinement of policy governing YA implementation?

In this chapter, I begin with an overview of the search process used to identify relevant literature, legislative developments, and empirical studies related to YA. I then provide a historical account of apprenticeship in the United States, followed by an examination of more recent state and federal policies designed to expand YA opportunities. These historical and policy perspectives establish the broader context for renewed national interest in YA as a viable educational and workforce strategy. Because collaboration is central to both research questions guiding this study, I also include a review of literature on interagency and cross-sector collaboration as it relates to the design, implementation, and policy evolution of YA programs.

Educators, economists, politicians, and policy makers all have a vested interest in the revival of apprenticeships as a workforce development strategy. Gaps between qualified, skilled workers and jobs that permit Americans to earn a living wage in an increasingly global, ever-evolving, technology driven economy dominate educational and political agendas. A review of the literature on contemporary apprenticeship practices in other countries proffers the utility of

youth apprenticeships in secondary education as a successful means to: (a) offset the staggering debt of postsecondary education; (b) reduce skills mismatches for young workers, and (c) reduce youth unemployment rates. Literature that explores the attendant factors will provide context necessary to explain why YA may provide a more direct pathway to positive educational outcomes and, at the same time, abate the rising cost of educational opportunities that enable young Americans to earn a living wage. Finally, connections between social capital theory and literature will explain its relevance to this study and outline its application to the identification of practices that promote efficient intertwinement of workforce development and education policy.

The Search Process

In the pursuit of pertinent bodies of literature for this study, I used key terms to search through Google Scholar: registered apprenticeships, youth apprenticeships, workforce development, and social capital theory. By mining the returns on these initial searches using Google Scholar's filters for currency and related articles, other key terms, as well as notable journals and prominent authors, became apparent. Key terms such as vocational education, work-based learning, human capital, and social capital theory and authors such as Robert Lerman, Michael Woolcock, Nan Lin, Pierre Bourdieu, James Coleman, and Robert Putnam were used in subsequent searches.

After I initially searched Google Scholar, I then used the following databases: ProQuest, JSTOR, EBSCO, and Scopus. Additionally, national, and international online databases provided by United States Department of Labor (USDOL), U.S. Department of Education (ED), the National Centre for Vocational Education Research (NCVER), and their international tertiary education research database VOCEDplus, provided current practices and related statistics for both the U.S. and also international trends in economics, education, and apprenticeship.

Specific searches were conducted on topics such as youth apprenticeship models, workforce development partnerships, and social capital theory. Returns were evaluated for currency, relevancy and authority, accuracy and purpose or bias. Most sources provided additional resources considered for this study through articles abstracts, reviews of literature and reference sections.

Theoretical Framework

I used social capital theory to frame this study. To guide my framework, I differentiate between the term "social capital" and "social capital theory." Grootaert and Van Bastelaer (2002) define social capital as "the institutions, relationships, attitudes, and values that govern interactions among people and contribute to economic and social development" (p.4). Kreuter and Lezin (2002) acknowledge the importance of interactions and, further, assert the inherent value key constructs of social capital bring to collaborative networks and the way they function.

Social capital theory evolved from the increasingly popular application of the concept of social capital to studies addressing socioeconomic, political, and policy debates (Durlauf, 2002; Kreuter & Lezin, 2002; Woolcock & Narayan, 2000). Prominent researchers who apply social capital in theoretical constructs include: Pieree Bourdieu (1986); James Coleman (1993); Michael Woolcock (1998, 2001); Robert Putnam (1993, 1997, 2001); and Nan Lin (1999, 2001). Each of these researchers addresses societal issues and links social capital to individual and group outcomes.

Lin (2008) conceives a theory of social capital that proffers an actor, an individual, or a group invests in embedded resources in social networks to attain certain goals. Lin believes a "network-based theory helps formulate sharper and more focused measures to inventory both internal and external social capital for associations and organizations so that their capability to

access and mobilize resources in actions augments a deeper understanding of the utility of participation" (p. 19). As YA programs involve individuals in educational and community networks, Lin's theory is particularly applicable to this research.

Pierre Bourdieu (1986) defines social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (p. 248). James Coleman (1993) similarly affirms the utility of social capital but extends its function beyond individual or organizational benefit to include broader societal outcomes, particularly within economic systems. While Bourdieu emphasizes the unequal distribution and reproduction of social capital across social classes, Coleman frames it as a public good, embedded in social structures and capable of facilitating collective efficacy.

Michael Woolcock (2001) differentiates three basic forms of social capital: bonding social capital, which refers to strong ties among members of families and ethnic groups; bridging social capital, which encompasses more distant relationships such as those with friends, associates, and colleagues; and linking social capital, which describes vertical connections across institutional hierarchies where access to power, social status, and resources varies by group. Each of these forms of social capital operates within and across the diverse stakeholders involved in YA program settings. While bonding social capital is often empirically linked to familial or ethnic ties, bonding is also evident in the close, trust-based relationships between mentors and apprentices. These relationships are characterized by regular interaction, shared goals, and mutual support Coleman (1993) noted that such high-trust relationships within structured environments can resemble familial bonds, citing workplace participants who described their peer group as "the closest thing to a family I've got" (p. 12). These emotionally

anchored connections within YA programs function as a workplace-based form of bonding capital, contributing to apprentice growth and retention. Scales et al. (2020) emphasize the importance of linking social capital in improving outcomes for youth from underrepresented backgrounds. In YA contexts, hierarchical relationships among employers, mentors, and apprentices create opportunities to link and leverage social capital that may otherwise remain inaccessible to marginalized youth.

A more contemporary observer of social capital and its impact on American society is Robert D. Putnam, Professor of Public Policy at Harvard University. Putnam's theoretical stance regarding the significance of networks to social capital is similar to Lin and Coleman. Putnam (1993) believes "features of social organizations, such as networks, norms and trust that facilitate action and cooperation for mutual benefit" are foundational to social capital theory" (p. 35). In Putnam's book, *Our Kids: The American Dream in Crisis,* Putnam credits economic growth and successive expansions of the educational system in the decades after World War II to exceptional upward mobility for many Americans. Conversely, he offers evidence that "absolute mobility has stalled since the 1970s, because both economic and educational advances have stalled [and] recent public commentary asserts that relative social mobility in America has fallen in the past quarter century as well…" (Putnam, 2016, 43).

Putnam promotes an examination of children's families, parents, schools, and community life to detect changes that may allow us to effect proactive measures and change the collective trajectory of upward mobility for our future generations. To fully operationalize Putnam's call to action would mean addressing pervasive societal ills confronting youth. For example, youth unemployment, college enrollment attrition, equity, and access to the American dream for marginalized populations, and skills gaps related to an aging skilled trades workforce are well-

documented barriers to the pursuit of the American dream (Anderson & Nieves, 2020; Collins & Casey, 2017; Ferguson, 2023; Giffi et al., 2015; Lerman, 2019; NCES, 2022-a; Remington, 2018). The application of social capital theory will provide a coherent structure for examining how the establishment of YA programs within and across educational and economic entities could simultaneously address economic and education issues.

Background

Historian William Reese (2007) explains U.S. public high schools began in the early 19th century as a means "to educate young people for the world of work and to reinforce middle-class sensibilities" (p. 79). However, for two centuries prior to formal institutions of learning, apprenticeships served as both a means of instruction and also a method of workforce development. In 1646, colonial Virginia enacted an apprenticeship statute "that empowered local authorities to round up boys and girls who, whether by parental neglect or absence, were not being instructed 'in some good and lawful calling" (Urban et al., 2019, p. 23). From these early apprenticed youth to America's most famous apprentice, Benjamin Franklin, to modern-day apprentices working in high-tech fields, young people have benefited from a multitude of functions that apprenticeships offer. Historically, apprenticeship "provided a safe passage from childhood to adulthood in psychological, social and economic ways" (Rorabaugh, 1988, p. viii). "In terms of more aggregative analysis, apprenticeship was a major factor in the determination of the rate and quality of human capital formation" (Mokyr, 2018, p. 22). Present-day proponents of apprenticeships reference these same human capital benefits as they advocate for a resurgence of the practice and, at the same time, portend potentially beneficial social capital implications (Parton, 2017; Lerman, 2016). Increased collaboration between educational organizations and the industry employers within the communities they serve could bring value to education reform

(Lanford & Maruco, 2018). Such collaboration, in social capital terms, would strengthen community linkages and bridge the path from school, to work, to a living wage career.

As these connections deepen, the metaphor of an apprenticeship ecosystem has gained traction among researchers and practitioners (Advance CTE, 2023; McMahon, et al., 2023; National Governors Association, 2022). Earlier discourse framed apprenticeship within a "landscape" of policy and workforce development, often treating programs as isolated or static initiatives (Dismore, 2013: Fuller & Unwin, 2009; Parton, 2017). In contrast, the ecosystem frame emphasizes a dynamic, evolving system of interconnected actors made up of educators, employers, students, intermediaries, and policymakers working collaboratively across institutional boundaries. This framing better captures the complexity of youth apprenticeship implementation in the U.S., where shifting roles, shared resources, and responsive adaptation are essential to program success. Understanding youth apprenticeship as part of an education–workforce ecosystem invites a broader perspective on how American education might be reconceptualized as a system that prepares students for life, work, and learning across multiple pathways.

Policy on Youth Apprenticeships

The practice of apprenticeship in the U.S. existed long before the concept entered the realm of public policy. Several societal factors converged during the industrial age of the early 20th century that linked apprenticeship and education (Jacoby, 1991). Policies governing the practice, implementation, and evaluation of formal apprenticeships soon followed this linkage.

20th Century Developments

The mechanization of factory work diminished the importance of older skilled workers training new job seekers as machinery replaced workers and their valued skill sets. Unions

became increasingly more involved with the oversight of apprenticeships, and apprenticeships transformed from contractual agreements between the employer and apprentice to union dictated training agreements with explicitly defined training tasks (Jacoby, 1991). Labor unions began working with state governments to regulate apprenticeships. In 1911, Wisconsin became the first state to establish registered apprenticeships through legislation that protected both the employer and the apprentice. Included in their legislation was the establishment of a state apprenticeship board "to administer legal provisions that included wage and hour regulations as well as continuation of schooling for each apprentice" (Jacoby, 1991, p. 897).

When World War I erupted, employees became the enlisted and factory owners lost both their apprentices and their qualified trainers. Worker shortages ignited a search for alternative methods to train new hires. In response to the need for skilled workers, "states and local governments felt the need to offer affordable postsecondary education to their populations, ensuring their labor forces could meet the needs of industrialized jobs" (Anderson & Nieves, 2020, p. 26). Vocational training schools soon emerged and provided a pipeline from secondary education to jobs and a stable wage for workers.

Eventually, the federal government regulated vocational training and apprenticeships with the authorization of the Smith Hughes Act in 1917. Smith Hughes provided a funding stream for training in agriculture, industrial arts, and home economics within the realm of comprehensive high school (Anderson & Nieves, 2020; Parton, 2017). An official era of federal oversight of apprenticeships began with the 1937 Congress passage of the Fitzgerald Act, a joint federal-state framework of apprenticeship programs in numerous occupations (Clark, 1992).

For several decades after the Fitzgerald Act, apprenticeship movements focused on adult workers. The notion of youth apprenticeships first appeared under the Carter administration with

the Youth Employment Demonstration Project Act. Although initially successful with 3,000 youth apprentices in eight states, “the stress of getting kids in jobs overwhelmed any efforts at research on what [made these] apprenticeships work” (Hamilton, S. as cited in Clark, 1992, p. 7).

While adult apprenticeships continued to grow in industries such as manufacturing and construction, interest in youth apprenticeships did not gain any policy momentum until President George H. W. Bush proposed a comprehensive plan to strengthen the connection between vocational schools and apprenticeship programs nationwide. Bush, Sr.’s Labor Department released grants for youth apprenticeship projects in 1990. Then, during his re-election campaign, President Bush approved the National Youth Apprenticeship Act of 1992. This Bill stipulated the following as criteria for youth apprenticeship programs: academic instruction; work-based learning; worksite learning and experience; agreement commitment by youth apprentices, parents or guardians, employers (in collaboration with labor organizations where appropriate), and local educational agencies; agreement provisions for educational outcomes and for wages and hours; and, information and guidance (S.B. 2745, 102nd Cong.,1992). Evidenced in these criteria are the foundations of social capital theory empirically defined in its most basic form as resources borne of social bonds, bridges, and linkages (Woolcock, 2001) and the utility of these resources as an investment or mobilization (Lin, 1999).

Under the Clinton Administration, youth apprenticeships again garnered bipartisan support in the passage of Public Law: 103-239, the School-to-Work Opportunities Act (STWOA) of 1994 (H.R. 2884; Lerman, 2013). In the same year, Congress passed the National Skill Standards Act (NSSA) as a voluntary national system of skill standards. These complementary acts, STWOA and NSSA, established attainable goals to help determine which skills workers needed per industry standards (Lerman, 2013). Despite early support, the law

failed to deliver on its measures. Nagging fears that STWOA and its emphasis on at-risk youth would track low-income and minority students in vocational courses with little promise for college preparedness or high-wage jobs plagued its implementation. By 2000, Clinton's $1.85 billion funding for STWOA accomplished little more than a legacy of "'venture capital' for starting programs that would rely on the financial commitment of states and districts to continue" (Hamilton, 2019, p. 39).

21st Century Ideological Pivots

Adding fuel to the demise of STWOA, the George W. Bush No Child Left Behind (NCLB) era favored "'College for All' [over] school-to-work in the vocabulary of many educational policymakers" (Anderson & Nieves, 2002, p. 11). NCLB garnered much attention from civil rights advocates who praised the Bill's intent to reduce achievement gaps spurred by Bush's belief the "policy would attack the 'soft bigotry of lowered expectations'" (Kaestle, 2016, p. 71). In fact, through the two terms of the George W. Bush administration, apprenticeships garnered no further political momentum as educational institutions focused new initiatives on accountability and educational achievement gaps.

Apprenticeships would again gain national attention with both the Obama and Trump administrations. President Obama pledged significant dollars to the expansion of apprenticeships through grants and executive orders. In 2014, President Obama announced his goal to double the number of apprentices in the U.S. to 750,000 with a $175 million American Apprenticeship Grant (Crane & Colburn, 2016). Like his predecessor's programs, Obama's focus was on high growth occupations and industries. In addition, and setting Obama's program apart from previous attempts, grantees were to create career pathways that encompass apprenticeship and align with other postsecondary educational offerings. Further, Obama's plan dictated intentional

efforts be given to previously underrepresented groups, such as women and minorities. In true social capital vernacular, Obama's labor secretary Tom Perez blogged, "Training programs like apprenticeships are a clear path to shared prosperity, and today's grants will provide hard working Americans with the skills and knowledge they need to advance their careers, get good jobs, and grow the economy" (Perez & Zients, 2016, n.p.).

President Trump's administration followed Obama's lead and issued an early Executive Order with a stated purpose to prepare workers for the jobs of the future. Specifically, Trump's order acknowledged two important needs. One, to help students graduate with the necessary skills and connections to secure a high paying job; and two, a desire to help students do so without accumulating the crushing debt with which so many individuals today find themselves (Exec. Order No. 13,801, 2017). With this executive order, Trump established an apprenticeship task force to explore solutions to a troubled American workforce.

President Trump's apprenticeship task force's budget included a set aside of a $200 million budget to address the task force findings. In their report to President Trump, the task force emphasized that development and implementation of an American apprenticeship framework would require collaboration of several critical stakeholders, including the private sector, state and local governments, academia, unions, and trade associations. Among the task force's recommendations was a shift from union governed apprenticeships to industry-led partnerships (Apprenticeship Expansion Task Force, 2018). This shift strengthened the role of employers and opened a market for third party certifiers, such as non-profit organizations, educational institutions, and joint labor-management organizations (Fortwengel et al., 2019). From a social capital perspective, the success of apprenticeship expansion would hinge on the extent to which different agents and agencies of expertise could form and sustain mutually

beneficial and accountable ties (Woolcock, 2001). Interagency partnerships became a common thread in both legislative actions aimed at expanding apprenticeship and in the request for proposals offering funds from public and private sectors.

Apprenticeship Impact on Human and Social Capital

Observers of American youth apprenticeship movements (Clark, 1992; Lerman, 2013; Parton, 2017; Tatum et al., 2019) point to a combination of potential human and social capital gains from apprenticeship models and express perplexity over the lack thereof any wide-scale implementation. Chief among these gains is human capital rewards afforded school-weary youth. Not only do students gain the advantage of earning while they are learning a skill, but they also learn to be an adult as they work alongside their older, more skilled co-workers (Poortman et al., 2011; Stanton-Salazar, 2016). Moreover, youth apprenticeships may not only entice school-weary youth to stay in school but also may add to their potential earning power and motivation to pursue postsecondary training a few years into their career. “Attaining industry-recognized credentials while still in high school has been shown to improve wages for graduates as well as working-learners should they enter college” (Stern, 2015, n.p.).

As for the social capital benefits, researchers cite evidence that youth apprenticeships decrease skill mismatches, address wage inequality, and reduce high youth unemployment (Lerman, 2013; Anderson & Nieves, 2020, Remington, 2018). Apprenticeship proponents often cite the successes of countries that use apprenticeship as a component of a vocational education and training program (VET). Over 40 countries around the globe employ some form of VET in their secondary education system. Delivery systems vary but follow three basic formulas: school-based education; dual-school-based curriculum combined with firm-based training; or some other informal training method (Eichhorst et al., 2012).

Evidence from Other Countries

In Germany and Switzerland, each with long-standing apprenticeship models, youth unemployment (ages 16-24) trends lower than the U.S. rate for the same demographic (Meyer et al., 2017). The Swiss VET system serves students of all ability levels and prepares for a range of occupations from traditional blue-collar trades to high-tech health care. Swiss employers credit its VET system as a major contributor to the strong Swiss economy, which boasts virtually full employment (Hoffman & Schwartz, 2015). Likewise, researchers studying the effect of VET in the Netherlands found that programs with an emphasis on apprenticeship training increase a student's labor market opportunities (Muja et al., 2019). These researchers attribute three significant causal elements for the improved labor market outcomes: improved human capital (the apprentice's acquired skills); effective queuing mechanisms (apprentice's educational attainment as signaled to and perceived by the employer); and impactful network mechanisms (institutional linkages afforded the apprentice).

Like the U.S., Australia, Canada, and England are experiencing a renaissance in apprenticeship expansion interest. Also like the U.S., the practice of apprenticeship in Australia, Canada, and England has been in existence for hundreds of years and has suffered marginalization since the turn of the twentieth century. Fortwengel et al. (2019) explain the distinguishing difference in the ability of these countries to sustain apprenticeship versus countries such as Germany and Switzerland lie in the structure of their economies. The U.S., Canada, Britain, and Australia, with their Liberal Market Economies (LMEs), rely on recruitment from external labor markets or industry specific training to create a supply of skilled workers. Whereas countries like Germany and Switzerland, with their Coordinated Market Economies (CMEs) rely on apprenticeship to recruit and train their workforce.

Still, recent governmental and private sector influences supporting expansion in these countries illustrate the power of social capital in action. Lerman (2019) credits Britain's recent 8-year, 850,000 new apprenticeships to joint efforts of 850 employment and learning providers. Since the mid-1990's, apprenticeship in Australia has been in a continuous cycle of expansion (Fortwengel et al., 2019). Australia's model illustrates strong linking and bridging forms of social capital influences through private, often nonprofit, Group Training Organizations (GTO). The GTOs serve typical human relations functions that otherwise rest in the employer's hands. The GTOs select and recruit apprentices, provide workers' compensation packages, manage quality and continuity of training, and provide continuous support to the apprentices to ensure successful completion (Lerman, 2019).

In Canada, expansion of apprenticeships has experienced similar limiters as those in the U.S. First, in both countries, college degrees reign as a primary postsecondary option. In a 2013 survey of Canadian youth aged 13 to 17, 53% named a 'university degree' as their first choice; a 'college diploma' was preferred by 25%; and less than 20% considered an 'apprenticeship program' as their first choice (Lehmann et al., 2014). Second, as in the U.S., the delivery of vocational education primarily happens in secondary schools and community colleges. Finally, there has been limited interest in apprenticeships beyond manufacturing and manual trades, unlike in the U.K. and European countries where apprenticeship opportunities occur across a variety of careers and sectors (Lehmann et al., 2014). Also, as in the U.S., interest in youth apprenticeships is a new phenomenon, and public perception and status of these programs suffer. Lehmann et al. (2014) report the Canadian model of youth apprenticeship is a hybrid between that of the UK's modern apprenticeship program and more traditional programs, like those in Germany, but with an emphasis on technical knowledge that is too loosely connected with

training in the workplace. As a result, the perception a Canadian youth apprentice holds of his or her vocational and learner identity by comparison to the value and status placed on the rigor of college and university degrees may be depressed. “It is therefore perhaps not surprising that efforts to increase participation in apprenticeships over the past decade are not achieving their goals” (p. 575). Lerman (2019) concludes:

> While none of these countries have the strong apprenticeship tradition seen in countries like Austria, Germany, or Switzerland, they have nonetheless grown significant programs. In fact, if apprenticeships as a share of the U.S. labor force reached the levels already achieved in Australia, Canada, and England (on average), the United States would attain over 4 million apprenticeships, about 9 times the current number of registered apprenticeships in the civilian sector. (p. 62)

United States

Although the intended outcome of both VET and vocational education in the U.S. is fundamentally the same (preparing students for work), the populous mindsets starkly contrast one another. In Switzerland, VET programs are seen “as an investment in both their financial health and the workforce as a whole (Anderson & Nieves, 2020, p. 34), whereas Americans still view a college diploma as the favored “indicator (or perhaps proxy) of professional competency and employability [and] a key driver of economic mobility” (Anderson & Nieves, 2020, p. 131). Despite these differing mindsets, both VET and U.S. vocational education programs serve similar economic and social purposes. Both intentionally develop qualified workers to meet the employment demands of their economies, and each employ work-based learning to seamlessly transition students from school to employment. However, a key structural difference in the

impetus behind VET and vocational education work-based learning practices is the role, scope, and financial investment of economic and workforce development systems. Reinisch and Frommberger (2004) note close ties to these social systems are evident in European VET models as early as the mid/late 19th century and this long history has shaped a societal value of an education system that links education and vocational training. In the U.S., however, "policies often assume that workers will capture all of the returns on their investments in education and training and that no one else in society will benefit from those investments" (National Academies of Science, Engineering and Medicine, 2017, p. 65).

Easing the transition from school to work only recently became a focus of vocational education in the U.S. During the 1980s, concerns for America's economic competitiveness and anxieties about the nation's schools dominated the political and educational agendas (Hamilton, 2019; Neumark, 2007; Stern, 2015). Vocational education advocates launched initiatives to transform the image and intent of the decades-old tradition of preparing students for jobs to preparing students for college *and* career/technical education (CCTE). This rebranding sparked a new era of intentionally tying core academic subjects to vocational courses to prepare students for college and career (Stern, 2015). Both the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 and the School-to-Work Opportunities Act (STWOA) of 1994 encouraged integration of vocational and academic courses, work-based learning experiences, and curricular connections to postsecondary education (Imperatore & Hyslop, 2017). The most recent reauthorization of Perkins Act, Public Law No: 115-224, Strengthening Career and Technical Education for the 21st Century Act, mandates secondary schools measure at least one of many indicators of postsecondary success. Among these indicators, both work-based learning and apprenticeship completion are options (Cushing et al., 2019).

Economic Advantages of Apprenticeships

Advocates of youth apprenticeship associate two key benefits as economic advantages of apprenticeship. First, the cost of unemployed and underemployed Americans of all ages is staggering. Hoffman and Schwartz (2017) report 3 million young Americans (ages 16-24) neither are in school nor employed. In 2012, Mathematica Policy Research conducted a cost-benefit analysis of registered apprenticeships in 10 states. Reed et al. (2012) found the estimated social benefits of registered apprenticeships exceeds social costs by $49,000, and the potential earnings for participants in registered apprenticeships over a career average $240,307 more than nonparticipants in similar careers. Second, apprenticeships offer more immediate gains in earnings than do postsecondary schools when you consider the apprentice is not incurring college debt and their earnings begin immediately, as opposed to deferring career to completion of degree (Lerman, 2019).

Barriers to Implementation of Youth Apprenticeships

Given numerous political, social, and economic movements over the past thirty years, education policymakers, politicians, and economists alike remain perplexed that no wide-scale launch of youth apprenticeships has developed. Remington (2018) suggests one unintended barrier that relegates apprenticeship movements to regional or local levels is the cyclical nature of our elections and the political will of the electorate:

> Each administration announces new initiatives designed to improve the match between the demand for skill and the supply of it. However, jurisdictional battles among federal agencies and congressional offices lead to fragmentation of these programs, and momentum for them flags when the next administration takes over. (p. 500)

Lerman (2019) offers 4 barriers that limit Americans' opportunity to increase human capital through apprenticeships. One, although USDOL funds an OA, the federal government devotes less than $30 million per year to supervise, market and publicize the system. Two, the structure of the system causes confusion as to oversight of registered apprenticeships. About half the states rely on their own governance, and the other half defaults to federal governance. Even when employers and educators try to launch programs, delays in the approval process, inadequate quality assurance, and a lack of national occupational frameworks confound it. Third, there is limited access to technical assistance for employers, intermediary organizations, and educators who want to establish programs due to the limited capability of the OA. Fourth, there is limited access to funding for academic-related instruction.

The Current State of Youth Apprenticeships in the United States

Definitive data regarding youth apprenticeship (YA) opportunities in the U.S. is convoluted in several ways, particularly due to inconsistent definitions of the term "youth" across federal, state, and programmatic contexts. For instance, the U.S. Census Bureau classifies youth as individuals aged 15–24, a range commonly used in demographic and labor statistics to capture transitional life stages between adolescence and adulthood (U.S. Census Bureau, 2024). The U.S. Department of Labor narrows the age band by one year, 16–24, in workforce programs and policy documents, including youth-targeted initiatives under the Workforce Innovation and Opportunity Act (WIOA) (U.S. Department of Labor, 2023).

Second, because there is no standardized definition of a YA program, states are free to dictate their own policies and practices regarding ages served. Specific apprenticeship programs and state-level implementations often define eligibility based on local education and labor laws. For example, some youth apprenticeship programs begin as early as age 16 when students are

legally eligible for employment and enrolled in high school, while others extend support through age 24, aligning with definitions of "out-of-school youth" used in federal funding criteria (Office of Apprenticeship, 2022). These discrepancies complicate efforts to develop standardized metrics, evaluate program outcomes nationally, and compare YA initiatives across jurisdictions.

Third, data for a registered apprenticeship program (RAP) is reported by two different governing entities: the USDOL OA and recognized State Apprenticeship Agencies (SAA) (ApprenticeshipUSA, n.d.). Ambiguity in the two governing systems can be confusing; moreover, a few states operate under both agencies. **Table 1** compares the features of each governing entity. Twenty-one states operate their apprenticeship programs through the USDOL OA and 29 states plus the District of Columbia operate as SAAs.

Using data from RAPIDs, Kuhen et al (2023) report the number of high school aged youth (under 18) engaged in apprenticeship opportunities as 2,358 of the 213,898 youth apprentices reported in RAPIDs (from data collected in 2021). Including 18-year-olds (presumed as students either finishing or exiting their senior year), the number of youth involved in YA experiences rises to 16,831. This represents a significant increase compared to 2015, when approximately 8,000 individuals aged 16–18 were engaged in registered apprenticeships. This growth reflects a 110% increase in participation among this age group since 2015. This increase was likely due to the 2015 announcement of the American Apprenticeship Initiative (AAI) competitive grant to support apprenticeship expansion (American Apprenticeship Initiative, 2014).

Several grants followed the issuance of the DOL AAI grant announcement. **Table 2** summarizes the grants that included a focus on YA. The Youth Apprenticeship Readiness Grant (YARG) sponsored by the Employment and Training Administration (ETA) division of the U.S.

Table 1

RAP Comparison Chart by Governing Entity

Features	USDOL OA	SAA
Program Oversight	Registers and oversees programs in states without an SAA; may register in SAA states under certain conditions	Recognized by OA to act on behalf of USDOL to register and oversee programs in their state
Staffing	U.S. Department of Labor federal employees	State employees
Registration Documentation	Registers all programs through standard documentation	May use standard federal paperwork or state-specific documentation
Data System Used	Utilizes the RAPIDS system for registration, oversight, and tracking of apprenticeship progress and compliance	May use RAPIDS or a separate state-specific system

Note. Information in this table summarized from Apprenticeship USA. See https://www.apprenticeship.gov/about-us/apprenticeship-system for more information and a map of states and their oversight agency.

Table 2
Apprenticeship Grant Initiatives

Year	Initiative	Funder	Goal	Focus
2018	PAYA	New America, Foundations (e.g., Siemens, Casey)	Expand youth apprenticeship for high school students	Direct focus on high school-aged
2020	SAE	USDOL	Develop/expand state apprenticeship initiatives	State oversight of YA
2020	YAI	USDOL	Develop and scale YA through intermediaries	Intermediaries to develop YA models
2022	ABA	USDOL	Strengthen and modernize RAP	Some YA focus
2023	YARG	USDOL (ETA)	Enhance YA in (RAPs).	Pre-apprenticeship programs for YA to lead to RAP
2023	SAEF	USDOL	Enhance and expand (RAPs)	Under-represented and under-served populations, including youth.

Note. National Governors Association *PAYA state policy playbook to advance youth apprenticeship.* https://www.nga.org/wp-content/uploads/2022/07/PAYA-State-Policy-Playbook_June2022.pdf

Department of Labor (DOL), included $42,500,000 in grant funds authorized under the Department of Labor Appropriation Act, 2019 (Public Law 115-245).

Payne and Kuehn (2023) summarize the (YARG) recipient models of YA program included secondary school–based, postsecondary school–based, intermediary-led, regionally coordinated, and youth-supporting mixed-age apprenticeships. Each model offers a different approach to organizing training, partner collaboration, and support services, allowing for tailored expansion strategies based on local contexts and youth populations served. For example, secondary school–based programs target younger youth through partnerships with high schools and career and technical education centers, while intermediary or regional models can help coordinate efforts across multiple stakeholders. The flexibility of these models provides a framework for expanding apprenticeship opportunities and addressing barriers such as employer hesitancy, liability concerns, and alignment with school schedules (Sharp & Dvorkin, 2018; Payne & Kuehn, 2023; Parton, 2017).

Challenges to YA Expansion

This flexibility, while helpful, also highlights a critical challenge: the lack of consistency in how youth apprenticeship (YA) is defined and structured across states (National Governors Association, 2022). Downs (2024) reports 30 states plus the District of Columbia have adopted a youth apprenticeship definition. In these states, YA programs may align with DOL Registered Apprenticeships, be defined as a separate program, or lack a formal definition altogether.

Prebil et al. (2021) contend “the inconsistency of youth apprenticeship definitions makes it difficult for larger businesses, unions, and employer groups—in traditional as well as nontraditional apprenticeship occupations—to efficiently start up programs” (n.p.). Politicians are in agreement. Senators John Hickenlooper (D-CO) and Mike Braun (R-IN) introduced the

Youth Apprenticeship Advancement Act (S.2363) to the 118th Congress. The Bill underscores a federal commitment to enhancing workforce development by integrating youth more effectively into apprenticeship pathways. Representative Bobby Scott (D-VA-3) introduced the National Apprenticeship Act of 2023 (H.R.2851) to the 118th Congress. This legislation aims to amend the original National Apprenticeship Act of 1937 to expand the national apprenticeship system to include apprenticeships, youth apprenticeships, and pre-apprenticeships registered under the Act. Both Bills include definitions that may help standardize YA language across the states and support scalability across the U.S.

States on the Forefront of Expansion

Several states repeatedly appear in the literature as having noteworthy YA programs. Four states stand out for varied reasons: Wisconsin and Georgia (having the longest running youth apprenticeships); South Carolina (having a program that merges high school CTE with opportunities for early postsecondary credit) and Colorado (one of the newest states to venture into a statewide model). All four states employ a model that embraces stakeholder input from employers, secondary schools, and postsecondary schools, and workforce intermediaries.

Apprentices in these programs are accelerating their path to a career as they accumulate years of work experience, college credit, industry certifications, and a portable DOL registered apprenticeship credential. Georgia and Wisconsin have both operated youth apprenticeship programs since the mid-1990s. Both programs use state funds to support youth apprenticeship coordinators in secondary schools (Lerman & Packer, 2015). South Carolina and Colorado each have new youth apprenticeship programs. Sharp and Dvorkin (2018) promote South Carolina as being notable for mobilizing its college system to support youth apprentices between the ages of 16 and 24:

> Supported by $1 million in state funding per year, Apprenticeship Carolina does outreach about apprenticeship to employers, offers apprenticeship consultants to guide employers through the logistics, and connects employers with related instruction provided by the technical colleges. The result has been a more than five-fold increase in the number of registered apprenticeships since 2011. (p. 14)

Likewise, Anderson and Nieves (2020) describe Colorado's state-run youth apprenticeship as a model for serving youth as young as 16 years old, with career exploration and other exploratory activities beginning in the ninth grade. "The average wage of an apprentice is $12 per hour, and students can complete up to 40 college credits for free while still in the high school program" (p. 38). One employer, Pinnacol Assurance, sets a starting salary for their youth at $18.24. Youth apprentices at this worker's compensation company also get performance-based raises, a benefits package that includes the company's employee incentive program, payment into PERA retirement, and paid time off (Hernandez, 2023).

Cost Considerations for Launching New Programs

While youth apprenticeships are gaining momentum as a strategic educational and workforce innovation, detailed data on actual program costs remains limited. Much of the available cost analysis stems from adult-focused Registered Apprenticeship programs, though some youth-specific insights are emerging through state programs and federal investments. For example, Wisconsin's Department of Workforce Development provides $1,100 per youth apprentice to support expenses such as tuition, uniforms, and mentor training (Wisconsin Department of Workforce Development, 2022). The previously referenced Youth Apprenticeship Readiness Grants (YARG), funded by the U.S. Department of Labor, allocated

over $42 million in 2020 to support the launch and expansion of youth apprenticeship models, with individual grantees receiving between $1.5 and $5 million.

Program developers and policymakers should be aware of key cost categories:

- Start-up and administrative costs: Planning, registration, and interagency coordination often require upfront investment in staff time, legal review, and partnership building.
- Instruction and training expenses: These include dual enrollment tuition, curriculum development, and technical equipment aligned with industry standards.
- Mentor training and employer engagement: Supporting business partners through stipends, onboarding materials, and mentor coaching can enhance sustainability and quality.
- Student support services: Transportation, career coaching, and supplies are essential to ensure equitable participation, especially for students from underserved communities.
- Program scaling and evaluation: Sustained funding is needed to expand participation, track outcomes, and ensure quality improvement.

Although precise per-student costs vary by region and delivery model, current evidence suggests that youth apprenticeship can remain cost-effective, particularly when programs align with broader economic development strategies and leverage available public funding. As the demand for sustainable funding models grows, philanthropic foundations and nonprofit organizations have increasingly stepped in to help offset start-up costs and provide critical infrastructure for program expansion.

Philanthropic and Nonprofit Support for Youth Apprenticeship Expansion

Nonprofit organizations, research institutes, and philanthropic foundations have been instrumental in advancing YA in the United States. The Urban Institute has played a central role in this effort, producing influential research, hosting policy convenings, and supporting the development of competency-based apprenticeship frameworks (Urban Institute, n.d.). Many of its fellows, past and present, have shaped the national discourse on apprenticeship, including economist Robert Lerman, whose foundational work on work-based learning helped lay the groundwork for the field. Lerman is prominently featured through Urban Institute publications as well as on the American Institute for Innovative Apprenticeship, which Lerman founded. His research and advocacy have informed both federal policy and local implementation strategies.(Dimeny et al., 2019). Likewise, the Partnership to Advance Youth Apprenticeship (PAYA), led by New America and supported by the Annie E. Casey Foundation, Siemens Foundation, and others, has promoted a national vision for equitable and scalable YA programs (National Governors Association, 2022). Other leading organizations such as Jobs for the Future (JFF), the National Governors Association Center for Best Practices, the Lumina Foundation, and the Markle Foundation further support the growth of youth apprenticeship through toolkits, policy reports, and state-based implementation partnerships. Together, these entities contribute to an expanding ecosystem that builds public will, facilitates cross-sector alignment, and establishes the collaborative conditions essential for sustaining and scaling high-quality YA programs.

The Partnership to Advance Youth Apprenticeship (PAYA) identifies key actions Governors and state leaders can employ to foster high youth apprenticeship programs:

- Establish a statewide vision and definitions;
- Establish a statewide governance structure;

- Champion youth apprenticeship;
- Improve systems alignment;
- Use data to inform program creation, implementation, and accountability;
- Establish new mechanisms to engage employers;
- Reduce logistical, regulatory, and financial barriers to employer participation and;
- Leverage existing resources and identify new resources. (National Governor's Association, 2022, p. 2)

According to Parton (2017), best practices for registered YA include:

- paid, on-the-job learning under the supervision of skilled employee mentors,
- related classroom-based or technical instruction
- ongoing assessment against established skills and competencies, and
- culmination in a portable, industry-recognized credential and post-secondary credit. (p. 3)

Additionally, PAYA identifies attributes that exemplify a vision for establishing and measuring effective and equitable programs. According to Parton (2018), PAYA defines these attributes as:

- Career oriented: Learning is structured around knowledge, skills, and competencies that lead to careers with family-supporting wages.
- Equitable: Learning is accessible to every student, with targeted support for those adversely impacted by long-standing inequities in our education system and labor market.

- Portable: Learning leads to postsecondary credentials and transferable college credit that expand options for students.
- Adaptable: Learning is designed collaboratively to be recognized and valued across an industry or sector.
- Accountable: Student, employer, and program outcomes are monitored using transparent metrics to support involvement. (n.p.)

These attributes may best be realized by employing interagency collaboration throughout establishing, implementing, evaluating, and sustaining YA. Policy analysts, government agencies, and researchers attribute collaboration as key not only to interagency endeavors at the local, state, and federal level, but to advancing positive outcomes for youth (Kaiser, 2011; Osher, D. et al, 2019; Shek, D.T. et al, 2019). The following sections provide further explication of the literature on interagency collaboration.

Interagency Collaboration

National security, telecommunications improvements, and societal concerns spurred interest in interagency collaboration in the 1980's (Dawes & Prefontaine, 2003; Frazier, 2014; Hill & Lynn, 2003). One early example of prioritizing interagency collaboration is The Family Support Act of 1988. Aimed at improving the welfare reform system, the Act highlighted the necessity for cohesive policy approaches across various sectors and mandated coordination of efforts between agencies serving youth. This act garnered the interest of educational researchers and policy analysists (Kagan & Neville, 1993; Weil & Finegold, 2002). By the early 1990's interagency collaboration emerged as a strategy to affect the mandates of the act. Grant seekers called upon community youth service providers to employ more integrated, thorough, and

impactful approaches to address the complex and varied issues faced by children in challenging family and social conditions (White & Wehlage, 1995).

Philanthropic grant funding and educational advocacy institutions joined forces to guide youth providers through interagency collaborations. One example of such an alliance is the William T. Grant Foundation and the Institute for Education Leaderships' 1991 publication of a guide titled *What it Takes: Structuring Interagency Partnerships to Connect Children and Families with Comprehensive Services.* This three-part guide begins with an urge for community providers to move beyond cooperation and into collaboration. It identifies five factors of effective partnerships: "the climate in which initiatives begin; the processes used to build trust and handle conflict; the people involved; the policies that support or inhibit their efforts; and, the availability of resources to enable their efforts to continue" (Melaville & Blank, p. 4). The second part ties successful collaborative initiatives to these factors. The third part provides practical guidance to policymakers, practitioners, and administrators to use in conversations as they form collaborative agreements.

Over the next two decades, interagency collaboration became avant-garde in local, state, and federal venues to address a wide array of societal ills. Initiatives focused on serving youth included issues of poverty, students with disabilities, youth in juvenile justice systems, and equity in education (Connell et al, 1995; Manno, 2006; Stagner & Duran, 1997). These initiatives aimed to garner support for abandoning old, siloed practices for new, innovative, multi-partner initiatives (Benson et al, 2006; Kubisch et al, 2011; Zaff et al, 2015).

In the early 1990's, members of civic, educational, and social organizations would combine efforts under the nomenclature of a Comprehensive Community Initiative (CCI) to resolve a given issue, or set of issues, in the community (Kubisch et al, 2011). CCIs provided a

structure for which initiatives could promote positive youth development (PYD) (Benson et al, 2006; Zaff et al, 2015). Interest in PYD spurred even more interest in CCIs and interagency initiatives. Where CCIs provided structure, PYD provided underlying principles of youth development and philosophy as to how youth should be viewed (Zaff et al, 2015).

Another name ascribed to collaborations between public and private sectors is cross-sector collaboration. Bryson, et al (2006) contend "people who want to tackle tough social problems and achieve beneficial community outcomes are beginning to understand that multiple sectors of a democratic society—business, nonprofits and philanthropies, the media, the community, and government — must collaborate to deal effectively and humanely with the challenges" (p. 44). Cross-sector collaboration is defined as "the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately" (Bryson et al, 2006, p. 44). In this seminal work, the authors use existing literature to present a framework for understanding cross-sector collaboration and introduce 22 propositions drawn from their research.

Bryson et al (2015) updated their seminal work by reviewing the subsequent decades' worth of literature on cross-sector collaboration. The authors present various conclusions for scholars and practitioners based on empirical research. Primarily, successful collaboration depends on leadership roles of various kinds, such as sponsors, champions, boundary spanners, and facilitators. Leaderships' challenge is to align "initial conditions, structures, processes and outcomes and accountabilities such that good things happen in a sustained way over time—indeed, so that public value can be created" (Bryson et al, 2015, p. 658).

Congressional Research Services Report R41803 examines formal interagency collaborative arrangements of the federal government and defines collaboration "as any joint activity by two or more organizations that is intended to produce more public value than could be produced when the organizations act alone" (Kaiser, 2011 p. 2). Further, this report identifies six different types of interagency collaboration, each with working definitions: collaboration, coordination, merger, integration, networks, and partnerships. Of these, collaboration, coordination, and partnerships most closely align with the work of YA programs:

> *Collaboration*: an arrangement which relies, to a substantial degree, on voluntary or discretionary participation among the members, who are relatively equal or at least have parity in such an activity and arrangement;
>
> *Coordination*: an arrangement in which a lead agency or officer directs an operation, project, or program among one or more other agencies;
>
> *Partnerships*: an arrangement which features public-private partnerships, with the public sector entities extending from the federal government to state, local, or tribal governments, as well as, in some cases, foreign governments; and with the private sector involving different types of entities: non-governmental organizations (NGOs), not-for-profit organizations, for-profit companies and firms, government-sponsored enterprises, and government-chartered corporations. (Kaiser, 2011, p.4)

Himmelman (2004) delineates coordinating and collaboration by defining characteristics. He describes the difference in a continuum that builds from information sharing to achieving a common purpose. Coordinating is defined as exchanging information for mutual benefit and altering activities to achieve a common purpose, whereas collaborating is expanded to include

sharing resources and enhancing the capacity of another to achieve a common purpose. Himmelman's use of partnership is synonymized with coalition and defined as community organizations working together for a common purpose. A partnership, then, becomes the platform upon which collaboration and coordination strategies are developed, implemented, and evaluated.

Applications of Collaboration, Coordination, and Partnerships in Youth Apprenticeships

Apprenticeships require multiple parties and entities to engage in mutually beneficial efforts (Fuller et al., 2023; Helper et al., 2016; McKnight et al., 2019; Taylor et al., 2023). For youth apprenticeships, youth and their families are central to the cause. Other parties and entities include educators at both the secondary and postsecondary levels, employers, and other community members invested in workforce development. When these parties convene, they constitute a cross-sector organization. For cross-sector organizations to succeed, it is incumbent upon the members to collaborate. Bryson et al. (2015) stipulate two critical components to yield successful cross-sector collaboration, namely processes and structures:

> Inclusive processes in particular help bridge differences among stakeholders and help partners establish inclusive structures, create a unifying vision, and manage power imbalances. Inclusive structures, in turn, facilitate governance of the collaboration and help implement the partners' agreements (Berardo, Heikkila, and Gerlak 2014; Quick and Feldman 2011, 2014; Saz-Carranza and Ospina 2001). (p.652)

Coordination, as defined by Kaiser (2011), is another component common in youth apprenticeship initiatives. Some youth apprenticeship programs employ an intermediary to provide coordination among their stakeholders. An intermediary could be an individual, but it is

most often an organization (Giloth, 2022; Smedlund, 2006). Coordination activities performed by intermediaries include:

- overcoming institutional and system barriers;
- building partnerships among disparate stakeholders;
- creating career pathways across multiple institutions and systems;
- aggregating labor demand and connecting to appropriate labor supply;
- generating new and transparent labor market information;
- aligning workforce, education, and philanthropic institutions to pursue agreed upon goals (Giloth 2023, p. 267).

Partnerships between public and private sectors have long existed between those invested in workforce development and education (Commonwealth, 2013; Eberts & Erickcek, 2001; Hyslop, 2009; Myran et al., 2023). Tynjala (2008) notes that the worlds of education and work are merging, necessitating an "integration of formal and informal learning as an essential prerequisite for developing the kinds of expertise needed in response to the changes taking place in working life" (p. 130). Interest in partnerships between educational institutions and workforce development agencies has continued to increase, as trends in postsecondary degree seekers and labor force statistics show a general decline of low and unskilled jobs, an increased need for high-skilled workers, and a strengthened relationship between college credentials and increased incomes (Carnevale et al., 2012).

To realize the full potential of such partnerships, scholars have identified several critical conditions that facilitate sustained collaboration. Bryson et al. (2006) and Mattessich and Johnson (2018) emphasized the importance of shared mission, adequate funding, mutual respect, and consistent communication as foundational elements. Similarly, Saunders et al. (2020)

outlined the need for clearly defined goals, structured communication strategies, and shared performance metrics to support effective collaboration. Expanding on these insights, Gazley (2010) argued that the quality of collaborative capacity—particularly in government–nonprofit partnerships—is closely tied to intentional communication structures and relational trust, both of which influence long-term performance outcomes. These findings underscore the significance of not only structural alignment but also interpersonal dynamics in sustaining interorganizational partnerships.

Building on this foundation, Saunders et al. (2020) drew from Himmelman's (2004) continuum of collaboration to propose a comprehensive framework for integrated partnerships. This framework outlines seven core dimensions: diagnostics and planning; alignment; roles and responsibilities; assessment; project management; barriers, including funding, time, staffing, and competition or ownership, and enablers, such as communication, relationship-building, and shared tools (Saunders et al., 2020, p. 459). When used as a guide for defining roles and expectations, this framework can help organizations leverage their partners' resources more effectively and navigate the complexities of cross-sector collaboration.

Summary

Lerman (2018) extols the benefits of youth apprenticeship, and in his reasons, I see inferences to returns on investment in human and social capital in several capacities:

> A robust apprenticeship program is especially attractive because of its potential to reduce youth unemployment, improve the transition from school to career, upgrade skills, raise wages of young adults, strengthen a young worker's identity, increase U.S. productivity, achieve positive returns for employers and workers; and, use limited federal resources more effectively (p. 1).

Though this is not an exhaustive list of the reasons for the resurgence of interest in apprenticeships, it does provide a clear rationalization for YA to become a common part of the U.S. secondary school experience: as a pathway to a career, YA offers an accelerated, less debt-intensive option for today's youth. Because these programs require the interest and investment of multiple stakeholders, interagency and cross-sector collaboration could provide viable processes and structures to support the formation of more effective and sustainable programs.

CHAPTER III

RESEARCH METHODS

In Chapter III, I explain the research design that I used to answer the research questions. My purpose in this study was to explore how social capital can be leveraged to define policy, programs, and key components of youth apprenticeship (YA) as a viable, educational pathway to a career. Another purpose of this study was to examine the extent and impact of interagency collaboration in the formation of education policy related to YA.

The following research questions guided the study:

1. How do stakeholders in educational institutions and workforce development agencies collaborate with employers to develop, advance, and sustain YA programs?
2. How can interagency collaboration aid the refinement of policy governing YA implementation?

Research Design

Researchers who employ case studies seek to explain how or why a 'contemporary' phenomenon works (Yin, 2018). Yin defines *contemporary* as "meaning a fluid rendition of the recent past and the present, not just the present" (Yin, 2018, p. 12). This definition aligns well with the current state of youth apprenticeship (YA) in the United States, where the model, though historically rooted, is experiencing renewed attention. While apprenticeship is a centuries-old practice, recent shifts in economic priorities, political discourse, and workforce development policy have prompted a resurgence of interest in YA as a viable education-to-career pathway.

International comparisons have further fueled this momentum. Countries with longstanding youth apprenticeship systems, particularly in Europe, have demonstrated positive

outcomes, including stronger economic resilience and lower youth unemployment rates (Lodovici et al., 2013; Rauner & Smith, 2010). These findings have informed several state and federal initiatives aimed at integrating YA more fully into U.S. secondary education systems. Nevertheless, YA remains underutilized in the United States and continues to represent a largely untapped strategy for addressing youth unemployment, rising college debt, and persistent skills gaps in the labor market (Crane & Colburn, 2016; Holzer & Lerman, 2014; Lodovici et al., 2013).

I conducted a single-case study in which I examined an existing youth apprenticeship program using interviews with key stakeholders, observations of apprentices and their mentors on the job site, and analysis of documents related to the case. Merriam and Tisdell (2016) describe single case study as "an intensive, holistic description and analysis of a single, bounded unit" (p. 232). In this case, data collected from interviews, observations, and documents provided a wealth of data for analysis. Creswell's (2007) characterization of qualitative case studies as focusing on "a group, an entire program, or an activity" (p. 74) is especially relevant to this study, as the bounded unit encompasses youth participants, educators, employers, and adult job-site mentors within the YA program.

I based my research on a pressing issue: the underutilization of youth apprenticeship (YA) as a viable career pathway in the United States. Drawing on my professional experience as a career and technical education director and long-time observer of educational trends and policy, I suspected that limited or surface-level collaboration among stakeholders might be undermining the long-term sustainability and broader adoption of YA models. To investigate this, I engaged in field-based observation, qualitative data analysis, and triangulation to identify key patterns and formulate evidence-based findings. My aim was to document the conditions that

support a thriving YA program. By analyzing the social and institutional structures within one successful case, I uncovered how community social capital contributes to program strength and continuity.

Creswell (2013) and Merriam (2009) advise case study researchers to begin with a problem and research questions framed from theory and a well-developed study rationale. Meyer (2001) asserts a well-informed theoretical framework improves consistency, rigor, and trust. Undergirding my research design is a philosophical worldview of social constructivism. Social constructivists believe that knowledge and reality are a construct of humans interacting with each other and their physical world (Crotty, 1998). In practice, apprenticeship holds promise for the validation of social constructivism's foundational belief. As part of the apprenticeship contractual agreement, multiple community stakeholders interact with one another across the social settings of education and the workplace in the construction of meaning that, in turn, makes a job or career become reality for an apprentice. Apprentices, mentors, co-workers, employers, educators, and other invested community stakeholders interact in fulfillment of the apprenticeship agreement. Such interaction exemplifies Crotty's (1998) basic premise "that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world and developed and transmitted within an essentially social context" (p. 51).

In alignment with my constructivist worldview, I situated my research within a theoretical framework of social capital. Social capital, as defined by theorists Pierre Bourdieu and James Coleman, encompasses economic, cultural, and social exchanges occurring in society and the relational tenets of generating trust, establishing expectations and creating and enforcing norms naturally embedded within the exchanges (Häuberer, 2011). Apprenticeship models

demonstrate the impact of social capital in action within and across the communities they serve in multiple ways. As students, educators, employers, mentors, co-workers, and other community stakeholders interact in educational and workplace settings, economic, cultural, and social exchanges occur, and the community at large reap benefits. While examining this single youth apprenticeship program through a constructivist lens, social capital theory guided my analysis, interpretation, and findings; thus, allowing me to expand a knowledge base that adds to the development of policy that reflects the voice of the stakeholders who benefit from apprenticeship.

Context

For this single case study, I selected a YA program from a pool of existing programs that met four specific criteria: (1) affiliation with a sponsoring organization registered with the U.S. Department of Labor Office of Apprenticeship (USDOL OA); (2) a minimum of three years of operational history; (3) the presence of articulation agreements or memorandums of understanding (MOUs) with partnering workforce development agencies and postsecondary institutions; and (4) active involvement with the Partnership to Advance Youth Apprenticeship (PAYA) initiative.

These criteria were identified during my literature review as foundational elements contributing to the effectiveness and sustainability of YA programs. Each criterion reflects a component of interagency collaboration and aligns with the principles of social capital theory, the theoretical framework underpinning this study. For example, partnerships established through MOUs demonstrate bridging and linking forms of social capital, while long-term operational success suggests norms of trust and shared expectations between agencies.

The selected program exemplifies a model of community-driven apprenticeship design that integrates educational institutions, industry partners, and workforce development agencies in the co-construction of career pathways for youth. As such, it offered a bounded case that facilitated examination of collaborative practices, stakeholder interactions, and the role of social capital in sustaining and scaling youth apprenticeship efforts. This context provided an ideal setting for a constructivist inquiry into how shared meaning, trust, and institutional linkages influence the development and implementation of YA programs.

Population and Sample

For this single-case study of YA in the U.S., I used 'two-tier' (Merriam & Tisdell, 2016) purposeful sampling to select both the case and the sample of people, activities, and documents within each subunit of the case. I employed criterion-based selection to choose study participants with characteristics relevant to the study. LeCompte and Schensul (2010) stipulate seven types of criterion-based selection procedures to determine patterns of difference between members of a population. One of these, a 'bellwether' or ideal case selection, fits well with my methodology. In this type of criterion-based selection, the researcher creates a 'recipe' or description of ideal conditions in which to observe the phenomenon of interest and then seeks out an example that matches that description.

My first level of criteria was defined through a cross-reference of identified YA programs that are members of PAYA and inclusive of exemplary practices identified through my literature review. These exemplary practices are three-fold: One, the existence of a steering committee, or other governing body, that includes the following representation: secondary and postsecondary educators; employers of youth apprentices; and community members involved with workforce development agencies. Two, successful completion rates defined as: 64% of

apprentices have met, or are on track to meet, requirements for earning a DOL national credential. Three, a range of career pathway options with multiple entry and exit points: the program includes a range of certificate options including a high school diploma, industry credential opportunities, and options for matriculation to postsecondary programs for attainment of associate's, bachelor's, and/or master's degree, as suitable to career advancement.

Specific case selection began with an email to program directors in which I introduced myself, shared my inquiry's purpose, and assured confidentiality of my methods. I requested the favor of a reply indicating their willingness to participate in a follow-up interview. The resulting responses and follow-up interviews led to the selection of the case for this study. The case, a YA program near the eastern coast of the U.S. with a large manufacturing sector, includes subunits consisting of youth apprentices, educators, employers, adult job-site mentors, and various workforce development agencies at local, state, and federal levels.

With my YA program selected, my next task was to identify the people and documents for study within each subunit. For my second-tier sampling, I pair my constructivist worldview and social capital theoretical framework with Patton's (2015) theory-focused realist sampling strategy as it is particularly suited to program evaluation and, therefore, functionally illuminative. Emmel (2013) purports a realist sampling strategy affords the researcher the use of explanation and interpretation to test and refine theory: "sampling choices seek out examples of mechanisms in action, or inaction towards being able to say something explanatory about their causal powers" (p. 652). My intended purpose included a focus on the intersection of the relationships, roles, and responsibilities of key stakeholders with the employed design, implementation, and evaluative strategies of youth apprenticeship models. As 'mechanisms' of successful youth apprenticeship models, these strategies reflect an investment of bridging and

linking dimensions inherent in social capital theory. This theoretical framework was the basis of my realist sampling strategy and served as my guide in determining whom to interview and what documents to review.

Because this type of theory-based, purposive sampling includes systematic decision-making and flexibility, decisions about sampling can be made at various stages during fieldwork (Emmel, 2013). Interviews with stakeholders permitted me to judge their perceptions of program effectiveness through the lens of social capital, especially regarding strategies and practices indicative of bridging and linking interactions. Through purposive sampling, I selected documents to review that were representative of interviewed stakeholders' involvement in various stages of development, implementation and evaluation of the YA program. Such documents included: programmatic documents such as mission, vision, and goal statements, policy guides, manuals, and apprenticeship contracts; print media from local newspapers validating stakeholder perceptions of evaluative measures; and web and social media documents representative of program design, development, and implementation.

Instrumentation

In qualitative research, the researcher serves as the primary instrument of data collection and analysis (Merriam & Tisdell, 2016; Stake, 1995). As such, I designed all instruments for this study. Interview protocols, observation tools, and document analysis guidelines were designed to align with the interpretive, constructivist tradition that underpins Stake's (1995) approach to case study. These instruments were developed to elicit rich, descriptive accounts from participants and to capture contextual nuances of the YA program under study.

Interview Protocol

A semi-structured interview guide was developed with open-ended questions informed

by the research questions, the theoretical framework of social capital, and a review of literature on youth apprenticeship and interagency collaboration. The protocol included prompts to explore participants' roles, perceptions of collaboration, program effectiveness, and key factors that contribute to or hinder sustainability. The flexible format supported probing and follow-up questions to clarify or expand responses, reflecting the inherently interactive and interpretive nature of qualitative inquiry (Stake, 1995).

Observation Guide

Observation protocols guided on-site job visits while observing youth apprentices in action with their workplace mentors. The focus of these observations included physical environment, interaction patterns between stakeholders, visible artifacts of collaboration, and evidence of bonding, bridging, or linking social capital. Notes were taken in real time, supplemented with reflective memos immediately following each observation to record initial interpretations and impressions.

Document Review Framework

A document analysis matrix was used to systematically review a variety of program-related documents, including apprenticeship contracts, policy manuals, internal programmatic documents, training materials, and web-based media. The framework included categories for assessing the document's purpose, origin, stakeholder involvement, and evidence of interagency collaboration or policy influence. These materials were cross-checked with interview and observational data to support triangulation and increase the credibility of findings.

Throughout the data collection process, I remained attentive to Stake's (1995) guidance that qualitative researchers must be "ever reflective," constantly evaluating their tools and interpretations considering the emerging data. Each instrument was pilot tested informally during

early site visits and adjusted accordingly to ensure alignment with the study's purpose and context.

Participants

The focus of this study was on the role of social capital in developing and sustaining youth apprenticeship programs as a viable career pathway. Capturing the perspectives of educators, employers, apprentice mentors, and workforce development agents involved in youth apprenticeship programs was key to linking the importance of social capital to the YA endeavor. Therefore, site participants for this study were primarily educational providers, workforce development agents, and apprentice employers engaged in collaborative measures to develop, promote, and sustain youth apprentice programs.

Data Collection

Data collection occurred through Zoom and face-to-face interviews, telephone interviews, email exchanges, observations conducted during site visits, and reviews of documents such as steering committee artifacts, operational policies, media coverage, federal and state grant announcements and awards, and web-based information such as media releases and educational or community partners web pages. **Table 3** presents a partial listing of the types of evidence collected.

The data set for this single-case research project consisted of site observations, transcribed interviews, and documents collected from the subunit sites. In theoretical sampling, analysis occurs concurrently with identifying the sample and collecting the data. Merriam and Tisdell (2016) refer to this type of data analysis as the constant comparative method and distinguish between its use to generate findings (Charmaz, 2014) versus its use to build a substantive theory. Thus, I draw a distinction here to my plan to generate *findings* based on

Table 3

Data sources

Unit of Analysis: YA Program Situated Near the Eastern Cost of the United States

Documents	Interviews	Observations
Media coverage	Intermediary team	On-site visits
Policy handbooks	Mentors	Personnel
Meeting minutes	Educators	Time, space, and modes of learning
Training materials	Employers	Mentor-apprentice interactions
MOUS		

research that is collected and analyzed through the lens of social capital *theory* for my purpose of identifying collaborative practices and definitive measures to influence policy that promotes the expansion of YA as a pathway to a career.

Data Analysis

Merriam (1988) emphasizes the simultaneous nature of data collection and analysis in qualitative case study research. I employed the constant comparative method of data analysis first developed by Glaser and Strauss (1967) to derive theory from data collected in qualitative studies. Merriam (1998) states that the constant comparative method of analysis applies to all qualitative research because the method complements the inductive nature and concept-building orientation of such studies. Interview transcripts, institutional documents, and field notes of observations were constantly compared to discover categories, develop codes, and assemble diverse data into themes. To assist in the constant comparative process, I employed NVivo (QSR International Pty Ltd, 2008).

Using Nvivo aided in the construction of categories by assigning codes to pieces of data. As I moved through each interview and each document of each subunit, I continually coded and categorized in search of contextual variables unique to each. The second phase of my data analysis was to make abstractions across the subunits in search of connections to social capital theory or to assimilate findings. “Analytic induction, the acts of moving from specific case to a general theory and back to another case, is made possible through cases, made up as they are of packages of data and theory to be transferred from one particular instance to other particular instances” (Emmel, 2013, p. 63). Through this iterative process, I synthesized patterns and relationships across the subunits to develop a cohesive understanding of how social capital

operates within the YA context, ultimately allowing for conclusions that reflect both the complexity of the case and the theoretical lens guiding the study.

Documents

I analyzed the content of collected documents to first develop codes, then to identify patterns, and finally themes. Triangulation of data sources, designed to increase the credibility of the study, helped to identify and "verify emerging hypotheses, advance new categories and hypotheses, offer historical understanding, [and] track change and development" of thriving YA programs. (Merriam & Tisdale, 2016, p. 182). Along with interview and observational data, document analysis served to increase the credibility of this case study.

Interviews

The in-person and Zoom interviews were semi-structured and employed questions designed to elicit participants' perceptions of their engagement in collaborative strategies during various stages of program development, implementation, and evaluation. I developed interview themes based on the study's theoretical framework, a review of relevant literature, and my professional experience in career and technical education (CTE) and emerging YA implementation. Drawing from these three sources ensured that the interview questions were both contextually grounded and aligned with the study's theoretical orientation.

Observations

I conducted site visits to observe the YA program's youth and adult mentors in action at a partnering employer site. While on site, I also conducted face-to-face interviews and collected documents relevant to the work-based learning environment. This multi-method approach aligns with Merriam's (1998) recommendation to incorporate observations during other forms of data collection in qualitative case studies. Observational data provided rich insight into the

interpersonal dynamics, routines, and physical settings in which youth apprenticeship occurred. Specifically, evidence of bonding, bridging, and linking social capital was revealed through mentor-apprentice interactions, workplace culture, and the structured integration of youth into adult work roles. Triangulating findings from observations, interviews, and documents helped illuminate how operational practices, inter-organizational relationships, and contextual conditions intersected within the program.

Trustworthiness

To achieve useful and meaningful results, I employed data analysis techniques designed to instill confidence in my audiences' interpretations of my report. Lincoln and Guba (1985) define four general criteria to which a qualitative researcher should attend to achieve trustworthiness: credibility, transferability, dependability, and confirmability. Along with these criteria, Lincoln and Guba (1985) correlate related activities to each criterion. I address credibility, transferability, and confirmability as these criteria fit my purpose of contributing to a knowledge base pertinent to the effect of interagency/cross sector collaboration on YA program development and policy refinement.

Credibility

Operationalization of credibility can be achieved through several techniques. Lincoln and Guba (1989) maintain that credibility occurs when co-researchers or readers are confronted with the experience and recognize it in the reported results. Merriam and Tisdell (2018) extend this observation with reference to how people's constructions of reality about similar experiences can be vastly different. They suggest that qualitative researchers, especially those with a constructivist worldview, must focus on methodological rigor to ensure trustworthiness. Because qualitative researchers address "people's constructions of reality—how they understand the

world…there will be multiple constructions of how people have experienced a particular phenomenon, how they have made meaning of their lives, or how they have come to understand certain processes" (Merriam & Tisdell, 2018, p. 243). Wolcott (2005) offers triangulation as a known practice to increase the correspondence between research and the real world. Triangulation in my research occurred through different data collection modes: (a) interviews, (b) document review, and (c) on site observations.

Another method of achieving credibility is member checking (Creswell & Creswell, 2018; Lincoln & Guba, 1985; Merriam & Tisdale, 2018). I conducted member checking by allowing the participants to review the results of the findings for verification and feedback. I asked participants to review my findings and make corrections as needed to confirm the meanings and interpretations I assigned to their interviews in an effort to accurately capture their reality. The goal was that participants would "be able to recognize their experience in [my] interpretation or suggest some fine-tuning to better capture their perspectives" (Merriam & Tisdell, 2018, p. 246).

Transferability

Transferability occurs as a researcher's report allows the reader to make applications of the findings to similar contexts or individuals. Lincoln and Guba (1985) explain a researcher can achieve transferability if he or she provides "sufficient information about the context in which an inquiry is carried out so that anyone else interested in transferability has a base of information appropriate to the judgement" … and further, they "call that appropriate base of information a 'thick description'" (pp.124-125). As I prepared research findings from interviews and observations, I detailed contextual information about the sites, organizations, and participants. I also included detailed descriptions of methods and time frames for data collection. My intent was

to create thick descriptions sufficient for readers to apply my findings or methods in other situations or contexts.

Conformability

As an educator, high school administrator, and career and technical education director, I bring my own bias and perspective to the study. As an apprenticeship grant recipient, I recognize that I have my own philosophy of education and its purpose in our American economic system. To counteract my bias, I am mindful of Patton's (2015) caution that "realist sampling is guided by theory-based design decisions (deduction) while being open to what emerges (induction)" (p. 52). As I prepared this dissertation, I adhered to Emmel's (2013) ideal of realist theory sampling:

> Considerations of reflexivity reinforce the observation that sampling is not procedural. These processes cannot be predicted in advance, nor do they conform to rules. They are matters of judgment made by researchers. The uncertainties and complexities of doing research are emphasized. We may accept, reject, or most likely refine theory through the theoretical work of sampling that happens in the research. This sifting, winnowing, and subsequent refining of theory advocated in a scientific realist sampling strategy cannot be described by rules of engagement with data and evidential account. Reflexive practice in sampling can only be shaped by guidelines of practice towards the task of knowledge production (p. 87).

Much reflexivity in my knowledge production was warranted and worthwhile as it relates to influencing policy towards sustainable expansion of youth apprenticeships. Reflexivity in qualitative research "is concerned with understanding how a particular researcher's values and expectations [influence] the conduct and conclusions of the study" (Merriam & Tisdell, 2018, p.

249). Reflexivity in my research was achieved using memos to record "observations about the process of data collection, hunches about what was learned, and concerns about reactions of participants to the research process" (Creswell & Creswell, 2018, p. 184). Such recordings were useful in checking my own biases, personal opinions, and experiences as I interpreted research results.

Summary of Chapter III

In this chapter, I presented the research questions and methodology that I used to explore how collaborative practices enable interagency partnerships to develop YA programs. The "how" questions posed in this case study align with Merriam (1998) and Stake's (2005) stance that case study approach allows a holistic understanding of a phenomenon within real-life contexts from the perspective of those involved. The methods for conducting the study have prioritized credibility through field observation, interview transcription, and document analysis with the employment of NVivo. The goal was to correlate the data into categories, factors, variables, and themes that lent answers to the research questions (Merriam, 1998). Triangulation (Merriam, 1998; Stake, 2010) and member checking (Creswell, 2005; Lincoln & Guba, 1985) lent credibility to the study.

CHAPTER IV

RESEARCH FINDINGS

The purpose of this study was to explore the perceptions of key stakeholders in educational institutions, workforce development agencies, and industry settings to identify the collaborative methods employed during the development, implementation, and evaluation of a thriving youth apprenticeship (YA) program. Guided by a social constructivist worldview and framed by social capital theory, I sought to understand how relationships, trust, and institutional linkages can be leveraged to inform the design of policies and practices that position YA as a viable educational pathway to a career. A secondary purpose was to examine how interagency collaboration shapes education policy related to YA.

In this chapter, I present the findings from a qualitative case study of a YA program operating near the eastern coast of the United States. The bounded case included educators from the sponsoring community college, an administrator from the state's Office of Apprenticeship, and employer partners from two manufacturing companies. For anonymity, all participants in this case study have been given pseudonyms. These pseudonyms are inspired by an analogy to Geoffrey Chaucer's *The Canterbury Tales*, where each character embarks on a journey for knowledge and personal growth. This narrative reflects the investment of an entire community of stakeholders, including the sponsoring college administrators, state officials, employer partners, and apprentice mentors. Their commitment to create a transformative postsecondary pathway for high school students is testament to the power of social capital in action. **Table 4** presents the stakeholders' role and assigned pseudonyms.

Table 4
Assigned Pseudonyms

Role in Case Study	Pseudonym
Technical Community College (Sponsoring Agency)	Tabard Community College
Dean of Apprenticeships	William
Vice President, State Office of Apprenticeships	Eleanor
Employer Partner (Small Manufacturing Plant)	Alice
Employer Partner (Large Manufacturing Plant)	Thomas
YA Coordinator (Large Manufacturing Plant)	Franklin
Youth Apprentice #1	Richard
Youth Apprentice #2	John
Mentor for Youth Apprentice #1	Robert
Mentor for Youth Apprentice #2	Reeve

Data were collected through three primary methods: (1) document reviews guided by a researcher-developed matrix with categories derived from the study's research questions; (2) semi-structured interviews with five stakeholders; and (3) observations of apprentices and their adult mentors, interpreted using a checklist based on Woolcock's (2001) dimensions of social capital, specifically the bonding, bridging, and linking dimensions.

Findings

The findings of this study are derived from three primary data sources: semi-structured interviews, document reviews, and workplace observations. This chapter presents the data as it was interpreted utilizing a constant comparative method to identify data, group them into categories, and then synthesize them into overarching themes (Merriam, 1998). In line with Stake's (1995) approach to qualitative case study research, the emphasis was not simply on reporting facts, but on interpreting meaning through the patterns and relationships that emerged from the data to make sense of the case in its particular context.

Interview transcripts, documents, and observation field notes were uploaded to Nvivo and analyzed in three key stages. First, a thorough reading of each data set was conducted to identify key data relative to each research question and to summarize the data with initial descriptive codes. Then, a second read through was conducted to review and refine the initial codes into more organized, focused codes. Through iteration of the same process, each set of data was reviewed, comparing it to the former and merging all data into codes and categories until one master list resulted. Finally, this master list of focused categories was used to develop seven overarching themes: (a) employer and community commitment; (b) continuous cultivation of stakeholder engagement; (c) culture of collaboration; (d) relationship building and nurturing; (e) sustainable intermediary leadership; (f) flexible adaptation to barriers; (g) policy refinement through cross-sector trust. These seven themes are presented in two parts; each theme is presented with additional subthemes. Part One presents the first five themes, which relate to the primary research question and examines how collaborative practices among interagency partners contributed to the development, implementation, and sustainability of the YA program under study. Part Two addresses the final two themes related to the secondary research question of how interagency collaboration supports the refinement of policies governing YA programs.

Part One: Themes Related to Interagency Collaboration

Employer and Community Commitment

Employer and community commitment emerged as a foundational factor in the development and sustainability of this YA program. This YA program is anchored in Tabard College, which has a long history as a central figure in workforce development for its broader community. This commitment was reflected not only in interviews but also in program documents, which state that “local employers commit to providing hands-on training, ensuring

that apprentices gain the real-world skills required by today's industry." Such language underscores the strength of public-private partnerships in preparing youth for the workforce. Alice and Thomas, both representing manufacturing companies, described their organizations' engagement with the program as intentional and long-term. Their companies exemplify a broader coalition of regional employers who view youth apprenticeship as both a talent development strategy and a means of reinforcing their organizational values. The local newspaper summarizes this sentiment with publication of a commentary article authored by the president of the state's technical college system. In the article, the president describes apprenticeship as providing a competitive edge to the apprentices while at the same time enhancing employee retention through increases in morale and motivation.

Thomas, whose company is part of a European-based enterprise with a long-standing apprenticeship tradition, shared how their engagement evolved. After initial success, his company hired a youth apprenticeship coordinator, Franklin, to manage hiring, coordinate on-the-job (OTJ) training, and support mentors. Franklin's responsibilities expanded beyond logistics. He also coached mentors and tutored apprentices, including one student struggling with dual enrollment math coursework. Franklin explains his role fits well within the company's globally branded educational program: "This company has a reputation across the globe for being partnership oriented. We have a branded employee education program with a broad mission of creating a talent pipeline of skilled technicians by partnering with local governments, schools, nonprofits and sector industry partners." This level of employer investment, at the macro and micro level of company policy, underscores the importance of dedicated support systems for both youth and staff.

Both Alice and Thomas acknowledged that supporting youth apprentices requires substantial time, energy, and resources, but agreed the return is well worth the effort. “Our team enjoys working with high school students… they bring positivity and energy,” Alice remarked. Their reflections echo William’s assertion that “successful YA programs are built when all stakeholders embrace the mission.” As Thomas observed, creating “an improved pipeline of workers for industry and the resulting impact on communities from keeping talented youth in their area” represents a win for all involved.

Environmental Factors

Participants consistently observed that the early success of the YA program was influenced by environmental conditions reflecting a longstanding culture of community investment in workforce development. William shared that Tabard Community College, “had maintained a forty-year tradition of educating citizens for employment in technical fields and had long offered employer-sponsored adult apprenticeship programs,” albeit on a smaller scale. Internal documents show Tabard responded to growing community interest in apprenticeship with a new division. In 2007, Tabard established the Office of Apprenticeships and appointed a Director of Apprenticeships to oversee the expansion of adult apprenticeship partnerships. That same year, the creation of the State Office of Apprenticeship (SAA) signaled growing momentum and coordinated statewide support for expanding apprenticeship pathways.

William transitioned into the Director of Apprenticeships role one year after it was established. After a decade of overseeing the college’s non-credit adult programs, William assumed his new position and a new title as Dean of Apprenticeships. William revealed his interest in youth apprenticeship was sparked “when a mid-state technical college launched the

state's first YA program.” For several years, William pursued the development of a youth apprenticeship program with local industry partners, but his initial efforts met with no success.

Momentum built when a new CEO at a European manufacturing company approached the college seeking to replicate the youth apprenticeship model familiar to him from his home country. With the CEO’s interest serving as a catalyst, William’s youth apprenticeship goal began to take shape. Without knowing it at the time, Tabard’s unexpected and rapid rise on the scene of youth apprenticeships underscored the powerful combination of having both an invested industry champion and strong sector partnerships to bring a youth apprenticeship initiative to fruition.

The Power of a Champion

William described how the CEO's request reignited his efforts to establish a YA program. When the CEO expressed interest in hiring youth apprentices, William seized the opportunity to convene a luncheon at the CEO’s facility and invited other local manufacturers to attend and learn about the initiative. William recounted that the CEO addressed the gathered competitors directly, stating, "We would welcome you to join us in starting this program, but regardless, we're doing it." This bold declaration proved catalytic. William recalled that three employers who had previously laughed off the idea of youth apprenticeship approached him after the meeting to shake his hand and quietly affirm, "We're on board."

The CEO’s action served as a catalyst, demonstrating the influential esteem an invested industry leader brings to a new endeavor. His early involvement produced a two-fold result: it sparked interest from peer organizations and shifted the broader industry culture toward embracing youth apprenticeships. William reflected that the CEO’s leadership reaffirmed a

philosophy he had developed in prior partnerships: the presence of a committed champion is often the decisive factor in moving new initiatives from concept to reality.

Sector Partnerships

William shared that his philosophy of sector partnerships first began to take shape while reimagining the college's adult apprenticeship model. Early in that process, a small manufacturing plant owner approached Tabard, requesting the development of an industrial mechanics apprenticeship program for his employees. When William explained that the college would require at least 16 participants to justify launching a new course, the employer initially seemed discouraged, noting that he did not employ that many mechanics. However, the conversation shifted meaningfully when the owner mentioned that he was part of a regional human resources group composed of other manufacturers. "What if I can get two or three of them to join in and send people?" he offered. This collaborative solution allowed Tabard to move forward with program development. Such employer-to-employer networks are illustrative of how sector agreements can overcome logistical barriers. William credited this experience as a turning point in how he approached building new programs and declared, "leveraging informal sector relationships to meet shared workforce needs is strategically lucrative" for all parties involved.

Employer Driven Expansion

William attributed much of the YA program's early success to the decisive moment when the European-based manufacturing CEO approached Tabard Community College. Prior to that request, William had struggled to convince local employers of the value of YA as a pipeline for developing future talent. The CEO's commitment, however, marked a decisive shift in direction. From that initial employer partnership, the program expanded to include more than 80 employers across nearly every sector within the college's service region in just three years.

William noted that employers are the program's primary clients and essential partners in sustaining this YA program's success. He explained:

> We can't do this without the employers, so we are constantly engaged with employers. I tell people all the time that it's the employers; they're my customer. And not saying I'm not helping kids; not that I don't want to collaborate with the high schools and with the economic developers and the funders. But the reality is, I can do education with all of those partners, except if the employer is not there, I can't do an apprenticeship. So, when you read about how apprenticeships are industry driven, you know, they really have to be industry driven. They have to cater to that population that is required to actually do an apprenticeship.

William's perspective reinforces the idea that while education providers, funders, and community agencies are critical collaborators, the central driver of a successful YA program is the sustained commitment of engaged employers.

Continuous Cultivation of Stakeholder Engagement

Sustaining a YA program over time requires more than isolated partnerships; it demands an intentional, ongoing investment in relationship-building and engagement strategies across the full spectrum of stakeholders. Participants identified proactive engagement strategies as essential not only for maintaining momentum but also for reinforcing trust and commitment among students and their families, employers, educators, and community partners. Stakeholders consistently described this engagement as a continuous process. William explained that "ongoing, regular communication, collaborative problem-solving, and shared ownership of program goals" enables the program to be fine-tuned over time. Alice similarly observed that "just having regular discussions with agencies that impact the ability to expand, or not to expand,

youth apprenticeship programs" helps identify barriers early and keeps the program moving forward. William reinforced this point, stating that sustained stakeholder dialogue, especially when focused on "process and progress, was 'key to avoiding delays or disengagement." Eleanor concurred and added that "successful scaling relied on structured, continuous dialogue to align educational systems, employer needs, and community expectations."

Student and Family Outreach through Networking Events

Employers and Tabard leaders emphasized the value of dynamic student and family outreach strategies designed to sustain growth and meet increasing employer demand. One of the earliest recurring events was an information kick-off session held on weekday evenings. Internal documents revealed that in the program's first two years, it drew around 50–60 families. By the third year, William recalled, the crowd was so large "we were standing on the stage thinking, 'Oh my God, the fire marshal is going to shut us down." When attendance routinely exceeded 800 participants, the kick-off was rescheduled to Saturday morning. William shared that his team was initially skeptical about whether employers and families would attend on a weekend, but their concerns proved unfounded. The weekend kickoff event resulted in a record-breaking turnout. This outreach strategy was not only effective but also highly visible. A local newspaper described the third annual session as drawing "a standing-room-only crowd of students, parents, and business leaders energized by shared commitment to student opportunity." Such public recognition helped to solidify the program's standing in the community and served as external validation of the trust and legitimacy Tabard's YA program had cultivated.

Responding to Growth

William described how the college adapted its outreach efforts in response to overwhelming community interest in the youth apprenticeship program. Initially, the challenge

was ensuring a steady pipeline of students interested in apprenticeship as a postsecondary pathway. One of their earliest responses was to launch a "signing day" event, inspired by athletic commitment ceremonies. As William recalled, it began as a spontaneous idea during a Chamber of Commerce event where Tabard's president was scheduled to speak. In a conversation just prior to the event, the president, William, and their high school coordinator partner brainstormed ways to make the occasion memorable. The resulting signing ceremony received enthusiastic media coverage and quickly became an annual tradition. Celebrating students' entry into career pathways and reinforcing the legitimacy of youth apprenticeship was the highlight of the chamber meeting. William remembers the crowd's energy prompting Tabard's president to declare on the spot, "We're doing this every year!"

Employer Engagement Strategies

Several new events were developed in response to the community's enthusiastic support. Each initiative became an annual opportunity to build community trust, showcase employer investment, and position youth apprenticeship as a legitimate and aspirational postsecondary pathway. As interest surged, Tabard introduced innovative outreach models to sustain momentum and deepen employer involvement. Thomas and Alice both expressed appreciation for the many ways the college facilitated student interaction. Alice specifically noted that "events that create meaningful opportunities for students and families to explore career pathways [are] incredibly impactful."

For example, when demand for healthcare placements began to outpace employer capacity, the college launched a "draft" experience modeled after the NBA draft, infusing the process with a sense of prestige and excitement. As the applicant pool continued to expand across industry sectors, the college also implemented a "first look" engagement designed to

accelerate employer participation in the hiring process. In this fast-paced format, employers conducted rapid interviews, similar to a speed-dating model, allowing them to meet high-potential candidates before applications were released to the general employer pool. William described this as “sort of an incentive for employers to hire quickly,” noting that the college would “hold the applicants until a certain month” and invite participating employers to an exclusive early-access session. “If you're willing to come to this event and interview and make decisions,” he told them, “We’ll give you first look at the candidates.” According to William, this opportunity was one that prospective employers “loved.”

Culture of Collaboration

Participants consistently described a thriving culture of collaboration among stakeholders as essential to developing, advancing, and sustaining this YA program. Local connections, regional networks, and word-of-mouth referrals emerged as factors contributing to the program’s growth. This collective dynamic was characterized as both intentional and cross-sectoral, involving industry, education, and community-based partners. Internal documents echo this emphasis, noting that “the apprenticeship initiative is built on a foundation of shared responsibilities, with technical college instructors, employer mentors, and career counselors all playing key roles in supporting the apprentice’s journey.” The following sections explore how formal and informal collaboration functions as a foundational element in the program’s ongoing success.

Collaboration in Action: The Role of Communication

Interviews, document reviews, and field observations illustrated the dynamic interplay among multiple stakeholders working together to create meaningful opportunities and outcomes for youth apprentices. This collaboration manifested in a variety of coordinated efforts across

institutional and sector boundaries, all of which were grounded in consistent communication among stakeholders. Educators and industry professionals co-designed curricula; administrators and intermediaries coordinated solutions to legal and logistical barriers; and adult mentors provided technical guidance and professional coaching to apprentices.

Stakeholders pointed to open and responsive communication as a critical mechanism for sustaining collaborative momentum. Alice described the interagency culture in enthusiastic terms, stating, “Our agencies here are super, everyone's super friendly, super open to trying new things,” a reflection of the informal warmth and openness that several stakeholders attributed to the program’s collaborative environment. Thomas noted the value of informal interactions such as employer breakfasts and information nights, which he explained, “help build confidence and trust in the process.” These casual spaces allow stakeholders to engage in authentic, low-stakes dialogue that supports ongoing problem-solving and alignment.

Community Relationships and Informal Networks

Eleanor described the importance of maintaining strong ties with key community influencers, attending local events, and employing consultants to provide direct support to employers. She asserted the value of “constant communication, you know, maintaining those relationships and being out and about in the community at community events.” Her remarks underscore how relationship-building beyond formal meetings plays a central role in sustaining employer participation and resolving challenges as they emerge.

Field observations further affirmed the program’s relational culture. Mentors were seen guiding youth through complex troubleshooting tasks using PLCs and multimeters while also coaching them in professional conduct and workplace problem-solving. In one observed instance, a mentor invited a high school apprentice to assist a line operator during a systems

check, giving the student a chance to demonstrate technical skills and engage in real-time teamwork. In another observation, the mentor stressed to his apprentice that cleaning up his mess after drilling new access to a power source was a critical step: “If it looks like a professional job, then it will be remembered as a professional job.” These moments reflect how workplace mentorship, embedded in daily routines, reinforces collaboration and supports youth development.

Families and youth, as direct beneficiaries of these coordinated efforts, also play a crucial role in sustaining momentum and public trust. Their participation in celebratory events, such as the annual signing day, reflects their personal investment and enthusiasm. Local media coverage of these events reinforces the program’s visibility and credibility, framing youth apprenticeship as a viable and exciting postsecondary option. For example, regional newspaper coverage of a signing event quoted a parent who called her daughter’s apprenticeship experience “life-changing,” noting that her daughter’s full-time employment after high school offered more stability and income than her own college-to-career pathway.

Coordinated Outreach as Collaborative Infrastructure

Participants described student and parent outreach, along with employer engagement, as central to sustaining collaboration. Two major avenues emerged: in-person events designed for families and students, and structured employer contact facilitated by apprenticeship consultants at both the college and state levels. William credited the importance of the latter to a coordinated team effort, with clearly defined roles for outreach, communication, and collaborative problem-solving. Similarly, Eleanor stressed that consistent communication and strategic networking are essential to ensuring “the folks who need to be at the table are at the table when we’re having those discussions, to just keep that collaboration going.”

Internal documents reinforced this perspective, describing how consultants routinely attend workforce summits, industry expos, and community hiring events to "share updates, solicit employer feedback, and identify emerging training needs." These points of contact are embedded within the broader program infrastructure and allow for timely information exchange. They also foster ongoing alignment and signal institutional commitment to sustained stakeholder partnerships.

In-Person Engagement as a Driver of Trust

Participants also called attention to the powerful role of face-to-face interaction in strengthening relationships and promoting the visibility of the youth apprenticeship program. Alice noted that events such as open forums, job site tours, and structured interview days made the program "more tangible for everyone involved," helping families and employers develop a clearer understanding of apprenticeship pathways. These opportunities help make the program more concrete and approachable, fostering stronger connections between families, students, and employers.

Eleanor described recurring in-person encounters as vital to sustaining collaborative energy. "You'll start seeing the same people at different events, and that helps you maintain that connection, so you know who to call when you need to bring them into a conversation." Her comment reflects a broader pattern in the data: repeated, informal interactions build familiarity, trust, and a reliable foundation for joint problem-solving.

William recalled a brief face-to-face encounter with an employer at a chamber event. The employer shared that he and his wife had seen a television news story covering the program's first signing day. His wife, reacting with surprise, had asked, "Why aren't you doing this?" The

employer followed up with a phone call the next day to request a meeting. “That employer,” William noted, “has been one of our best partners ever since.”

Media accounts and internal documentation also highlight the importance of public presence in building community trust. One local newspaper described an outreach event as “educating parents and students about the program while providing employers with a venue to advertise career opportunities.” These efforts were credited with raising awareness and offering “free advertising for the growing initiative.” More than promotional, such events affirm the program’s legitimacy and reflect broad community investment in youth apprenticeship as a meaningful pathway to both career entry and postsecondary advancement.

Relationship Building and Nurturing

While a culture of collaboration provided the foundation for stakeholder engagement, participants articulated that the success of the YA program also relied on actively building, nurturing, and sustaining personal relationships at every level. Evidence of these connections emerged through both observations and stakeholder interviews. Interactions documented during site visits and reflected in interviewee comments suggested a relational ethic that extends beyond formal roles and reinforced a centrality of trust and mutual investment. Verbal and nonverbal cues noted during field observations illustrated the deep trust shared between mentors and apprentices. During all interviews, participants stressed the importance of maintaining strong, intentional relationships with key partners to sustain momentum and support apprentice success.

Alice shared her experiences related to selecting appropriate mentors for youth apprentices, emphasizing that finding the right mentor is essential. The focus, she explained, is not only on technical skills but on identifying employees who demonstrate a positive and encouraging attitude. “We want them to have a positive experience. We also want them to work

with people who are encouraging them. And so, choosing the right trainers is intricately important." Alice also expressed pride in her company's ability to retain youth apprentices after program completion, noting, "The number of students who choose to stay with our company after completing their apprenticeships is rewarding for their mentors." Her comments underscore the long-term value of investing in strong mentor-apprentice relationships. She credited high school and college educators for preparing students effectively, setting expectations, and helping families understand the importance of workplace mentoring. "These are students who are thinking about their futures," Alice observed. "They are open to feedback and excited to be here."

The importance of reciprocal communication and mentorship was also evident in field observations of a high school apprentice, Richard, who initially struggled with follow-through but became noticeably more confident and independent over the course of the observation. Robert, his mentor and a seasoned technician, used inquiry-based coaching to prompt reflection and reinforce both technical and professional habits. As Richard worked to isolate the source of a power failure, Robert offered a mix of thoughtful questioning, redirection, and positive reinforcement. This approach supported Richard's confidence and engagement as he developed his problem-solving skills. The observation highlighted how responsive, relationship-centered mentoring fosters meaningful and growth-oriented apprenticeship experiences.

Sustaining Partnerships through Public and Professional Networks

Strategic networking emerged as an essential practice for maintaining long-term collaboration in the YA program. Eleanor remarked that active visibility was instrumental in building awareness and trust among employers. She cited examples such as attending trade and industry association meetings, speaking at local events, and developing relationships with HR

managers. Networking was also prominently featured in media coverage of promotional events, which consistently created opportunities to reinforce community engagement. One recent article highlighted a signing day event where four youth apprenticeship graduates were featured as panelists, seated alongside prominent funders from two major financial institutions and the current Director of the Partnership to Advance Youth Apprenticeship (PAYA). The event also showcased participating employers formally signing their new apprentices, reinforcing the program's credibility and appeal. Events like these not only elevate the visibility of youth apprenticeship but also strengthen public confidence in its legitimacy as a postsecondary pathway.

The importance of ongoing relational work was echoed across multiple data sources. At one manufacturing site, field notes documented how a full-time apprenticeship coordinator not only oversaw on-the-job training but actively cultivated relationships with school-based liaisons to align student readiness with workplace expectations. For this company, the importance of the coordinator role is well-rooted in its global commitment to an employee education model. For other stakeholders, the commitment is reflected through internal guidance documents that note college apprenticeship consultants "regularly participate in business expos and workforce summits to share program updates, solicit employer input, and respond to evolving training needs."

Relationships that Empower Stakeholders

All interviewees described empowerment as a defining feature of successful YA programs. They spoke about empowering students to develop career-focused identities, equipping adult employees to mentor youth effectively, and enabling employers to embrace a broader mission of community investment. This relational form of empowerment was evident

not only in participant reflections but also in the structural choices made by employer partners. For example, Thomas added staff capacity to support his company's youth apprentices. The new staff member, Franklin, served multiple roles: overseeing recruitment and hiring, training mentors, offering technical assistance, and representing the program both internally and in the broader community. These actions exemplify how trust-based relationships and shared responsibility contribute to a culture in which all stakeholders are positioned to participate meaningfully in the apprenticeship experience.

Developing Career Oriented Students

Eleanor shared that guiding students toward career-oriented mindsets begins with the early establishment of clear expectations. She attributed much of this clarity to Tabard's strategically designed informational forums, which serve as a first step in aligning students and parents with the program's goals. These forums, she explained, help families understand that youth apprenticeship is not a casual experience, but a serious commitment to both a program and an employer:

> This isn't job shadowing, it's not a short-term internship. If you're going into a youth apprenticeship program, you are becoming an employee of that company; so, making sure that they understand [being a youth apprentice] is really involved, it's a huge commitment, and it's not just a one semester thing, but also understanding the benefit of YA for themselves.

Alice described program effectiveness not only in terms of skill-building but also in retaining youth apprentices after program completion. She shared the story of two apprentices whose experiences reflect the range of post-program pathways the YA model supports, whether apprentices pursue higher education or enter full-time employment.

> Our very first youth apprentice had ambitions of going to a university. And so, we knew it was very likely that he wasn't going to stay on as an employee. But what was great about that is we actually did start a scholarship program for our youth apprentices. And so, we were able to give him a scholarship while he was in school. And then when he would come home during the summers or on breaks, he would work here, which helped us out a lot. Because every time he came back, we actually needed him because maybe someone was out, or someone was on leave.

She also recalled a second apprentice, a student who aspired to become a machinist without pursuing college. “He just wanted to learn a trade and stick with us,” Alice explained. “And so, once his program was over, he became our employee.” For Alice and her company, these examples reflect a broader norm: youth apprenticeships serve as launchpads to career and thrive when rooted in trust, mentorship, and opportunity. The long-term relationships formed during the apprenticeship process create pathways that are not only educational and professional but also deeply personal and mutually beneficial.

Cross Generational Relationships

One of the most consistently cited strengths of the YA program was the depth of connection forged between adult mentors and youth apprentices. These relationships helped cultivate not only technical skills but also a strong sense of workplace belonging. William stressed the importance of preparing mentors to coach students toward success, noting that mentors sometimes struggle when apprentices experience setbacks. In such moments, he sees an opportunity to support the mentors themselves, encouraging them to frame failure as part of the learning process. He candidly observed that preparing employers for this level of mentorship is

"crazy, very difficult, and almost impossible at times," yet he considers it fundamental to program success. Without intentional support for mentors, he cautioned, apprenticeship initiatives are unlikely to thrive. William further asserted that the most effective employers are motivated not solely by organizational gain, but by a genuine desire to shape young people's lives. However, as he astutely noted, "such investment ultimately benefits their companies as well."

Employer interviews reinforced the significance of relationships in driving program success. Alice, for example, described how the "apprentices' raw skills and positive energy invigorated their workplace mentors" and enriched the company's culture. Many employees, she explained, "either had children themselves or had raised children, making them naturally supportive of the program's mission." As a result, Alice found that identifying willing mentors was rarely a challenge. She also felt engagement has persisted over time because the company's culture consistently supported and valued youth apprenticeship.

The perspectives of mentors obtained during field observations also highlighted the reciprocal benefits of cross-generational relationships. For example, Reeve asked his apprentice, John, to develop a technical 'weed out' test to evaluate peer readiness. Reeve reported that the test had already been used to identify one apprentice ready for promotion to the manufacturing floor and another who needed more training. Sharing this success visibly boosted John's confidence and helped ease his initial nervousness about being observed. After the observation, John proudly invited the observer to see a Fanuc robotic arm he had programmed, demonstrating a growing sense of pride, ownership, and comfort in his role. These interactions show how intentional mentorship fosters student growth, strengthens workplace culture, and reinforces the relationship-driven structure that supports youth apprenticeship.

These examples of trust-based mentoring and mutual investment illustrate how youth apprenticeship thrives when relationships are nurtured across generations. Yet sustaining that level of connection and program coherence over time takes more than goodwill. It depends on leadership that is consistent, collaborative, and strategically positioned.

Sustainable Intermediary Leadership

All interviewees mentioned the critical importance of the intermediary role in sustaining a YA program. An intermediary, whether an individual or an organization, serves as the central connection point among stakeholders, responsible for keeping all parties informed, engaged, and accountable. In this case study, the intermediary was consistently described as both a coordinator and a driving force behind cross-sector collaboration, supporting every phase of the program from design and recruitment to long-term sustainability. At Tabard Community College, this role is carried out by the Dean of Apprenticeships, William.

William characterized Tabard's intermediary role as multifaceted. While he serves as the program's primary point of contact, an expectation reflected in his title, he is quick to credit the college president and the vice president of community and continuing education for providing the institutional support that sustains his leadership. As he explained, "That's why when you talk about capacity, when you talk about building an intermediary, it's impossible to do with just one person. Because even though I was pretty good at building relationships with employers, I didn't have any relationships with the high schools whensoever." His comments reflect both the demands of the role and the collaborative foundation that makes it viable over time.

William further noted that Tabard assumed this role out of necessity rather than by formal design. Originally focused on adult apprenticeships, the college expanded its reach to youth when the CEO of the European-based manufacturing company sought Tabard's help in

replicating the vocational education and training (VET) model from his home country. The CEO's request prompted Tabard to bring in additional employer partners, gradually positioning the college as the program's coordinating body. Tabard began managing classroom instruction, onboarding high schools, securing funding, and overseeing operations, including marketing and promotion. Internal documents and media coverage highlighted the college's organizing capacity, citing "regular information sessions, strategic planning meetings, and continuous dialogue among all stakeholders" as hallmarks of sustained coordination. These practices illustrate the intermediary's core function: convening partners and ensuring aligned, ongoing collaboration.

William likened the intermediary to "the hub in the wheel," responsible for keeping all program components and people moving in the right direction. He acknowledged, however, that maintaining this central role is no small task. Drawing from his experience assisting other communities, William observed that many struggle to sustain intermediary leadership over time because of the breadth and intensity of the responsibilities involved. From this perspective, Tabard's success reinforces a key insight: a sustainable intermediary that can coordinate cross-sector relationships and maintain momentum is not simply beneficial; it is essential to the long-term viability of a youth apprenticeship program.

Community Colleges as Intermediaries

While William credited much of the initial success of the YA program to strong employer commitment, he also recognized that Tabard Community College's internal leadership and strategic assumption of the intermediary role were key to sustaining the initiative. The college's innovative leadership style had long shaped its institutional identity. Eight years after the YA program's launch, Tabard's president was invited to participate in the White House

Apprenticeship Ambassador Initiative. During a national panel discussion, she championed the broader value of apprenticeship, stating, “registered apprenticeships have power—the power to change lives in remarkable ways and the power to accelerate our economy and build strong communities.” Her national advocacy reflected a vision already taking shape at Tabard. She aimed to expand the college’s longstanding apprenticeship infrastructure, which had previously focused on non-credit training for adult workers, to include youth, credit-bearing pathways, and stronger alignment with regional workforce needs.

William explained that before the YA initiative, most of the college’s apprenticeship efforts centered on non-credit programs serving adults. This model is common among two-year institutions. His transition from leading non-credit training to becoming Dean of Apprenticeships on the credit side marked a significant institutional shift. In this new role, he continued expanding adult apprenticeship opportunities while also developing credit-based coursework tailored to youth. He described the transition as unconventional within the two-year college system:

> When I became Dean of Apprenticeships, it was on the credit side, because our president wanted apprenticeships to be credit-based. And I went from the credit side not liking me to loving me, and the rest is history. I joke around about it all the time. When I tell other colleges I work on the credit side, they ask, ‘What do you mean?’ I say, ‘I work on the credit side.’ So, it's almost an unheard-of possibility.

William asserted that community colleges are uniquely positioned to serve as effective intermediaries for youth apprenticeship programs. Their existing infrastructure, combined with institutional flexibility, provides a strong foundation for managing youth apprenticeships. With

intentional restructuring, William contends that community colleges can offer credit-bearing pathways that not only support technical skill development but also build credit hours toward associate degrees. In doing so, they can fulfill the intermediary function and help legitimize YA as a viable and attractive postsecondary option

Investing in Intermediary Leadership

On the institutional side, William observed that building internal capacity was essential to sustaining the program's expansion. "We've hired more staff and changed processes as we grew," he shared, referencing deliberate adjustments to staffing and systems. He noted that sustainability required measures to support employers, promote apprentice opportunities, deliver educational curricula, and recruit youth to meet rising demand. These efforts reflect a broader institutional strategy to build an apprenticeship infrastructure responsive to both industry and student needs. William is acutely aware of the reciprocal relationship between industry, the economics of his service area, and student needs. He professes that he has "never started a new apprenticeship program unless [he has] employers lined up ready to hire."

Tabard's experience demonstrates that when community colleges commit to serving as intermediaries, they can transform youth apprenticeship programs into powerful pathways that connect secondary education, postsecondary credentials, and long-term career opportunities. William noted that fulfilling this role effectively requires dedicated staffing, institutional authority, and the time needed to build and manage partnerships. His assertion that "someone has to drive the bus" underscores the importance of an empowered intermediary who can coordinate the many responsibilities and relationships among schools, employers, and government entities.

All other interviewees echoed William's analogy, affirming the need for a clear point of contact to keep collaborative efforts aligned and moving forward. Whether addressing parent

concerns, navigating legal questions, or responding to leadership turnover, successful partnerships depend on institutions that are responsive, reflective, and adaptable. As William put it, sustaining momentum requires ongoing advocacy: “You have to go back and resell the program over and again.”

Thomas and Franklin shared a story that illustrates both the value of intermediary support and the importance of sustained advocacy. They recalled a youth apprentice whose father had once worked at the plant before passing away unexpectedly. When the student expressed interest in becoming an apprentice, his mother, Franklin recalled, was hesitant. She expresses worry that “factory work might limit his future and take college off the table.” In response, Tabard’s intermediary team arranged a personalized tour of the facility for the mother and son. After the visit, the mother grew emotional and told the staff, “His dad would be so proud to know you all are working hard to take care of him.”

Defined Roles and Responsibilities

Alongside investments in leadership capacity, the success of Tabard Community College’s youth apprenticeship program was supported by clearly defined roles and responsibilities among key personnel. This role clarity laid the foundation for sustained collaboration and strategic growth. William attributed much of the program’s early progress to the entrepreneurial leadership of the college president. After learning of the CEO’s interest in hiring youth apprentices, she quickly empowered a two-person team to guide the initiative: William, representing the Division of Apprenticeships, and a colleague from the Division of

High School Programs. “That was our president’s strategy,” William recalled, “to grow high school programs and also grow apprenticeship programs.”

The president’s decision to pair these two leaders reflected both strategic alignment and an understanding of the importance of community trust. William noted that his colleague was already well respected by local educators, which helped establish early credibility for the initiative. This trust was affirmed in a professional organization’s newsletter, which praised Tabard’s Coordinator of High School Programs for her community service “on numerous cross-sector collaborative initiatives aimed at improving education,” including a leadership role on the Board of Directors for the metro area Chamber of Commerce.

As William and his colleague began to structure the program, their distinct roles and professional networks quickly became strategic assets. William recalled that his first step was to reach out with the CEO’s vision. He recalls asking his colleague, half-jokingly, “Hey, can you get me some kids?” Although they operated under separate administrative divisions, the two worked in close coordination. William focused on employer engagement, while the high school coordinator maintained communication with principals and guidance counselors across the region. “The work of the intermediary,” William reflected, “is not an isolated endeavor but a team effort, thriving because each member cultivates and sustains relationships with critical partners.”

Looking back on the program’s formative years, William credited its early success to the president’s foresight and her commitment to building a trust-based infrastructure. Both leaders envisioned the initiative as a regional model rather than a single community endeavor. That vision proved well-founded. Local media documented the program’s rapid expansion: in just

three years, the number of youth apprentices grew from 13 students placed with six employers to 71 students working across 43 companies.

As the program scaled, Tabard's leadership responded with strategic, incremental staffing. Internal records trace a steady progression: in 2015, a youth apprenticeship coordinator was hired to assist with school outreach and student recruitment; in 2018, a consultant joined the team to support employer engagement. By 2019, the duties of Tabard's community work experience program were merged into the Dean of Apprenticeship's office. Between 2021 and 2024, one full-time and one part-time youth apprenticeship coordinator were added to meet rising demand. This deliberate structuring of roles and gradual capacity expansion proved essential to transforming Tabard's youth apprenticeship initiative into a scalable, regionally recognized model.

State Level Support for the Intermediary

While internal leadership and clearly defined roles laid the groundwork for program growth, participants also recognized the importance of external support at the state level in strengthening and sustaining intermediary efforts. In states that operate under a U.S. Department of Labor (DOL)-approved State Apprenticeship Agency (SAA), as is the case for the program under study, SAA personnel collaborate with partners to support YA program development. These agencies help ensure regulatory compliance and assist in program design for both adult and youth apprenticeships, providing critical support that complements the work of local intermediaries.

Eleanor, Vice President of the SAA, offered additional context on the agency's role in supporting statewide apprenticeship expansion. She explained that the agency was established in 2007 in response to industry demand for assistance navigating the registration process with the

U.S. Department of Labor. Although the state operates as an Office of Apprenticeship (OA) state, meaning DOL retains final regulatory authority, SAA personnel work "hand in hand" with federal officers. Their core function, Eleanor noted, is "helping employers design and develop apprenticeship programs, guiding them through the process of preparing and submitting program documents for federal registration."

Eleanor further explained that the SAA's reach extends beyond supporting employers and educational sponsors. In many respects, the agency itself functions as an intermediary, serving as a central hub for apprenticeship development across the state. She described the day-to-day operations of her team as "helping individuals seeking apprenticeship opportunities, advising employers starting new programs, or providing technical support for sponsors managing their programs through the Registered Apprenticeship Partners Information Data System (RAPIDS)." The agency maintains a staff of 22 to 24 members, including dedicated consultants embedded within the state's technical college system. A review of the SAA's media publications describes these consultants as key facilitators who "work closely with community colleges, industry leaders, and school districts to align training with employer needs, develop program standards, and facilitate sponsor registration with the U.S. Department of Labor."

Further illustrating its integrative role, the SAA recently launched a mobile application to help employers advertise apprenticeship opportunities directly to potential candidates. Eleanor described the app as "an avenue to connect citizens with employer sponsors who are looking to hire apprentices." This initiative underscores the agency's ongoing commitment to expanding access, increasing visibility, and strengthening alignment across the apprenticeship ecosystem.

Part Two: Themes Related to Policy Refinement Through Interagency Collaboration

In addition to exploring how interagency collaboration supports the development, implementation, and sustainability of YA programs, this study examined how those same collaborative practices contribute to the refinement of policies that govern YA efforts. Research Question 2 asked: *How can interagency collaboration aid the refinement of policy governing youth apprenticeship programs?*

The findings presented in the following sections illustrate how structured communication, stakeholder alignment, and sustained trust across sectors have enabled program leaders to address systemic challenges and inform policy adaptations at both the institutional and state levels. Rather than resulting from isolated legislative action, many of the policy shifts described by participants emerged from collaborative problem-solving and relationship-driven decision-making.

Flexible Adaptation to Barriers

The following themes highlight how systemic barriers prompted collaborative policy adaptations for this YA program. Differences in work-day schedules between educational institutions and partnering employers, liability concerns, and other disparate organizational priorities presented challenges from the beginning. While these challenges persist, participants described how trust-based relationships, flexible leadership, and sustained dialogue contributed to practical policy refinements across both institutional and state levels.

Challenges in Interagency Collaboration and Policy Refinement

Participants consistently conveyed that the success of the YA program did not stem from the absence of barriers, but from a shared willingness to adapt, problem solve and stay united around common goals. Obstacles included legal concerns related to hiring minors, scheduling

misalignments between high schools and workplaces, and conflicting institutional priorities. Interviewees acknowledged addressing these issues required more than flexibility; it demanded deliberate collaboration, mutual respect, and consistent communication among partners. William provided several examples of such flexibility, including leveraging homeschooling arrangements, adjusting internal college policies, and even working with employers to reframe HR protocols that might otherwise restrict youth hiring. In each case, stakeholders developed tailored solutions that supported both student opportunity and employer participation, demonstrating how collaborative adaptation contributed to incremental policy shifts within and across institutions.

One early concern involved legal liability for apprentices under the age of 18. To mitigate this risk, the sponsoring college assumed responsibility for workers' compensation and insurance coverage during the program's initial years. This decision reflects an important early example of policy adaptation shaped through interagency coordination. Alice noted that her company subsequently revised its internal hiring policy to allow apprentices within three months of turning 18, describing the adjustment as a pragmatic way "to err on the side of caution." William felt that many perceived legal constraints did not originate from state or federal law, but from company-level practices that could often be re-evaluated through dialogue and trust-building. "Policies can be changed," he reflected, underscoring how collaborative relationships create space for refining institutional policies to expand access for youth.

Eleanor noted that a shared vision among stakeholders helped generate innovative responses to structural challenges, including misaligned school calendars, restrictive accountability metrics, and rigid policy guidelines. One such challenge involved district report cards, which could not reflect youth apprenticeship participation unless the program concluded

before a student's graduation. Eleanor highlighted ongoing communication with state level education administrators to revise these accountability systems so that districts receive formal recognition for student participation in YA programs. She attributed this possible policy shift to sustained advocacy from program leaders: "The state is revamping report cards and we are hopeful districts will get credit for YA." This example illustrates how interagency collaboration, particularly through ongoing communication between local program leaders and state officials, can result in meaningful policy adaptation that incentivizes school participation in youth apprenticeship.

Scheduling conflicts also posed a significant barrier to youth apprenticeship participation, particularly in sectors such as construction and heating, ventilation, air conditioning (HVAC) contractors, where workdays typically begin early and end by mid-afternoon. William voiced frustration with the limitations imposed by traditional high school schedules, which often prevent students from participating in these fields. "I probably have a hundred HVAC employers on board hiring kids every day," he explained, "but they'll tell me, I need them here during the day… and because the high school programs' schedules are set up as such, it doesn't work." His comment highlights a structural mismatch between academic calendars and employer expectations; and, unfortunately, the mismatch is one that limits student access to high-demand occupations and raises broader questions about how school scheduling policies might evolve to support greater alignment with workforce needs.

While traditional high school schedules often constrain apprentice availability, alternative educational settings can provide greater flexibility. This was the case for John, a homeschooled youth apprentice observed during fieldwork. Because his academic obligations were not tied to fixed start and end times, John was available for extended, uninterrupted periods on the job site.

This daytime availability offered distinct advantages: Franklin noted that more experienced employees typically worked day shifts, which allowed him to pair John with highly skilled mentors. One of those mentors, Reeve, specialized in programmable logic controllers that governed the factory's operations. He described his work as requiring "an understanding of electrical systems, mechanical processes, and the overall factory workflow." Reeve noted that John's schedule gave "him access to the full range of factory activities" and enabled deeper learning through real-time observation and hands-on application. Over time, Reeve observed, "John has shown clear signs of growth in his confidence and independence as he has progressed through the tasks outlined in his apprenticeship work process schedule. This example highlights how structural flexibility, when supported by collaborative planning, can enhance both instructional depth and mentorship quality. It also points to the importance of exploring more adaptive scheduling policies that allow broader student participation in high-quality apprenticeship experiences.

Program leaders acknowledged that structural misalignment is not limited to differences between institutions but often exists within them. Eleanor explained that even within a single district, "you're dealing with different people, different calendars, different class offerings; each is unique." Internal program records confirm that students frequently rely on flexible mechanisms such as early release, dual enrollment, or online coursework to align their academic schedules with apprenticeship responsibilities. These examples illustrate the importance of local customization, sustained communication, and collaborative flexibility in responding to barriers that cannot be addressed by one-size-fits-all policy solutions. Without adaptive mechanisms, students may miss out on apprenticeship opportunities, and employers may disengage due to unresolved logistical constraints.

Misalignment of Organizational Goals and Processes

Participants described how differing priorities among parents, educators, and employers can complicate efforts to expand and sustain youth apprenticeship programs. Eleanor noted that some families view youth apprenticeship as a potential burden rather than an opportunity. She recalled instances where parents expressed concern that balancing academic responsibilities with apprenticeship obligations would place unnecessary stress on students during their senior year—a time they expected to be more flexible or less demanding. She shared:

> It's hard to make an argument against that if that's what the parent is pushing, and, of course, the child, if given the option, is like, 'Yeah, well, I'll just hang out then the last couple of years.' So, I think it's really making sure that both understand the benefits and the opportunities that this type of program affords them, particularly if they don't have plans post high school or don't know what those plans are going to be. Often times, you're not paying a dime for your education. It's either covered by grants or scholarships at the technical college level or the employer is going to throw in some portion.

This example illustrates a common misperception: that youth apprenticeship is an either-or choice that limits postsecondary academic options. Eleanor expressed concern that such assumptions can deter families from seriously considering YA as a viable component of a broader college and career strategy. She underscored the need for early and transparent communication with both students and parents to convey that youth apprenticeships can align with, and even strengthen, postsecondary plans.

William described other tensions that arise when employers fail to follow the work process schedules outlined in the youth apprenticeship agreement. "These lapses may limit an

apprentice's ability to complete required competencies in their Registered Apprenticeship Program (RAP) and can raise concerns about program integrity," he explained. In one case, a youth apprentice withdrew after becoming discouraged by a lack of meaningful work assignments. Upon follow-up, William learned that the employer had not implemented the agreed-upon training plan. Although the employer expressed regret and reassured William that the student's performance was not to blame, the situation underscored the consequences of inconsistent employer implementation. While such issues are typically resolved through direct dialogue with the intermediary, they point to the importance of proactive oversight and shared accountability mechanisms to ensure compliance with apprenticeship standards.

Finally, both employers acknowledged the complexities of navigating mentor-apprentice relationships, particularly when behavioral challenges arise. Franklin noted that although mentors receive training before working with youth apprentices, this preparation does not always equip them to manage immature or risky behavior. One common concern involves cell phone use on the plant floor, which poses both safety hazards and disciplinary issues. This was observed firsthand during a site visit: Richard, a youth apprentice, arrived disheveled and seemingly unprepared. As his mentor, Robert, reviewed the day's assignment, Richard glanced at his phone, prompting Robert's immediate and firm correction. Richard responded quietly, "I was letting my mom know I made it to work." Afterward, Robert explained to the observer that Richard's phone use had become a persistent issue and constituted a safety violation. Alice shared similar challenges, noting that it can be "difficult for mentors to balance their roles as supportive coaches while also enforcing workplace safety standards and professionalism expectations." These examples point to the need for ongoing refinement of mentor training

protocols, particularly in addressing age-appropriate coaching strategies that support apprentices' attainment of technical skill and reinforce apprentices' accountability to workplace expectations.

Policy Refinement Through Cross-Sector Trust

Participants credited effective policy advancement in youth apprenticeship programs to sustained, trust-based relationships across sectors. Rather than functioning as isolated partners, stakeholders described themselves as part of an integrated network that shapes policies through shared experience and mutual accountability. William noted that policy collaboration begins with "understanding who to involve in the conversation and building relationships," while Eleanor described the indispensable role of technical colleges in employer engagement, stating, "We always bring in the technical college when talking to industry."

Trust also enabled stakeholders to challenge and revise existing practices. Eleanor stressed the importance of open communication among institutions, particularly when interpreting complex regulations. This trust fostered a co-constructive approach to problem-solving, allowing stakeholders to anticipate challenges and adjust policies to meet both employer needs and student expectations. Internal documentation echoed this dynamic, noting that "representatives from educational institutions, workforce agencies, and employers work together to shape standards and requirements for youth apprenticeships."

Participants suggested that cross-sector trust serves not only as a support system but as a mechanism for joint policy development. As Alice explained in reference to revising internal hiring policies for youth under 18, "We had to work that out with [our legal team], but then try to recognize that, oh, okay, this may be a challenge for our manufacturing community. What can we do to overcome that for future manufacturing partners?" Her reflection illustrates how shared learning and trust can scale one employer's solution into a broader policy conversation.

Forging Agreements through Mutual Trust

Participants described how trust among industry, education, and government partners laid the foundation for formal agreements that shaped the early direction of the youth apprenticeship program. William credited both the internal leadership of Tabard Community College's president and the external influence of the European-based manufacturing CEO with establishing the groundwork for cross-sector alignment. The CEO's early and visible commitment helped position the manufacturing industry as a primary partner, creating legitimacy and momentum for broader employer engagement.

This trust-based partnership was reinforced by favorable economic conditions. Local media reported a "14.4 percent increase" in manufacturing job growth shortly before the program launched, alongside announcements of new industry expansions within Tabard's service region. The CEO's leadership, combined with strong institutional support, enabled stakeholders to craft agreements that reflected both regional workforce needs and shared commitments to program standards. These agreements became early building blocks for policy design, establishing clear expectations for employer participation, youth worksite safety, and coordination of training requirements.

Simultaneously, Tabard's president demonstrated responsive institutional leadership by restructuring internal operations to meet the program's emerging needs. Internal documents show that the president strategic merger of departments also signaled aligned communication and curriculum development policies to support a unified apprenticeship model. This restructuring enabled cross-functional collaboration and established a more cohesive internal policy framework.

The president's internal efforts, combined with the CEO's external leadership, laid the foundation for coordinated agreements among schools, employers, and government agencies. One example of this coordination is the Youth Apprenticeship registration process, which formalizes interagency agreements through structured commitments from students, families, educators, and employer partners. As outlined in the application packet and student handbook, apprentices must meet academic and legal employment requirements, obtain recommendations from school and community representatives, and participate in a hiring cycle that demands alignment across districts and employers. The process also requires multi-party consent and formal information-sharing agreements to facilitate placement and track performance. These embedded protocols reflect how trust and leadership translate into durable governance structures that sustain interagency collaboration over time.

Leveraging Strengths

Participants noted that effective policy refinement often emerged when stakeholders strategically leveraged one another's strengths to overcome implementation barriers. Liability, particularly in the manufacturing sector, was consistently cited as a perceived obstacle to hiring youth. In response, the intermediary's institutional knowledge of apprenticeship regulations and established relationships with employers led to a creative solution: partnering with a staffing agency to assume liability. This strategy reassured employers and allowed them to focus on mentorship and integration, rather than legal risks.

William stressed that many barriers were not grounded in federal or state laws, but in internal company policies shaped by liability concerns. He and others noted that policy refinement often began by challenging the assumption that existing practices were immovable. With shared goals and a willingness to engage in dialogue, even long-standing internal policies

could be renegotiated to improve access and alignment. Eleanor offered another example of strength-based collaboration in coordinating dual enrollment offerings across multiple school districts. She described the process as “a challenge”, but one made possible by “a shared commitment to student access and employer needs”. Internal documents reinforce this approach, stating that “barriers to youth participation are addressed through continuous dialogue and role clarity among institutional partners.” Participants consistently affirmed that leveraging institutional expertise in legal navigation, curriculum alignment, and employer engagement was essential to crafting responsive, sustainable policy solutions.

Responsive Collaboration in Policy Implementation

A recurring theme across interviews was the importance of mutual responsiveness and trust among partners when navigating policy implementation challenges. Participants described how one stakeholder’s strengths often compensated for another’s limitations, enabling quick, coordinated responses. William summarized this dynamic as “everyone knowing who to call when something goes wrong,” and described Tabard’s role as the central hub for resolving issues that arose across schools, employers, and state agencies. He offered examples such as mediating disciplinary concerns with high schools, clarifying worksite expectations with employers, and consulting with regulators to ensure compliance with youth labor laws.

Eleanor and Thomas reinforced this view, emphasizing how long-standing relationships enabled collaborative troubleshooting. “Understand the policies in your area and know who to talk to,” Eleanor advised, explaining that many challenges stemmed from localized policy interpretations. Thomas added, “More things happen when people trust each other.” Internal program documents echoed this theme, stating that “timely issue resolution relies on shared accountability and clearly defined communication channels.” These reciprocal partnerships were

useful for managing day-to-day operations. They were also central to ensuring that apprenticeship policies remained adaptable, aligned, and grounded in real-world practice. Eleanor stressed that "understanding the policies that drive school decision-making is essential to overcoming barriers," and concluded that regular communication with education officials remains vital for long-term alignment between state and local apprenticeship efforts.

Summary

This chapter presented findings that illustrate the collaborative efforts, leadership practices, and adaptive strategies that shaped the development, advancement, and sustainability of a successful YA program. In addressing the first research question, the study found that sustained intermediary leadership, intentional relationship-building, a culture of collaboration, and strong employer and community engagement were foundational to program success. In response to the second research question, the findings revealed how cross-sector trust, flexible responses to institutional barriers, and collective advocacy enabled stakeholders to refine policy and align systems in support of youth apprenticeship.

Across both sets of themes, participants consistently emphasized that youth apprenticeship programs do not succeed by chance, but through deliberate investment in partnerships, strategic coordination, and persistent negotiation of institutional and regulatory complexities. These findings suggest that policy and program advancement require structural alignment, and they depend on the relational capacity and shared commitment of those involved. The next chapter will interpret these findings in light of existing literature and offer implications for practice, policy development, and future research.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

Through this qualitative single case study, I examined a youth apprenticeship (YA) program operating near the eastern coast of the United States. Insights from interviews, documents, and field observations illuminate the collaborative practices, interagency dynamics, and social capital mechanisms that contributed to the program's development, implementation, and long-term sustainability. Participants included state and postsecondary administrators, employer partners, and mentors who guide apprentices through on-the-job skills training. These stakeholders represent a cross-sector network responsible for designing curriculum, managing operations, mentoring apprentices, and facilitating legal, educational, and workforce alignment. The purpose of this chapter is to interpret the findings in relation to the study's two research questions, connect the results to relevant literature and theoretical frameworks, and present implications for practice, policy, and future research.

Summary of the Study

In Chapter I, I introduced the problem that influenced this study, the purpose of the study, and the significance of the study. In the introduction of the problem, I presented a historical view of education in the U.S., with particular emphasis on the relationship between apprenticeship and education as workforce development. Further, I contrasted the pursuit of the American Dream with the economics of postsecondary options. Specifically, I drew attention to the often-staggering debt of college education versus the practical affordability of apprenticeship. Thirty percent of American youth are living at or below a living wage while youth in other countries with youth apprenticeship embedded vocational education training (VET) programs fare much

better. I argued that integrating youth apprenticeship into the U.S. educational landscape could offer American youth a more cost-effective, skills-based pathway to career success.

After establishing the problem, I then explained the purpose of this study: to examine the collaborative practices of a thriving YA program to understand how interagency collaboration both establishes and sustains YA initiatives and shapes YA policy. Using a framework based on Woolcock's (2001) bonding, bridging, and linking forms of social capital, I employed qualitative methods to address two research questions:

1. How do stakeholders in educational institutions and workforce development agencies collaborate with employers to develop, advance, and sustain YA programs?
2. How can interagency collaboration aid the refinement of policy governing YA implementation?

By identifying effective collaborative practices, I sought to offer actionable recommendations for educators, funders, and policymakers seeking to expand YA as a career pathway in the U.S. Participants were delimited to educators, employers, and community stakeholders involved in one well-established YA program. Their practices were analyzed through a theoretical lens framed by Woolcock's (2001) bonding, bridging, and linking forms of social capital.

In Chapter II, I reviewed the literature on social capital and the history of apprenticeship as a workforce development strategy both in the U.S. and abroad. I then traced three decades of socio-political and economic events that spurred interest in YA as a pathway to career in the U.S., noting that even with support from multiple presidential administrations, this societal interest and political support achieved only limited development. Turning to contemporary sources, I reviewed several non-profit organizations' websites and the United States Depart of

Labor (USDOL) internet resources on youth apprenticeships to present up-to-date statistics on existing YA programs. I also outlined reports showing grant funded efforts that led to development of some YA programs. Finally, I reviewed scholarly journals with articles on interagency and cross-sector collaboration. I concluded with the assertion that interagency and cross-sector collaboration could provide the processes and structures needed to create youth apprenticeship ecosystems that intentionally intertwine education and workforce development in the U.S.

In Chapter III, I outlined the research design and methodology used in this study. Employing a qualitative single case study approach, I collected and analyzed data from three sources: semi-structured interviews, document reviews, and workplace observations of youth apprentices interacting with their mentors. This design was selected to allow for an in-depth exploration of interagency collaboration within an existing YA program, enabling the capture of rich, descriptive data that reflected the experiences and perceptions of stakeholders involved in YA program implementation, evaluation, and sustainability.

Data collection aligned with Stake's (1995) guidance on triangulation in case study research, which emphasizes using multiple sources of evidence to corroborate findings and enhance interpretive credibility. According to Stake, examining a phenomenon from varied vantage points, such as interviews, documents, and observations, provides a more comprehensive and trustworthy understanding of the case. This triangulated approach was employed to strengthen the validity of findings and to provide a solid foundation for thematic synthesis presented in the following section.

Summary of Findings

To summarize the findings, I offer a holistic, composite review of the emergent themes as they relate to the research questions that guided this study. This process was guided by Merriam and Tisdell's (2016) inductive approach to qualitative data analysis, in which meaning is derived through systematic engagement with the data. As each source of data was reviewed, patterns and insights emerged, were grouped into units, and assigned descriptive codes. Next, these units of data, drawn from interviews, documents, and field observations, were examined for patterns, grouped into categories based on similarities, and then synthesized into overarching themes. These themes are presented as they relate to my two broad research questions and Woolcock's (2001) forms of bonding, bridging, and linking social capital.

Research Question One Discussion

Research question one asked how stakeholders in educational institutions and workforce development agencies collaborated with employers to develop, advance, and sustain YA programs. Findings revealed that successful youth apprenticeship implementation relies on sustained intermediary leadership, intentional relationship-building, and a strong culture of cross-sector collaboration. These collaborative practices were not isolated events but emerged from networks of trust and shared responsibility across education, industry, and workforce development entities. In alignment with Woolcock's (2001) theory of social capital, these practices illustrate how bonding, bridging, and linking relationships operate simultaneously to support long-term program viability.

The Intermediary as Institutional Anchor: Linking and Bridging Capital.

A central finding of this study was the pivotal role the intermediary played in every facet of this YA program. Historically, intermediaries have been tasked with coordinating service

delivery and brokering relationships between disconnected institutional actors (Benner, 2003; Fitzgerald, 2004). Consistent with this role, Tabard's intermediary team acted as a conduit across systems and enabled stakeholders to engage meaningfully and align institutional logics.

Unlike philanthropic initiatives such as CareerWise Colorado (CareerWise USA, n.d.), which originated through strategic design and external funding, this intermediary structure evolved organically. The program's origin, rooted in a single request from a manufacturing CEO, illustrated the informal, trust-based conditions under which this YA program took root. As the data showed, there was no strategic plan or seed money to fund it. Instead, the intermediary emerged as a relational anchor, responsible for onboarding employers, coordinating across high schools and state agencies, and maintaining continuity through leadership turnover and shifting policy contexts.

Tabard's intermediary style exemplifies Woolcock's (2001) linking social capital defined as connections between institutions and individuals across power differentials that enable resource access and policy navigation. Simultaneously, the intermediary also facilitated bridging social capital and built peer-level connections among employers, school staff, and regional workforce entities. Tabard's intermediary team embodied both forms, not simply by acting as a logistical coordinator, but by cultivating shared understanding, translating institutional norms, and ensuring aligned expectations across sectors. As Woolcock (2000) notes, such synergy emerges when "subordinate groups and activists can forge broad, coherent coalitions…and nurture relations with allies in positions of power," enabling access to rights and resources that might otherwise remain inaccessible (p. 24).

William also reinforced the importance of maintaining momentum through regular engagement events, such as signing days, informational sessions, and sector-specific signing

drafts. As stakeholders gather at these events, interest is reignited, and commitments made by cross-sector partners are honored. These events enhance and add visibility to the cultivation of trust, mutual respect, and community investment that Tabard's intermediary service provides. Trust-building activities are essential to the durability of cross-sector collaborations; particularly when those involve visible public engagement which depend on continuous relationship reinforcement and stakeholder legitimacy (Bryson et al., 2006).

Employer-Driven Sector Partnerships: Bridging Capital.

Employer engagement in this case study was not incidental but strategically cultivated through sector-based outreach and continuous relationship-building. As detailed in Chapter IV, the YA program's initial launch was initiated by a European manufacturing CEO who approached Tabard with a desire to replicate the apprenticeship model from his home country. This singular request served as a catalyst: the college's Dean of Apprenticeships convened a luncheon with other local employers which ignited the immediate formation of a cross-sector coalition that sparked the program's launch.

Such intentional efforts to build industry engagement align with broader trends in employer-driven partnerships across emerging YA programs. Research by Fortwengel et al. (2019) and Lerman (2019) highlighted a shift toward industry-led apprenticeship development, particularly in countries with liberal market economies like the United States, where apprenticeship growth depends heavily on employer initiative and intermediary coordination. These collaborations, rooted in mutual self-interest and guided by practical workforce needs, illustrate Woolcock's (2001) concept of bridging social capital defined as the ties that connect diverse institutional actors across organizational boundaries.

In this case, bridging capital was activated not only through employer outreach, but also by Tabard's ability to convene stakeholders from different sectors to establish a shared framework for action. This approach reflected what Woolcock and Narayan (2000) described as "strategic linkages" that enable institutions to align their goals and mobilize resources across sectoral divides. The initial coalition built around that first employer meeting evolved into a more durable structure for collaboration and underscored the essential role sector partnerships played in sustaining this YA program.

Once initiated, employer engagement expanded rapidly and evolved into a broader regional movement. Data indicated that program leaders effectively leveraged sector-based relationships and aggregated employer demand to scale apprenticeship opportunities across companies with similar training needs. This strategic use of peer-to-peer employer networking proved to be a key factor in the program's expansion. It exemplified Woolcock's (2001) notion of bridging social capital, wherein horizontal ties among similar-status actors (employers) enabled coordinated and mutually beneficial collaboration.

Outreach events such as annual kickoff sessions, signing days, and NBA-style "draft" ceremonies not only reinforced employer enthusiasm but also made the program tangible to youth, families, and the broader public. These events facilitated sustained interaction among cross-sector stakeholders and generated momentum that legitimized youth apprenticeship as a serious postsecondary option. Informal gatherings, including employer breakfasts and community-based celebrations, also played a critical role in building trust and confidence in implementation processes. Together, these forms of structured visibility and coordinated outreach fostered a shared network of employer needs, educational goals, and community aspirations. These cross-sector interactions exemplified Woolcock's (2001) concept of bridging

social capital by strengthening horizontal ties among diverse stakeholders and fostering collaborative momentum around a common youth development agenda.

Building Relational Trust: Bonding Capital.

Triangulated data from interviews, document reviews, and field observations confirmed that the program's emphasis on relationship-building among adults contributed to a durable form of bonding social capital. Observational evidence illustrated how trust and mutual investment were developed through repeated, supportive interactions between mentors and apprentices. In one case, a mentor empowered his apprentice to design a competency evaluation for peers—an act that reflected not only trust in the apprentice's abilities but also a culture of peer accountability embedded in the daily workflow. These high-trust dynamics were not incidental; they were purposefully nurtured through real-time feedback, active mentor engagement, and deliberate mentor selection aligned with the program's educational values. Internal planning documents further reinforced this focus, noting the importance of mentor credibility and consistency in fostering youth confidence and program retention. As Woolcock (2001) explains, "Bonding social capital is good for 'getting by' in life… it helps people manage daily life in dense networks based on trust and mutual obligation" (p. 13). These tightly woven adult relationships reinforced shared behavioral norms and helped sustain cohesion within the employer setting.

Program documents further reflected intentional scaffolding that helped formalize and sustain these trust-rich environments. Mentor expectations were embedded throughout institutional materials, including the application packet's recommendation criteria and readiness rubrics, which emphasized personal responsibility, teamwork, and reliability. These documents signaled to both employers and educators that mentorship involved more than technical

oversight; it required interpersonal commitment and developmental coaching. This approach aligned with Lerman's (2010) argument that high-quality apprenticeship programs depend on close interaction with adult mentors who guide youth not only in technical skills but also in developing the soft skills and confidence necessary for long-term success. When adult stakeholders shared accountability for apprentice success, they developed a sense of shared ownership and collective efficacy. As Coleman (1993) noted, social capital derived from the structure of relationships that facilitated individual and group action. This cross-stakeholder cohesion reflected bonding capital not merely as a byproduct of good mentoring but as a strategic mechanism embedded in program design to enhance retention, reinforce norms, and cultivate a relational culture across organizational boundaries.

Building Organizational Capacity for Sustained Collaboration: Bonding, Bridging and Linking

Bryson et al. (2015) asserted that sustained collaboration depends on the deliberate alignment of structures, leadership, and processes to generate long-term public value. Findings from this study reflected that principle through recurring references to institutional capacity building as a foundational condition for program success. Capacity building was described as essential not only for launching the youth apprenticeship initiative but also for maintaining its long-term viability. Participants emphasized that sustained engagement from both youth and employers was critical to preserving momentum. Their accounts portrayed the intermediary as an entrepreneurial actor within the broader apprenticeship ecosystem, responsible for forging partnerships, reinforcing stakeholder commitments, and adapting to changing labor market demands. The intermediary's ongoing work in recruitment and retention highlighted the importance of cultivating trust among employers and educators, fostering collaboration across

organizations, and maintaining credibility with system-level leaders. These efforts demonstrated bonding capital through internal trust, bridging capital through cross-sector alignment, and linking capital through sustained engagement with institutional authorities.

For Tabard's president, capacity building also involved fostering an entrepreneurial mindset within the institution. This mindset valued experimentation and accepted the inherent risk of failure. William exemplified this orientation through his approach to program development, which encouraged innovation and flexibility in response to emerging local needs. This approach enabled the intermediary to adapt as the program evolved. However, experimentation alone did not ensure success. Sustained implementation depended on a robust institutional infrastructure capable of supporting instruction, oversight, compliance, and communication. William emphasized that effective program management required capacity across multiple dimensions, including recruitment, instructional delivery, ongoing coordination, and regulatory adherence. These reflections underscored that effective interagency collaboration depended not only on strong external relationships but also on internal organizational readiness, adaptability, and leadership commitment. This combination of internal capacity and adaptive leadership mirrored what Bryson et al. (2015) and Saunders et al. (2020) identified as essential conditions for building cross-sector collaborations that are sustainable over time.

Conclusions Derived from Research Question One

Findings from this case study affirmed that the development and sustainment of this YA program relied heavily on structured, trust-based collaboration among diverse stakeholders. Intermediary leadership emerged as a pivotal force in convening partners, aligning institutional agendas, and translating policy into practice. Employer engagement was not incidental but strategically cultivated through sector partnerships that leveraged shared workforce needs to

drive program design. Across these efforts, relationship-building served as a continuous thread tying regular communication, mutual accountability, and visible commitment to youth success. Through the lens of social capital theory, these practices illustrated the activation of bridging and bonding capital: bridging ties enabled cooperation across institutional boundaries, while bonding capital reinforced internal cohesion among mentors, program leaders, and educators. Together, these forms of capital created a resilient collaborative structure that advanced program goals while adapting to local needs. Ultimately, research question one demonstrates that interagency collaboration is not a peripheral condition of youth apprenticeship: it is its foundation.

Research Question Two

Research question two asked how interagency collaboration aided in the refinement of policy governing YA implementation. Findings revealed that sustained interagency collaboration not only facilitated implementation logistics but also served as a vehicle for ongoing policy refinement. Rather than functioning as static partnerships, cross-sector relationships evolved into dynamic infrastructures for innovation, adaptation, and advocacy. As stakeholders confronted misaligned systems and restrictive regulations, they leveraged relational trust, institutional knowledge, and mutual accountability to co-develop responsive solutions. Viewed through the lens of social capital theory, these efforts exemplify the interplay of bridging and linking capital as they demonstrate forms of connectedness that empower actors to span organizational boundaries and influence policy environments from within. As Woolcock and Narayan (2000) explain, “Bridging and linking ties allow access to broader systems and institutions, enabling people to leverage resources, ideas, and influence beyond their immediate social networks” (p. 237). The following sections interpret how such collaborations contributed to structural

adaptations, policy realignment, and the long-term embedding of youth apprenticeship within broader educational and workforce systems.

Adaptive Collaboration in the Face of Barriers: Linking and Bridging Capital.

Interviewees cited persistent structural barriers such as misaligned school calendars, payroll restrictions for minors, and rigid accountability metrics that impeded implementation efforts. Rather than stalling program development, these challenges prompted adaptive strategies across stakeholder groups. For instance, secondary and postsecondary providers coordinated creative scheduling solutions so that apprentices could meet academic requirements without conflicting with jobsite schedules. Employers who faced liability concerns that prevented placing youth directly on payroll partnered with temporary staffing agencies to ensure wage disbursement and legal coverage. In response to accountability constraints, program leaders worked with the state Department of Education to develop performance frameworks that more accurately captured youth apprenticeship outcomes. These collaborative strategies reflected bridging capital through cross-sector problem-solving and linking capital through engagement with institutional and regulatory authorities. As Woolcock (2001) explains, bridging and linking ties enable collective problem-solving and the navigation of hierarchical systems, both of which proved essential to overcoming implementation barriers. Together, these adaptive responses illustrated how relational networks and institutional partnerships enabled the program to adjust in the face of systemic constraints.

These strategies illustrate not just practical solutions, but the operational power of social capital in sustaining interagency collaboration. As Kreuter and Lezin (2002) observe, social capital fosters not only interaction but also enables networks to "function more effectively through trust, mutual norms, and connectedness" (p. 6). The ongoing cross-sector meetings

among employers, school leaders, and postsecondary administrators served as critical mechanisms for cultivating these conditions. Within this context, Woolcock's (2001) linking and bridging forms of capital become visible: linking capital allowed stakeholders to navigate institutional hierarchies (e.g., working with state agencies to modify policy constraints), while bridging capital enabled cooperation across organizational boundaries to maintain program momentum despite institutional misalignments.

Policy Influence Through Stakeholder Alignment: Linking and Bridging.

Interviewees emphasized that substantive policy change was made possible through the strength of relationships cultivated across sectors. Rather than relying solely on top-down directives, policy adjustments emerged from aligned action among the state Office of Apprenticeship, local school districts, and postsecondary institutions. One notable example involved collaborative advocacy to modify how youth apprenticeship could count toward secondary school accountability metrics. Leaders from community colleges and workforce agencies worked jointly with K–12 administrators to ensure that the educational value of youth apprenticeship could be formally recognized within existing accountability frameworks. These localized efforts mirror provisions included in the proposed National Apprenticeship Act of 2020 (H.R. 8294), which called for aligning youth apprenticeships with high school graduation requirements and expanding their role in formal secondary education systems. Such examples illustrate how bridging and linking capital, operating through trusted partnerships and coordinated advocacy, can influence the policy landscape from within.

This type of coordination reflects both bridging and linking forms of social capital. Bridging capital was evident in the trust-based relationships that enabled stakeholders from traditionally siloed sectors, such as secondary education and workforce development, to

coordinate shared messaging and pool influence. Linking capital operated simultaneously as these actors navigated hierarchical policy systems, leveraging their institutional credibility to shape decisions at the state level. As Woolcock (2001) suggests, linking social capital enables access to institutions with power to allocate resources and enact formal change. In this case, the strength of interagency ties was not just instrumental but generative, serving as the mechanism through which YA gained legitimacy as a recognized career pathway.

Collaborative Infrastructure for Policy Dialogue: Linking Capital.

Beyond isolated initiatives, the case study revealed a sustained infrastructure for policy dialogue built on routine, trust-based interaction among stakeholders. Formal planning sessions, informal check-ins, and recurring interagency meetings created structured opportunities to surface tensions, clarify responsibilities, and adjust implementation strategies in real time. These forums did more than exchange information; they served as incubators for joint problem-solving and strategic alignment.

This collaborative infrastructure exemplified the function of linking social capital, which Woolcock (2001) defined as the capacity to engage institutions with authority in ways that yield structural advantage. In this case, school administrators, apprenticeship coordinators, and state officials relied on recurring dialogue to reduce bureaucratic inertia and enact policy refinements responsive to program realities. Communication was not episodic or reactive; it was embedded in the rhythm of the partnership. Internal documents emphasized this ongoing structure, noting that regular information sessions, strategic planning meetings, and continuous dialogue among all stakeholders ensured that every partner stayed informed and engaged. These relational mechanisms enabled stakeholders to speak with a unified voice as they advocated for supportive policies and proactively managed tensions before they undermined progress. This aligned with

Bryson et al.'s (2015) assertion that collaborative governance depends on sustained engagement, deliberative processes, and adaptive alignment. Similarly, Saunders et al. (2020) emphasized that clearly defined roles, ongoing communication, and project management practices are essential to the durability and effectiveness of interagency collaboration.

The impact of this infrastructure extended beyond immediate problem-solving. It fostered a collective sense of accountability and a shared orientation toward long-term sustainability. Rather than deferring to institutional mandates, partners acted as co-producers of the policy environment and used established relationships as a foundation for continuous learning and system-level improvement. This reflected what Bryson et al. (2006) described as the ideal function of cross-sector collaboration: a dynamic process in which stakeholders collectively shape the context, adjust relationships, and engage in joint learning to support systemic change.

Sustaining Trust and Communication for Long-Term Impact: Bonding, Bridging and Linking

While structural reforms and policy adjustments marked tangible outcomes of collaboration, participants underscored that the sustainability of these gains depended on something less visible but equally essential: the ongoing cultivation of trust and communication. Stakeholders repeatedly emphasized that formal agreements or one-time meetings were insufficient to maintain momentum. What mattered most was the steady reinforcement of relationships over time through deliberate engagement, institutional familiarity, and mutual respect. This finding aligned with Parton's (2018) assertion that effective youth apprenticeship systems rely on ongoing communication, trust, and clarity of purpose among stakeholders across education and industry sectors.

Program data pointed to the importance of both relational and institutional fluency in sustaining cross-sector collaboration. Participants described how understanding local policies, knowing whom to engage, and navigating complex systems were essential skills for advancing program goals. These insights reflected a recognition that effective collaboration required not only structural alignment but also interpersonal trust. Stakeholders consistently associated progress with strong working relationships, emphasizing that shared goals were most achievable when trust was present. This aligned with Woolcock's (2001) assertion that bridging and linking forms of social capital enables access to institutional levers of change by embedding actors in networks where trust and reciprocity support coordinated action.

The findings of this study affirmed that sustained interagency collaboration depended not only on aligned goals and leadership but also on deliberate communication practices. Across stakeholder groups, structured engagement routines such as planning meetings, feedback sessions, and co-developed implementation tools functioned as relational infrastructure that enabled partners to coordinate effectively across institutional boundaries. These findings support Saunders et al. (2020), who emphasized that clear communication strategies are critical to collaborative success. They also extend Bryson et al.'s (2015) emphasis on the alignment of structures, values, and processes as foundational to durable cross-sector efforts. Gazley (2010) further reinforced this interpretation by noting that the quality of collaborative capacity, particularly in government–nonprofit partnerships, is closely tied to the presence of intentional communication systems. Taken together, these perspectives help explain how relational networks and institutional routines coalesced in this case to support adaptive, trust-based problem solving. They also illustrate how linking and bridging forms of social capital

(Woolcock, 2001) were mobilized through both formal mechanisms and informal relational work to sustain the program's development and expansion.

Eleanor's reflection on the importance of understanding how K–12 systems make decisions highlights the value of cross-institutional empathy in sustaining effective partnerships. Without such awareness, even well-intentioned collaborations may falter due to misaligned priorities, timelines, or accountability structures. Her call to improve communication with state education officials reinforces a broader insight: sustained collaboration is not a static achievement, but a continuous process grounded in shared understanding, responsiveness, and trust. This aligns with Bryson et al.'s (2015) assertion that long-term cross-sector success depends on the partners' ability to interpret and respect one another's institutional logics while working toward a common goal. Putnam (1995) emphasizes that civic trust and reciprocity enhance the collective capacity for coordinated action, while Lin (2001) adds that social capital flows through relational networks that support information exchange and mutual accountability. Together, these elements form the foundation for navigating the complexities of interagency collaboration.

Conclusions Derived from Research Question Two

Taken together, these findings illustrate that interagency collaboration is not simply a logistical necessity but a dynamic mechanism for shaping and refining policy in youth apprenticeship programs. Through regular engagement, relational continuity, and strategic use of bridging and linking social capital, stakeholders were able to overcome institutional misalignments and co-construct more responsive, integrated systems. Policy influence in this context was not the result of unilateral authority or isolated advocacy, but of trust-based partnerships grounded in shared goals and sustained dialogue. These patterns underscore

Woolcock's (2001) claim that social capital enables actors to "get ahead" by accessing institutional power while maintaining relational integrity within and across organizational boundaries. As such, the YA program under study provides a compelling example of how policy systems can be reshaped from within when collaboration is treated not as a tactic, but as a long-term practice of mutual investment.

Summary of Discussion

This qualitative single case study, grounded in social capital theory, explored the perceptions of interagency stakeholders involved in the development, implementation, evaluation, and long-term support of a youth apprenticeship (YA) program. Findings reveal that social capital operated across multiple dimensions of collaboration. Linking capital facilitated institutional anchoring through intermediary leadership, enabling access to formal systems and policy influence. Bridging capital supported employer-driven program design and growth by fostering cross-sector partnerships grounded in mutual benefit. Bonding capital, particularly evident in mentor-apprentice relationships, sustained internal cohesion and reinforced shared norms. These forms of social capital, mobilized through consistent engagement, relational trust, and joint problem-solving, did more than support daily operations; they fostered a collaborative culture that enabled the program to adapt, expand, and influence policy. Collectively, the findings demonstrate the generative capacity of social capital as both an interpretive lens and a practical mechanism for scaling and sustaining youth apprenticeship initiatives within an evolving ecosystem that integrates education and workforce development.

Implications for YA Expansion in the U.S.

Although YA programs have received growing attention in U.S. workforce development discourse, empirical studies on their viability and long-term impact remain limited. Much of the

existing research on YA has focused on international contexts, particularly in European countries where apprenticeship is embedded in national education systems. In contrast, U.S.-based studies tend to emphasize general apprenticeship expansion, with minimal attention to youth-specific models or the role of interagency collaboration in sustaining them. As a result, educators, workforce leaders, and policymakers often lack grounded, practice-informed guidance on how to grow YA initiatives in ways that are contextually feasible and socially equitable.

This study contributes to filling that gap by offering insight into the mechanisms through which social capital in its bridging, bonding, and linking forms can be mobilized to support youth apprenticeship (YA) development and policy refinement. While these forms of capital yield mutual benefit for participating institutions and individuals, they also serve a broader economic and civic function. As Coleman (1988) explains, social capital consists of "some aspect of a social structure" that facilitates coordinated actions among individuals within that structure (p. S98). By strengthening relationships and enabling coordinated action across sectors, social capital becomes a structural resource for improving youth outcomes and expanding equitable access to middle-skill careers.

If YA is to expand meaningfully in the United States, replication efforts must attend to both the social and structural dimensions that made the case study program successful. Specifically, the following implications emerge:

- Dedicated Intermediaries: Community colleges or workforce development organizations should serve as neutral brokers, coordinating logistics, aligning stakeholder goals, and advocating for policies that recognize the dual academic and workforce value of youth apprenticeship.

- Sector-Based Recruitment: Employer-driven partnerships ensure that apprenticeship pathways are relevant, regionally aligned, and responsive to labor market demand. Sector partnerships also create a collective incentive for employer engagement.
- Mentor Development: High-functioning YA programs require not just youth training but adult mentor capacity. Intermediaries must invest in mentor onboarding, coaching, and recognition to reinforce program quality and retention.
- Cross-Sector Coordination: Addressing fragmented accountability systems, labor regulations, and calendar misalignments requires formal structures for collaboration. Trust-based relationships and ongoing dialogue across education, workforce, and government sectors are essential for removing institutional barriers.
- Cost Planning and Resource Leveraging: Program leaders should anticipate early-stage expenses related to curriculum design, staff coordination, student support, and employer onboarding. While costs vary across delivery models, states such as Wisconsin and federal initiatives like the Youth Apprenticeship Readiness Grants offer funding to offset these burdens. Strategic alignment with public funding streams, including WIOA, Perkins, and state-based dual enrollment support, can mitigate startup costs and enable sustainable scaling. Planning for braided funding and fiscal partnership is critical to ensure equitable access and long-term viability.

Limitations of Findings

The findings of this study should be interpreted in light of several important limitations. First, this research employed a single-site case study design focused on one youth apprenticeship (YA) program identified for its strong interagency collaboration and sustained success. While the selected site offered rich, practice-based insights, it represents a high-functioning exemplar. As

such, the findings may not be generalizable to YA programs operating in less mature or differently structured contexts. The purpose of the study was to explore in depth rather than to generalize broadly; nonetheless, transferability should be considered cautiously and in relation to local conditions.

Second, the study did not include direct interviews with youth apprentices themselves. Although adult stakeholders offered extensive insight into collaboration, mentorship, and program infrastructure, the absence of apprentice perspectives limits the study's ability to assess how these collaborative structures are experienced by youth. Including apprentice voices could have strengthened the understanding of bonding capital and offered additional insight into how trust and support are perceived from the apprentice's side.

Third, the data collected were cross-sectional and bounded within a specific moment in time. While this snapshot yielded a valuable picture of stakeholder perceptions and organizational dynamics, a longitudinal design would provide stronger insight into how collaboration and social capital evolve over time. A longitudinal study would yield insight into program progression as they expand, experience changes in leadership, or shifts in policy occur.

Finally, while efforts were made to triangulate findings across interviews, field observations, and documents, all qualitative research is influenced by the interpretive lens of the researcher. My positionality as a scholar-practitioner shaped the coding, analysis, and synthesis of themes. Reflexivity and methodological transparency were prioritized to mitigate bias, but complete neutrality is neither assumed nor claimed.

Despite these limitations, the study offers practical and theoretical insights with relevance for practitioners, policymakers, and researchers engaged in YA expansion. The findings highlight conditions under which interagency collaboration can be leveraged to support program

development, foster stakeholder alignment, and influence policy refinement. The following recommendations are grounded in the study's core themes and offer guidance for sustaining and scaling youth apprenticeship programs in diverse U.S. contexts.

Recommendations for Future Research

This study opens several promising avenues for future research on youth apprenticeship (YA) in the U.S., particularly in relation to interagency collaboration and the role of social capital in program development. First, additional qualitative case studies are needed to examine YA programs across a wider range of institutional, geographic, and policy contexts. Comparative case analyses could help determine which collaborative practices and intermediary structures are transferable, and which are shaped by local conditions. Such studies would deepen understanding of the circumstances under which youth apprenticeship can be effectively scaled or adapted in diverse regions.

Second, future researchers might consider employing Social Network Analysis (SNA) as a theoretical and methodological framework to examine the structure and dynamics of interorganizational collaboration and mentorship networks. SNA can illuminate how relationships among individuals and institutions—such as educators, employers, intermediaries, and apprentices—shape access to information, resources, and influence within the apprenticeship ecosystem. As demonstrated by Zhao and Frank (2003), understanding educational change through an ecological network lens enables researchers to trace the diffusion of innovations and identify key actors (e.g., mentors or intermediaries) who facilitate or constrain system-wide adoption. Similarly, Rosenberg et al. (2020) illustrate how the density and reciprocity of social connections can influence the strength and sustainability of professional learning communities. Applied to YA, SNA could be instrumental in assessing how the strength, quality, and

configuration of stakeholder relationships affect program outcomes such as student placement, employer engagement, and policy refinement. By mapping these complex social structures, researchers may uncover relational patterns that facilitate, or hinder, the long-term scalability and equity of youth apprenticeship programs.

Third, longitudinal studies are needed to examine the long-term trajectories of youth apprentices. Tracking educational attainment, wage progression, career stability, and postsecondary engagement would offer valuable insights into the sustained impact of YA participation compared to traditional academic pathways. Longitudinal data could also provide evidence on the extent to which the benefits of interagency collaboration and mentor support continue, or diminish, after program completion.

Finally, researchers should further investigate how social capital operates as a mechanism for systemic change. While this study applied Woolcock's (2001) framework to interpret how collaboration facilitated program advancement and policy refinement, future studies could explore how bonding, bridging, and linking capital contribute to institutional transformation beyond a single site. Network analysis, mixed-methods studies, or cross-sector organizational research could offer deeper insight into how social capital enables durable change in workforce and education systems.

Concluding Thoughts and Reflection

This study was guided by the belief that youth apprenticeship holds unrealized potential in the United States. It is not only a workforce strategy, but also a more equitable and relational model for education-to-career alignment. As a researcher and practitioner, I have seen how siloed systems often leave young people without clear pathways to meaningful work or postsecondary opportunity. The case study presented here suggests that those silos can be

bridged. When stakeholders invest in trust, prioritize relationships, and commit to shared ownership, youth apprenticeship can flourish, not in spite of system complexity, but through collaborative engagement with it.

Yet the promise of youth apprenticeship cannot be fulfilled by programs alone. It depends on infrastructure, on leadership, and, most of all, on the collective will to reimagine how we support young people as they transition from high school into adulthood. As this study shows, the bonding, bridging, and linking mechanisms of social capital are not abstract concepts. They are lived, practiced, and negotiated in real time by educators, employers, and institutions that believe in what young people can become. If we envision youth as the most valuable form of capital, then we must do better to build systems that allow them not only to prevail, but to thrive.

This study affirms that interagency collaboration driven by trust, anchored by intermediaries, and informed by social capital can transform youth apprenticeship from a niche program into a systemic strategy for education-to-career alignment. By investing in relational infrastructure and cross-sector coordination, communities can create durable YA programs that foster youth success and real potential for upward economic mobility over a lifetime.

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VITA

Donna Wortham is a career educator with more than thirty years of experience serving students in American public schools. She has taught every grade from kindergarten through grade 12, with a longstanding focus on secondary education. Her professional expertise includes working with special populations, leading programs in Career and Technical Education (CTE), and serving as a high school assistant principal in a suburban school district.

She holds a Bachelor of Science in Education with certification in elementary education and K-12 special education, a Master of Education in Leadership Studies, and a Doctor of Philosophy in Educational Leadership and Policy Studies—all from the University of Tennessee, Knoxville. Her academic and professional journey reflects a commitment to bridging research and practice to support educational equity, workforce relevance, and collaborative leadership. She has applied these commitments in instructional and administrative roles, as well as in district-level planning and program development for CTE pathways.

Her doctoral research explored interagency collaboration in youth apprenticeship programs, with particular attention to how community social capital supports sustainable workforce development. She remains committed to advancing educational equity for underserved populations through research, policy development, and practice. Her current focus is on education policy that empowers public, private, and workforce development agencies to collaboratively reimagine American public education—particularly the high school experience—so that students graduate with a stronger sense of purpose, real-world experience, and access to educational pathways that lead to meaningful careers and engaged civic life.