DIVERSITY, GROWTH, AND TECH SAVVINESS: WAKE TECH STUDENTS ENHANCE LOCAL BUSINESS WHILE BUILDING TRANSFERABLE SKILLSETS

Technical Report (August 2022)

WAKE TECH®

EFFECTIVENESS & INNOVATION

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Executive Summary

Programs in which students gain practical work experience and potentially earn wages while pursuing a credential have been recognized by higher education institutions, employers, and policy experts as providing opportunities for workforce talent development while advancing equity and diversity in industries (Cheney, 2019; Haviland & Robbins, 2021; Ross et al., 2020). Multiple avenues exist for students to gain professional experience through Wake Tech, which tend to fall under three broad categories: (1) Work-Based Learning (formerly known as Cooperative Education or "Co-op"), (2) apprenticeships, and (3) internships. In addition, since around 2018, an informal partnership with The Tennie Group, an accounting firm headquartered in Knightdale, NC, has facilitated opportunities for Wake Tech students seeking employment and on-the-job training.

The purpose of this case study is to understand the distinctions among these programs, as well as how this informal partnership has operated successfully to provide benefits to students and the employer. An additional aim is to identify whether there are elements that could be scaled up and/or replicated with other local employers—as well as the resources that would be needed to do so—to provide more of these types of mutually beneficial opportunities.

Data from semi-structured interviews with key informants, Wake Tech program websites and online source material, Wake Tech podcasts, and email correspondence, provide evidence for the following key findings:

- The informal nature of the partnership with the accounting firm has allowed for students with diverse backgrounds to gain access to the work opportunities with fewer academic and administrative requirements than the formal programs.
- Major benefits/gains for students working for The Tennie Group:
  - new skillsets learned on-the-job
  - work experience in a professional setting
  - transferable skills and knowledge they can apply in other industries
  - experience working in a supportive environment to help them succeed
  - flexible scheduling to accommodate their class schedules and academic workload
  - growth and advancement within the company

- o experience training others as they transition into new roles
- Major benefits/gains for the employer:
  - o cultural and linguistic diversity within the firm to better represent and communicate with the communities they serve
  - o diversification of the firm's client base
  - o ability to grow into new markets and geographies
  - o enhanced technological savviness

Recommendations for ways Wake Tech can scale up partnerships with local employers:
- identify new or existing resources to have an intermediary at the college who can identify the specific needs and interests of students and employers and make recommendations based on a goodness of fit for student employment outside of the formal programs
- explore the possibility of providing a direct line to the college for employers to get referrals for student hires
- expand outreach to recruit new employers into partnerships
- communicate with existing and prospective partners about various options for employing students

Ultimately, existing research and evidence from this study indicate that enhancing and diversifying collaborative relationships between higher education institutions and employers can create opportunities to promote the upward mobility of underrepresented and minoritized groups and, by creating a school-to-employer pipeline, to address local and nation-wide equity and labor gaps in high-paying, fast growth jobs.

Background

In the past decade, and particularly in the wake of the country's economic hardships during the COVID-19 pandemic, bipartisan political support and employer adoption of programs in which students gain on-the-job training and potentially earn wages while pursuing a credential has been growing in the U.S. (Cheney, 2019; Haviland & Robbins, 2021). Partnerships between higher education institutions and employers can facilitate connections among postsecondary education, skills training, and employment that are often unclear or unavailable for many young people and adult learners. High quality workplace learning partnerships provide students with supportive relationships with professionals (e.g., mentoring, supervision, guidance and feedback) and opportunities to gain technical skills and to take on new roles and responsibilities that help them build their credentials and professional experience (Cheney, 2019; Friedman, 2021; Ross et al., 2020).

In general, these partnerships and programs are "widely recognized as a talent development strategy that enables employers to develop a skilled workforce while providing people with the expertise they need to advance in their careers" (Cheney, 2019, p. 5). For many young adults around the country whose education and employment opportunities have been disrupted by the health and economic crisis, workplace learning partnerships can provide pathways for students to earn income while gaining credentials and skills they need for the workforce (Ross et al., 2020). Policy experts also see these collaborations as creating opportunities to advance equity and diversity in industries (Cheney, 2019) and education systems that have "routinely disadvantaged young people who are Black, Latino or Hispanic, or low-income" (Ross et al., 2020, p. 6).[i]

Multiple avenues exist for students to gain professional experience through Wake Tech, which tend to fall under three broad categories: (1) Work-Based Learning (formerly known as Cooperative Education or "Co-op"), (2) apprenticeships, and (3) internships. While "work-based learning" is often used as an umbrella term for many different types of opportunities for students to gain real-world skills and experience at an employer, including "paid or unpaid internship, pre-apprenticeship, registered apprenticeship, and practicums" (NC State Board of Community Colleges Code, 2018, 1D SBCCC 300.10), Work-Based Learning (WBL) is a specific type of program requirement at Wake Tech that operates independently from the college's WakeWorks

Apprenticeship program and internships.[1] **One of the aims of this research project is to help clarify the distinctions in requirements and processes among these three formal programs.**

In addition, since around 2018, an informal partnership with The Tennie Group, an accounting firm headquartered in Knightdale, NC has emerged as an additional resource for Wake Tech students seeking employment opportunities and on-the-job training. Initiated by a former Senior Dean at Wake Tech and former Mayor of Knightdale, this informal partnership with The Tennie Group has provided at least seven Wake Tech students with real-world professional experience and skills that they could build upon at the firm or transfer to careers in other industries. At the same time, The Tennie Group's ability to bring on additional part- and full-time employees has allowed the firm to expand its capacity, reach, and offerings to clients. The Tennie Group now has a presence in multiple states and, because several of the students speak multiple languages, can offer its services to a broader and more diverse client base.

Proving over the past few years to be mutually beneficial to both the students and to the local employer, this informal partnership between Wake Tech and The Tennie Group offers a case study in an effective workplace learning partnership that has operated outside of the formal structures at the college. **The purpose of the study is to understand how this informal program has operated successfully to provide benefits to students and the employer, and whether there are elements that could be scaled up and/or replicated with other local employers—as well as the resources that would be needed to do so—to provide more of these types of mutually beneficial opportunities.**

The primary data source for this case study was semi-structured interviews with key informants, including the local employer, Wake Tech liaison, current and former students, and Wake Tech staff members with knowledge of workplace learning programs and opportunities. To gain additional background and contextual details on Work-Based Learning (WBL) and the WakeWorks Apprenticeship program (WakeWorks), the research team reviewed numerous sources of online material, including from Wake Tech's program websites, *We Are Wake Tech*

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[1] When referring to WBL at Wake Tech, "Work-Based Learning" will be capitalized in this report. In an effort to reduce confusion, the report will also use "workplace learning" as the umbrella term for these opportunities, rather than "work-based learning".

Podcast episodes, and information on apprenticeship requirements through the U.S. Department of Labor's website. To further clarify details related to WakeWorks and WBL requirements, the research team had follow-up correspondence with program staff via email. Program directors also reviewed relevant sections of this report to ensure accuracy. (For more details on the research design, data source, and analysis methods, see Appendix A.)

Findings

To understand how the informal partnership with The Tennie Group differs from formal workplace learning programs at Wake Tech, it is important to also tease out how the formal programs compare to one another in terms of their requirements and processes. This inquiry has been guided by the following research question:

How does The Tennie Group's employer/WTCC partnership compare to WTCC's apprenticeships programs, Wake Works, and other workplace learning programs? How is The Tennie Group approach different?

To succinctly capture the similarities and differences among the formal and informal workplace learning opportunities, the research team referenced information from the program websites, interviews, and email correspondence to develop the matrix below.[2] This matrix focuses specifically on the documented or typical requirements of each type of program/opportunity. Individual experiences, especially within different A.A.S. programs, may vary.

Table 1: Matrix of requirements for specific workplace learning opportunities at Wake Tech

	Associate in Applied Sciences Work-Based Learning (WBL 111-222)	Wake Works Apprenticeships	Internships	The Tennie Group Informal Partnership
Minimum 14 credit hours in the major	X			
Minimum 2.0 GPA	X			
In good academic and behavioral standing	X			
U.S. work authorization	X	X	X	

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[2] Website sources for matrix: U.S. Department of Labor (n.d.); *WakeWorks Apprenticeship* (n.d.); *Wakeworks Youth Apprenticeship* (n.d.)

	Associate in Applied Sciences Work-Based Learning (WBL 111-222)	Wake Works Apprenticeships	Internships	The Tennie Group Informal Partnership
TABE Assessment		X[3]		
Meet with faculty/staff coordinator	X	X		
Approval from Department Head/Director	X			
Pre-registration with the correct division office[4]	X			
Written WTCC/Employer agreement	X	X		
Find employment	X	X	X	
Apply directly with employer	X	X	X	X
Interview for a position	X	X	X	X
Classroom learning	X	X[5]		
On-the-job learning	X	X[6]	X	X
Achieve Measurable Learning Objectives (MLOs)	X			

Work-Based Learning offers students an opportunity to earn academic credit—and, in the vast majority of cases at Wake Tech, to earn wages—while gaining professional experience and networks in their career fields. Employers who partner with the college to provide WBL opportunities represent a wide variety of industries and range in size from small privately owned businesses to Fortune 500 companies. At Wake Tech, 10 programs that earn an Associates in Applied Science degree require WBL, while 44 programs offer WBL as an elective credit. University transfer students do not have WBL courses in their degree program since WBL courses are not eligible for transfer credit.

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[3] At the time of this report, the TABE is only required for Emergency Medical Technicians (EMTs).
[4] Some programs mention "Work-Based Learning Office"; others mention the division office.
[5] 144 hours of classroom instruction required (Related Technical Instruction)
[6] 2,000 hours of on-the-job training required (Competency Checklist)

Before students can sign up for WBL credit, they must have completed a minimum of 14 credit hours in the major requirements and have a GPA of 2.0 or higher. The student must also be in good standing with the college, having not violated the Student Code of Conduct on the moderate or major level, and be recommended for participation in the program by a faculty advisor. Additionally, the student must be legally authorized to work in the United States.

Fewer academic requirements exist for students to gain entry into the WakeWorks Apprenticeship program, which provides Wake County-sponsored scholarships to cover the costs of tuition, books, fees, tools, and other expenses up to $1,000 per year (Ralls, 2021). WakeWorks Apprenticeship provides opportunities in a variety of industries, including traditional apprenticeship occupations like trades and construction, as well as non-traditional apprenticeship occupations like healthcare and information technologies (Ralls, 2021). To be eligible for the program, students must also have authorization to work in the U.S. and be at least 18 years old (student under 18 can apply for the WakeWorks Youth Apprenticeship program). The apprenticeship is integrated with the curriculum, with some programs, like in automotive, replacing a lab requirement with a workplace learning component that provides students with real-life experience as well as college credit (Ralls, 2022). Registered apprenticeships require 2,000 hours of on-the-job training and 144 hours of classroom instruction (*WakeWorks*, 2022).

The first step in becoming part of an apprenticeship program is to go through the WakeWorks Apprenticeship website, which prompts students to fill out an interest form. Students may be directed to the website after expressing interest in one of the programs that requires an apprenticeship. This interest form allows staff members to collect contact information and coordinate students taking the Test for Adult Basic Education (TABE), which helps determine their academic readiness for the programs. If students do not score as high as necessary for the programs, they can receive help in reading and math to bring their skills up to those needed to be successful in the coursework. A Wake Tech staff member connected to WakeWorks described this process:

> *"We want to assess their readiness for the academics that they're going to go through. So, once they sign up, then we'll send them to a TABE assessment, they'll take it, they'll score, so for each one of the occupations, we know kind of a minimum academic score*

that they need to be at, to perform in the related instruction. So, if they do, and I'll tell
you about 98% come in and test above the level they need to, they just move to the next
step, which is meeting with a WakeWorks Apprenticeship coach. So, each one of them
gets a career coach. And that's where they walk through, "Hey, what do I want to be? I
put down five occupations. I know I can only be one of these." And then they kind of work
it through."

The student's first semester is a pre-apprenticeship program which consists of the academic curriculum courses needed to get them a background in the program they have entered.

For internships, specific academic and administrative requirements for students may vary greatly by employer and academic program, if one is associated. Internships also tend to vary in length, both in weekly commitments and duration, but are generally shorter term, spanning the length of two weeks, a few months, or a semester (Brookings, 2020).

Few Requirements for Work Opportunities with The Tennie Group

The informal nature of the partnership with the accounting firm has allowed for students to gain access to the workplace experience with fewer academic and administrative requirements. For example, students do not have to be in any particular program of study, nor are there credit-hour pre-requisites that can sometimes prevent students, particularly students in college transfer programs, from taking part in apprenticeships or other work-based learning opportunities. Work opportunities at The Tennie Group are available to students in any discipline who are willing to learn on-the-job. While the Tennie Group is an accounting and tax firm, they do not look specifically for students in business and/or accounting programs at Wake Tech. As The Tennie Group CEO described, the firm is open to students with different types of academic backgrounds and has had great success with students who are eager for an opportunity to learn on-the-job:

"I do look at what the [student's] current goals are, and, you know, some of the classes
they've taken, but a lot of it is based on interviews with them, because one of our major,
major successes was [a student] in Heating and Air. But, you know, he came in and he
said, well, you know, he was honest about it. He said, "I have never done finance before,
but if you give me opportunity to learn it…" and that was a main success story. I can tell

you right now, it was an amazing success story. And so, again, I looked at it, look at the
character of the individual that comes in, you know, and the students seem to come,
they've had a willingness and determination, and they just want an opportunity."

When students have been connected with The Tennie Group through the Wake Tech liaison, they have typically had an initial meeting with the CEO to determine whether they might be a good fit. If it does seem to be a fit, the student can apply to the firm as they would most other types of employment that is unrelated to college programs. The CEO described the hiring process:

"Well, basically, when we bring them on, you know, of course, they go through the
application process, you know, and then we're deciding which area that we want to put
them in. So, you know, basically, we go through the application process. We do, we are
doing some reference checks…now more we do more reference checks, but other than
that, we just bring them in and then we assign them to a department going in, and we talk
to them and then we put up with all the training, set up the training process for them."

One of the major requirements of formal workplace learning programs that does not apply to The Tennie Group is the need for students to be authorized to work in the U.S. before they start employment at the firm. The "major success story" the CEO mentioned was also significant because the student was in the Deferred Action for Childhood Arrivals (DACA) program and needed sponsorship from a U.S. company to obtain a visa for work authorization. The Tennie Group sponsored the visa for this student and the CEO stated how he would like to be able to provide these kinds of opportunities for more students in the DACA program.

How has the Tennie Group employer/WTCC partnership benefitted Wake Tech students?

Like students in the formal programs at Wake Tech, students who have worked at The Tennie Group have benefitted from gaining income, on-the-job training, and professional experience while pursuing their studies. The original Wake Tech liaison with The Tennie Group described how students working with The Tennie Group have the opportunity to **gain new skillsets on-the-job** and **work experience in a professional setting** that will benefit them at the firm and in other careers they may choose:

"First and foremost being able to develop and obtain skill sets that they probably would not otherwise have been able to get. Because he [the CEO of The Tennie Group] is willing to bring a person on and train them from day one. And it seems like that had a tremendous success rate in terms of when he brings the students in, but also they get to experience, understand the importance of a professional environment. So he has certain requirements that you know, you have to dress professionally and conduct yourself, professionally. And so when you get those types of fields, wherever you go, you can take those skills that anywhere you go. And that's the most rewarding piece."

Many of the Wake Tech students who have worked at The Tennie Group were working outside of their field of study and their opportunities allowed them to train and gain professional experience in areas that they may have never considered. *"[W]hen I first started,"* a student/employee said, *"I didn't know anything about accounting and financial…I didn't know anything about business in general…I could definitely say I've learned a lot."*

Accounting or finance may also not be fields the students working at the firm are planning to pursue for a career; yet, they recognize the **transferable skills and knowledge** they have gained that they can apply in other industries. As the former student/employee who studied Heating and Air described, the skills and knowledge gained at The Tennie Group could help him start his own business in the future:

> *"…it gave me more experience on computers and accounting. It helps me in the long run— it might not be exactly what I'm going to be doing when I'm working, because I'm working in the HVAC industry. So it's not the same thing. But eventually if I ever want to keep records of my work, or if I ever want to start my own business, I could always refer back to that accounting teaching that I had when I was working with the team."*

As in formal workplace learning programs, students at The Tennie Group **gain real-world, hands-on experience** working in the industry that they would not gain access to in classroom learning only. As the CEO noted, the students are also supported by their colleagues at the firm as they learn how departments operate and how their role functions:

"...you might see things that they don't teach at school, but we're going to show you the process of how it works from accounting, to financial, to taxation, we kind of try to give them more of a real-world scenario, you know. So we kind of throw them in hands-on, but we have someone with them, but we kind of put in the hands-on."

Students working at firm also talked about how supported they felt working at the firm, particularly when they had started new roles and had questions. When asked about the training they received for their roles, multiple students/employees highlighted the firm's **supportive environment** and how colleagues had guided them to help them succeed:

"The support from Mr. Tennie is really well. When payroll was transitioned to me, he basically would check up on me and see if I'm into it, if, if I'm not stressed out or anything like that. He always told me, 'If you have any questions, you can, I'll guide you to it.' And my first two weeks, when I started payroll, I didn't really know the clients. And we have a ton of clients. And I wasn't sure if some clients their payroll was already set up. They have it set on time. Or every week. But I basically had to reach out to the client, introduce myself to them, and just learn a bit about them, and how their company works, just pretty much build a relationship with them. That way, no confusion. And Mr. Tennie also helped me, the other staff at that time also helped me with it, the lady who was doing payroll before she helped me learn, you know, get to know some of the clients that she knew."

Another likened the supportive environment to working with family:

"I honestly love it because it's like working with family. So if we need, if we have questions or don't really, you know, like, understand something, my colleagues, you can say, we really help each other out. And if we want to ask Mr. Tennie as well, he's really like, happy to help us...Like, everybody just works as a team. Everything flows smoothly. So it's been a good experience."

Furthermore, even though the students' work at The Tennie Group may not connect with their program of study at Wake Tech, the employer supports their gaining postsecondary credentials and has provided them with **flexible scheduling** to accommodate their class schedules and

academic workload. Students described how they were able to work part-time at the firm and at times take longer stretches off when their courses were particularly demanding:

> *"They did support me through all the time I was going to Wake Tech. And while I was working, they understood that I was running their department. And not only that, I was only there for two days, three days a week, they supported me going to college. They were understanding more than anything of that I was still going to college, so I would have to miss some days to go to school and learn."*

Another student/employee reported:

> *"I had to take MED-150 and 140. It's been so hectic this summer. It's been Monday, yeah, Monday through Thursday, from 8:30 to 1:30, basically, for a class. So I haven't been working for those 10 week period because of that. And since it's a lot of information and a short time, [so I had] to take off [work]. And Mr. Tennie, he was understanding about that. So since I finished now, I'm back to work, and then I'll be back at school."*

Finally, students working at The Tennie Group described the opportunities they have had for **growth and advancement** within the company, which also involved **training others** as they transitioned into new roles. Often trained in multiple areas within the company, the students/employees described how they were constantly learning new aspects of the firm's operations and would be responsible for training others as they came along:

> *"My first [position], it was small, just keeping files. I started doing bookkeeping with them as an assistant to the main bookkeeping analyst. And then after that, she had to leave because of maternity leave. And pretty much from there, I took over the accounting firm for the other accounting side of the company. And up until the day I had to go, I had I left the Tennie Group, I was still taking over the accounting and I had to train and show other people how to do it, so they could take my spot once I left a Tennie Group…that's the thing with The Tennie Group. Once you got there, and you took a hold of your position, you were there to keep showing yourself how to do stuff. I'm learning more. And then you were also there to show the people that were following you."*

How has the Tennie Group employer/WTCC partnership benefitted The Tennie Group?

The informal partnership between Wake Tech and The Tennie Group has greatly benefitted the local employer as well as Wake Tech students. According to the CEO, being able to hire Wake Tech students has benefitted his firm tremendously in terms of ***"[d]iversity, growth, [and] staying on top of technology."*** The original Wake Tech liaison to The Tennie Group also commented on how the students brought in technological skills that have ultimately saved the firm money:

> *"Mr. Tennie would share with you that a lot of the young folks are **technologically savvy**, and so they bring that skillset that he would probably would have to go out and pay some professional company thousands of dollars to do when we have these young folks coming in."*

In addition to technological skills, the Wake Tech students have also been able to utilize their diverse backgrounds and fluencies in different languages to strengthen communication with clients, which the CEO credits as the most significant benefit of being able to hire the students:

> *"But the biggest benefit for us is diversity. With the students that we're hiring, and the amount of individuals and amount of communities that we touch, you know, with the bilinguals I have, you know, students here, [one student] speaks French, [another] who speaks Spanish. You know, we have another Arab student here as well. But it's just the diversity that they bring. The benefit of our firm is **being able to communicate with clients efficiently**. They bring in desire. And so basically, the biggest benefit to us is **growth, it's allowed us to grow**."*

Moreover, the students' diverse backgrounds have helped the firm to not only broaden its clients base to different markets, but to better represent the communities that it serves. As the CEO elaborated:

> *"I like the fact that we are employing students, you know, of diverse cultures. That's one of the things I do like now, I do, like the fact that we will, we're working with a lot of your students, Wake Tech students, with a lot of diverse backgrounds. And I would like to continue that, you know, because it, one thing about that, it allows us to **touch different markets, you know, and different segments of the population, different communities**,*

*and we want **our firm to represent the communities we serve**. And so I would like, that's one of the things I like to continue, hopefully, we can add more, is more **cultural diversity within our firm**."*

Since hiring Wake Tech students, The Tennie Group has been able to expand its client base into multiple states and the CEO expects that their service areas will continue to grow in number and diversity. He also wants to continue to enhance the cultural diversity among his staff and bring in *"more and more"* Wake Tech students. When asked about whether he might need any type of supports from the college to help bring in more students, the CEO noted that he would like to have a direct line to connect with students whenever they have positions available. He has reason to believe that other businesses would be interested in this kind of direct line for recruiting, as well. As he recalled:

> *"We do get a lot of requests… [asking] 'Where did you find these individuals? Where'd you find these students?'"…Because now a lot of employers are looking for students or individuals who come in with some type of willingness and some type of training background, educational background, that can meet the demands of today's market."*

Ultimately, these accounts from the students, employer, and original Wake Tech liaison highlight numerous mutual benefits from this informal partnership. In addition to these known benefits for those have been involved in this partnership, the findings suggest that scaling up partnerships of this kind could help meet the labor needs of other local employers while at the same providing a pipeline of opportunities for students to gain real-world, hands-on, professional experience who do not have access to them through the formal workplace learning programs at the college. This research study therefore also aimed to gather insights into the aspects of the informal partnership that could be scaled up, and what kinds of resources Wake Tech might need in order to do so.

What aspects of The Tennie Group's employer/WTCC partnership can be scaled up? What resources would WTCC need to invest to scale up direct employer/WTCC partnerships?

While The Tennie Group CEO did not suggest that he needed any additional resources, per se, to continue hiring Wake Tech students at the firm, he has indicated that he would like to have a

direct line to the college to get referrals whenever he has opportunities available. As the original Wake Tech liaison explained:

> *"It's been my experience with him [for him to say], 'Look, I need more students. Bring me some students, I'll take care of the rest.'… I think what he really needs from the college is some sort of connection and a link to where he can pick up the phone and say, you know, speak to a person on the other end say, 'Look, I have two positions coming open, these are the times that are available, do you have any students and that connection for me?'"*

Both the original liaison and The Tennie Group CEO envision that creating this type of direct line to Wake Tech students could be a great benefit to other local employers, and that the college should endeavor to recruit more employers into these types of partnerships. As the original liaison stated,

> *"Well, you know, it is, it is my hope that we continue to identify other businesses that would do something similar. I am so glad that you all have had the opportunity to see what this man has done, and the impact it has had on the community. I would do everything as a representative to work with you all to identify other businesses in the area. I would like for this to go much broader than just Knightdale. I would like for it to be Knightdale, Wendell, Zebulon. I'd like for it to be in every sector of the county,"*

The Tennie Group CEO also suggested that Wake Tech should reach out to more business owners and offered to assist with recruitment efforts himself by showing how Wake Tech can help to diversity companies:

> *"I do think that if Wake Tech would reach out more to the business owners or, you know, as we partner together, and we're excited about that, I think that would be a great opportunity…and, I will say this, showing companies how Wake Tech can diversify your companies and make and basically make your company represent what people are looking for…I think if Wake Tech could talk more to the business owners in the communities, I think that would be a huge win for Wake Tech as well."*

According to staff members connected with WBL, WakeWorks, and Career Services at Wake Tech, **outreach and communication with local employers** is already happening through various avenues around the college, with staff in these offices all *"orbiting in the same solar system",* as one said. *"And we pass contacts back and forth to each other all the time."* Employers are engaged in hiring Wake Tech students through these formal programs and actively recruit new student employees through career fairs, which may be program/division-specific or open to students more generally. Recruiting local employers into a partnership like The Tennie Group has with Wake Tech may therefore require:

- informing employers actively recruiting at Wake Tech that this type of option can exist for hiring students from any discipline if they are willing to provide on-the-job training,
- expanding outreach to local employers who are not actively recruiting at Wake Tech, and
- developing materials to widely share The Tennie Group's success stories with local employers.

In addition to engaging more local employers, as those involved with The Tennie Group partnership and reports from Wake Tech staff members suggest, both students and employers could benefit from having an **intermediary at the college** that can help **identify the specific needs and interests of both parties** and make recommendations based on a goodness of fit. As a Career Services staff member explained, students often know they are looking for a job opportunity, but many tend to label all types as "internships" without knowing the distinctions between different types of workplace learning:

> *"Students often, we get them saying, you know, they want an internship. Well, an internship to them could mean Work-Based Learning, it could mean an apprenticeship, it could mean a part-time job. That's the most universal term that they use, which, unfortunately, isn't a very universal term here at Wake Tech. So, we do have to spend time with students' kind of re-educating them on what that means."*

Currently, the formal workplace learning programs at Wake Tech have staff or faculty who can assist students and employers in identifying their needs and can potentially connect students directly with employers, such as some faculty coordinators do with WBL and staff members do in the WakeWorks Apprenticeship office. Through the Career Services website, employers are also able to register to post job openings for students to find and apply. Students can also access

a multitude of resources and support through Career Services, including job search assistance, resume writing, interview preparation, and assistance with getting connected to a particular employer if staff have direct contacts. Because **Career Services** provides supports and resources for students seeking employment, **a liaison role for these types of informal partnerships could logically be housed in this department with the appropriate resources allocated.** However, other considerations should be made to envision a liaison role that may:

a) have stronger ties to students and employers,
b) be able to connect students who may not know about or do not utilize Career Services or the job board, and/or
c) be able to engage local employers who do not wish to post job opportunities generally, but instead want to have a direct referral.

For example, unlike the partnership with The Tennie Group, with job opportunities posted on the Career Services website there is not a liaison who can vouch for a student's work ethic and willingness to learn, nor provide assurance that an employer will provide training, a supportive environment, flexibility, and advancement opportunities for the student. The role of **WBL faculty coordinators** may provide insights into who (what type of position) at Wake Tech would have this knowledge and be able to act as a liaison for the students and employers.

As Wake Tech staff interviewees described, every program with a WBL component, whether required or optional, has a faculty member who serves as the WBL coordinator. The coordinator may be able to facilitate students finding jobs and provide them with contacts at various companies and potential employers, as a staff member explained:

> *"…The students don't have to cold call as much like, nah, they are opportunities, the employer, the faculty is going to be able to tell them, 'Hey, reach out to this person, reach out to that person.' And that is what I think is ideal, because that is just a lot easier for the student to have that information."*

Currently, an interviewee noted, the extent to which students receive assistance in finding WBL opportunities tends to, "*vary by program, and it varies heavily on who their faculty Work-Based Learning coordinator is,*" in terms of their experience and how they operate in this role. Several interviewees also commented on how the amount of compensation for faculty coordinators,

which had been $100 a semester per student, had presented a major challenge for coordinators to be able to provide the level of support some students need. (Note: in Fall 2021, the pay rate was increased to $250 a semester per student, pending the Faculty Coordinator's completion of all tasks associated with the role[7]; in addition, some Faculty Coordinators serve in the role as part of their workload without additional compensation.) Considerations could therefore be made for evaluating the roles, responsibilities, and compensation for existing WBL faculty coordinators, as well as creating similar positions for programs that do not have a WBL component but nonetheless have students who would benefit from professional employment while completing their studies at Wake Tech.

Summary and Recommendations

Existing research and evidence from this study indicate that enhancing and diversifying collaborative relationships between higher education institutions and employers can create opportunities to promote the upward mobility of underrepresented and minoritized groups and, by creating a school-to-employer pipeline, to address local and nation-wide equity and labor gaps in high-paying, fast growth jobs. Each of the formal workplace learning programs at Wake Tech provide opportunities for students to gain real-world professional experience and advance their skillsets while earning income and working towards a credential. Wake Tech's informal partnership with The Tennie Group has also opened up a new pathway for students from various areas of study to benefit from employment, mentorship, and on-the-job training. At the same time, the partnership has allowed for the local employer to enhance its business.

In summary, data from semi-structured interviews with key informants, Wake Tech program websites and online source material, Wake Tech podcasts, and email correspondence, provide evidence for the following key findings from this case study:

- The informal nature of the partnership with the accounting firm has allowed for students with diverse backgrounds to gain access to the work opportunities with fewer academic and administrative requirements than the formal programs.
- Major benefits/gains for students working at The Tennie Group:
  - new skillsets learned on-the-job

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[7] Individuals who only conduct the mid-term employer site visit report receive a stipend of $100 per student.

- o work experience in a professional setting
- o transferable skills and knowledge they can apply in other industries
- o experience working in a supportive environment to help them succeed
- o flexible scheduling to accommodate their class schedules and academic workload
- o growth and advancement within the company
- o experience training others as they transition into new roles
- Major benefits/gains for the employer:
  - o cultural diversity within the firm to better represent and communicate with the communities they serve
  - o diversification of the firm's client base
  - o ability to grow into new markets and geographies
  - o enhanced technological savviness

From the study's findings, some recommendations can be made for Wake Tech to be able to scale up partnerships with local employers:

- provide resources to create an intermediary at the college who can identify the specific needs and interests of students and employers and make recommendations based on a goodness of fit
- provide a direct line to the college for employers to get referrals for student hires
- expand outreach to recruit new employers into partnerships
- communicate with existing and prospective partners about various options for employing students.

Appendix A: Research Design

This study employed the case study research method, "a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals" (Creswell, 2009, p. 12). With an aim to understand the intricacies of this partnership and the paths of the individuals involved, this study was well-suited for the case study method, which "allows investigators to retain the holistic and meaningful characteristics of real-life events" (Yin, 2003, p. 2). As characteristic of case study research, this study draws upon multiple data sources, including interviews, documents, websites, and email correspondence. Analyses of interview data have been conducted in a phenomenological approach, where common meaning has been gleaned from multiple informants based on their lived experiences, practices, and attitudes (Creswell & Poth, 2018).

Data Sources

The primary data source for this case study was semi-structured interviews with key informants with knowledge and experience related to one or more of the major topic areas of the study's research:

- The informal partnership between Wake Tech and The Tennie Group, which included the following interviewees:
    - The Wake Tech liaison who initiated the informal partnerships
    - The founder and CEO of the Tennie Group
    - Two Wake Tech students who were employed at the Tennie Group at the time of the interviews
    - A Wake Tech alumna who had previously been employed at the Tennie Group
- Wake Tech and employer partnerships through formal programs or services, which included the following interviewees:
    - Three directors of WBL or apprenticeship programs at Wake Tech
    - Three Wake Tech Career Services staff members

All interviews were conducted by one member of the research team during the Summer of 2021 and each lasted between 15 to 30 minutes.

To gain additional background and contextual details on the formal workplace learning opportunities and apprenticeship program at Wake Tech, the research team reviewed numerous sources of online material, including from Wake Tech's program websites and information on apprenticeship requirements through the U.S. Department of Labor's website. To further clarify details related to Wake Tech's WakeWorks Apprenticeship program, the research team also corresponded with program staff via email.

Data Analysis Methods

All interviews were conducted via Microsoft Teams meeting platform and were video/audio recorded. Following the interviews, each recording was uploaded to Otter.ai, an online artificial intelligence transcription service. Once transcripts were processed, a member of the research team reviewed the text line-by-line to correct spelling errors and check for accuracy, referencing the video/audio recording when necessary. All transcripts were then imported into Dedoose, a computer assisted qualitative data analysis software program.

To begin the interview coding process, the research team member who conducted the interviews created an initial codebook based on key topics from the research protocol and that had emerged from interviewees' responses to questions. A second team member reviewed all interview transcripts and added additional codes to the codebook as necessary. Both team members continued to review the codebook throughout the coding process and discussed and clarified any inconsistencies or redundancies. Codes were grouped by their relation to specific research questions and, as appropriate, by major themes that emerged outside of the research questions.

To confirm details shared in interviews, and to provide supplemental information, about Wake Tech's programs, the research team cross-referenced each program's website, online source materials, relevant podcasts, and email correspondence with program staff members. Program directors also reviewed relevant sections of this report to ensure accuracy.

Appendix B: Interview Protocols

Interview Questions for Employer
1. Can you tell me about how you became involved with employing students from Wake Tech?
    a. When did you first start hiring WTCC students?
    b. How many WTCC students have you employed since then?
    c. How many WTCC student do you currently employ?

2. What has the process been like when identifying WTCC students to hire?
    a. What key qualities or skills have you looked for?
    b. Are there any particular programs or courses of study from which the hires have come?
    c. In general, what have you looked for in a new hire?

3. Can you describe the typical onboarding process when you bring on a new student hire from Wake Tech?

4. Are there particular trainings or supports that student hires receive when employed with your firm?

5. What would be a typical trajectory for a student hire when employed with your firm?
    a. Are there avenues for advancement within the firm?
    b. How are those avenues determined?

6. What do you think are the greatest benefits for WTCC students who you employ?

7. What have been the greatest benefits for your firm since employing WTCC students?

8. How would you like for your partnership with WTCC to continue and/or change going forward?

9. Are there any additional supports or resources that your firm would need to continue hiring Wake Tech students?

10. Is there anything else you think is important to share regarding your experience hiring WTCC students that would be beneficial for Wake Tech or other employers who might be interested in this type of partnership to know?

Interview Questions for Wake Tech Liaison
1. Can you tell me about how you became involved with referring Wake Tech students for employment at The Tennie Group?

    a. When did you first start referring WTCC students?
    b. How many WTCC students have you referred since then?

2. What has the process been like when identifying WTCC students to refer for hire?
    a. What key qualities or skills have you looked for?
    b. Are there any particular programs or courses of study from which the referrals have come?
    c. In general, what have you looked for in a referral?

3. What do you think are the greatest benefits for WTCC students who have been employed by The Tennie Group?

4. What do you think have been the greatest benefits for The Tennie Group since employing WTCC students?

5. How would you like for employer partnerships with WTCC to continue and/or change going forward?

6. Are there any additional supports or resources that you think employers would need to partner with Wake Tech to hire students?

7. Are there additional resources that you think Wake Tech would need to continue to partner with employers to hire students (outside of the current programs, such as internships, apprenticeships, Wake Works, etc.)?

8. Is there anything else you think is important to share that would be beneficial for Wake Tech or other employers who might be interested in this type of partnership to know?

Interview Questions for Other WTCC Informants (WBL Program Directors, Career and Employment Resources Staff, Executive Leadership)

1. Can you tell me about the work-based learning program(s) you work with (or programs you are familiar with) at Wake Tech?
    a. What is the process like for students gaining entry into the program(s)?
    b. What kinds of employers/industries participate in the program(s)?
    c. How have/do employers become involved in the program(s)?

2. How are students connected with particular employers through the program(s)?
    a. Is there a process for matching students with employers?
    b. If so, what are the matching criteria, or steps in the matching process?

3. What do you think are the greatest benefits for WTCC students who participate in the program(s)?

4. What do you think are the greatest benefits for employers who participate in the program(s)?

5. What are the main roles and responsibilities that your office/department has in terms of the operations involved with the program(s)?
    a. What positions in your office/department support the program(s)?
    b. In what ways do the specific positions support the program(s)?

6. Are there other areas outside your office/department that help support the program(s)?
    a. In what ways do these other areas support the program(s)?

7. Are there additional support or resources that you think are needed to improve the program(s)?
    a. What are those supports or resources and how do you think they would improve the program(s)?

8. Is there anything else you think is important to share about the program(s)?

Interview Questions for Students Currently Employed at Employer
1. Can you tell me how you came to work for The Tennie Group?

2. What was the onboarding process like when you first started working there?
    a. Did you receive any particular training?
    b. How did you learn about the industry?
    c. How did you learn about what to do in your role?

3. What role(s) and responsibilities have you had at The Tennie Group?
    a. If multiple, what was the process like in changing or shifting roles and/or responsibilities?

4. How would you describe the support you have received while working at The Tennie Group?

5. Has your working with The Tennie Group impact your experience as a student at Wake Tech?

6. Has the work you have been involved with had any impact on your thoughts about career opportunities going forward?

7. What do you think have been the greatest benefits you have gained from working at The Tennie Group?

8. Do you have any advice for other students who might be interested in working for a company like The Tennie Group while continuing their studies?

9. Is there anything else you think is important to share that would be beneficial for Wake Tech, other employers, or students to know about your experience?

Interview Questions for Alumni Currently or Formerly Employed at Employer

1. Can you tell me when you worked at The Tennie Group and how you came to work there?

2. What was the onboarding process like when you first started working there?
   a. Did you receive any particular training?
   b. How did you learn about the industry?
   c. How did you learn about what to do in your role?

3. What role(s) and responsibilities did you had at The Tennie Group?
   a. If multiple, what was the process like in changing or shifting roles and/or responsibilities?

4. How would you describe the support you received while working at The Tennie Group?

5. Did your working with The Tennie Group impact your experience as a student at Wake Tech?

6. Did the work you were involved with have any impact on your thoughts or decisions about career opportunities?

7. What do you think were the greatest benefits you gained from working at The Tennie Group?

8. Do you have any advice for other students who might be interested in working for a company like The Tennie Group while continuing their studies?

9. Is there anything else you think is important to share that would be beneficial for Wake Tech, other employers, or students to know about your experience?

References

Cengage. (2021). *Graduate employability report: a Cengage survey examining graduate employability, education ROI and degree stigma among 2- and 4-year college graduates*. Cengage Publishing, 1–24. https://info.cengage.com/employability-report_rept_1761959

Cheney, G. (2019). *Growing equity and diversity through apprenticeship: Business perspectives*. JFF's Center for Apprenticeship & Work-Based Learning. https://jfforg-prod-new.s3.amazonaws.com/media/documents/GrowingEquityandDiversitythroughApprenticeship-BizPerspectives-07182019-2.pdf

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J. W., & Poth, C.N. (2018). *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, CA: Sage Publications, Inc.

Education Strategy Group. (2019, November). The critical role of intermediary organizations in expanding youth apprenticeship. *Education Strategy Group*. https://edstrategy.org/wp-content/uploads/2019/11/ESG-Youth-apprenticeship-12092019-update.pdf

Friedman, L.N. (2021, May 6). Why every high school student needs a work-based experience. *The Hechinger Report*. Retrieved from https://hechingerreport.org/opinion-why-every-high-school-student-needs-a-work-based-experience/

Goger, A. & Sinclair, C. (2021). Apprenticeships are an overlooked solution for creating more access to quality jobs. *The Avenue*, Brookings (January 27). Retrieved from https://www.brookings.edu/blog/the-avenue/2021/01/27/apprenticeships-are-an-overlooked-solution-for-creating-more-access-to-quality-jobs/

Haviland, S. & Robbins, S. (2021) *Career and technical education as a conduit for skilled technical careers: A targeted research review and framework for future research*. ETS Research Report Series ETS RR-21-07. https://doi.org/10.1002/ets2.12318

Hora, M. T., Lee, C., Chen, Z., & Hernandez, A. (2021). Exploring online internships amidst the Covid-19 pandemic in 2020: Results from a mixed-methods study. *Center for Research on College-Workforce Transitions (CCWT), University of Wisconsin-Madison*. https://eric.ed.gov/?id=ED615005

Jobs for the Future. (2020, March 25). *The business case for work-based learning*. https://jfforg-prod-new.s3.amazonaws.com/media/documents/Business-Case-WBL-03162020.pdf

NC State Board of Community Colleges Code. Work-Based Learning. 1D SBCCC 300.10 (2018) https://www.nccommunitycolleges.edu/sbcccode/1d-sbccc-30010-work-based-learning

Porter, J., Hirsch, R., & Stephens, R. (2021). Leveraging registered apprenticeship to build a thriving and inclusive economy: a playbook for governors. *National Governors Association*, 1–12. https://www.nga.org/center/publications/leveraging-registered-apprenticeship-to-build-a-thriving-and-inclusive-economy/

Ralls, S. (Host). (2022, April 19). New Hendrick Center for Automotive Excellence (No.15) [Audiovisual podcast episode]. In *We Are Wake Tech.* Wake Technical Community College. https://www.waketech.edu/about-wake-tech/administrative-offices/communications/podcast/episode-15%3A-new-hendrick-center

Ralls, S. (Host). (2021, March 10). WakeWorks apprenticehip & WakeWorks propel (No.2) [Audiovisual podcast episode]. In *We Are Wake Tech.* Wake Technical Community College. https://www.waketech.edu/about-wake-tech/administrative-offices/communications/podcast/episode-2%3A-wakeworks-apprenticeship

Ross, M., Kazis, R., Bateman, N., & Stateler, L. (2020). *Work-based learning can advance equity and opportunity for America's young people*. Washington, DC: Brookings. Retrieved from https://www.brookings.edu/wpcontent/uploads/2020/11/20201120_BrookingsMetro_Work-based-learning_Final_Report.pdf

Seleznow, E.M. (2020). Reauthorizing the national apprenticeship act: The time has come. JJF (March 6). Retrieved from https://www.jff.org/what-we-do/impact-stories/center-for-apprenticeship-and-work-based-learning/reauthorizing-national-apprenticeship-act-time-has-come/

U.S. Department of Labor. (n.d). *What is the difference between an apprenticeship and internship?* Apprenticeship.gov. https://www.apprenticeship.gov/help/what-difference-between-apprenticeship-and-internship

Van Horn, C., & McCarthy, M. A. (2021, March). Building back better: a jobs-centered infrastructure plan: supporting recovery through community service jobs. *New America*. https://www.newamerica.org/education-policy/briefs/building-back-better-a-jobs-centered-infrastructure-plan/

Wilson, R. (2015, January). *A resource guide to engaging employers*. Jobs for the Future.
https://jfforg-prod-new.s3.amazonaws.com/media/documents/A-Resource-Guide-to-
Employer-Engagement-011315.pdf

WakeWorks Apprenticeship Frequently Asked Questions (n.d.) Wake Technical Community
College. Retrieved May 2,2022 from https://www.waketech.edu/programs-
courses/wakeworks/students

WakeWorks Youth Apprenticeship (n.d.) Wake Technical Community College. Retrieved May
2,2022 from https://www.waketech.edu/programs-courses/wakeworks/youth

Yin, R. K. (2003). *Case study research: Design and methods* (third edition). Thousand Oaks,
CA: Sage Publications, Inc.

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i Work-based learning programs offer the opportunity to serve the needs of employers in need of a skilled workforce and to act as "a lever to advance equity and economic opportunity" (Brookings, 2020, p.6; Cahill, 2016, Cheney, 2019; Van Horn & McCarthy, 2021; Porter et. al, 2021). Currently, equity gaps observed where minoritized racial groups, women, low-income, rural, and disabled students have fewer access to educational and work opportunities are reflected in current access to work-based learning (Brookings, 2021; Cheney, 2019; Education Strategy Group, 2019). With registered apprentices, for example,

> "According to the U.S. Department of Labor, women represent almost half of the labor force but made up just 8 percent of registered apprentices in 2018. Meanwhile, although African Americans account for 13.4 percent of the U.S. population, just 10 percent of the people who completed Registered Apprenticeship programs were African American" (Cheney, 2019, p.10).

Further accelerating the push for expanded, equitable work-based learning is employers' increased understanding that it is good for business (Cahill, 2016; Cheney, 2019; Education Strategy Group, 2019; Friedman, 2021; Goger & Sinclair, 2021; Haviland & Robbins, 2021; Jobs for the Future, 2020; Porter et. al, 2021; Seleznow, 2020). Employers who hire from work-based learning receive better trained, more-invested employees, and long-term, successful programs offer the promise of an ongoing stream of qualified workers. When those employees are hired from a diverse applicant pool intentionally designed to recruit from minoritized groups, the work-based learning experience has the potential to open up a pipeline that can be mutually beneficial for workers and employers alike, and could potentially "reduce occupational segregation in the labor market" (Goger & Sinclair, 2021).

As the employee pipeline transforms to reflect the demographics of society, businesses can remain relevant by employing people who belong to the communities they serve (Cheney, 2019). As one employer stated in Cheney's (2019) study, "This is not charity. This is a bottom-line decision. We need to attract new candidates to our industry and break down barriers that keep underrepresented populations out." When colleges make a concerted effort to open up spaces that are historically perceived as white and male, employers can access pools of applicants that they

would not have encountered otherwise. Ultimately, work-based learning programs have the potential of "addressing the skills gap and...developing a more diverse talent pipeline" (Cahill, 2016, p. 2).

As educational institutions expand their workplace learning offerings, college staff and employers can build capacity for all students, particularly racially minoritized students, women, and students with disabilities, by investing in the mentorship process and providing additional support for those who may have gaps in technical or soft skills and/or financial constraints (Brookings, 2020; Cengage, 2021; Cheney, 2019; Haviland & Robbins, 2021; Porter et. al, 2021; Wilson, 2015). For example, with the WakeWorks Apprenticeship program providing an income and covering costs for tuition, equipment, and fees, opportunities are opened for students who not only may not be able to afford tuition and those who need to work to support themselves and/or their families.

Offering cohorts of similarly situated students, providing culturally relevant pre-apprenticeship training, connecting students to wrap-around services, and expanding recruitment efforts have all been identified as effective interventions to address the existing equity gaps in workplace learning opportunities (Cahill, 2016; Cheney, 2019). During the COVID-19 pandemic, virtual workplace learning opportunities also emerged as an important practice that can provide access to "students with disabilities, those living in rural areas, low-income students, and working students, all who would theoretically be more able to access an internship from their own home and on their own schedule than if they had to commute or relocate" (Kraft et. al, 2019, as cited in Hora et. al, 2021, p.9). In addition, providing flexible schedules and course offerings at times that work best for students can also help to expand access to these opportunities for students to gain skills and course credit while earning wages and improving their career prospects. As a Career Services staff member stated about the workplace learning opportunities at Wake Tech:

> *"It provides that pathway. With as many of the normal barriers to this pathway taken down, the biggest one always happens to be time and money. And in this case, if we're looking at workforce, continuing education, we're offering these skills paths in the evening, which is great, so they can continue to work their jobs, and then get those skills*

they need to be hired in a better career path, a better paying career path, one that is
something that they want to do that they select it for themselves."