

Promoting Active and Sustained School-Business Partnerships: An Exploratory Case Study of an IT Academy

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In support of the national push for promoting career readiness, school-business partnerships have been noted as an important support strategy. However, there is limited research in the context of career academies. Thus, we sought to explore the nature of a partnership between an information technology (IT) career academy and local business partners. We found that the development of social capital is required to keep the network of partners bonded toward a common goal, bridged through a Business Advisory Council to facilitate planning and related supports, and linked by a local web of connecting relationships. Study findings add to the limited literature on the interface of school-business partnerships, career academies, and the promotion of career readiness in particular occupational contexts such as IT.

Keywords: career academy, career and technical education, career readiness, school-business partnerships

Introduction

Over the past two decades, the need to better prepare high school students for further education or work in today's high-tech and knowledge-based economy has been well-documented (Aasheim, Li, & Williams, 2009; Carnevale & Smith, 2013; Fletcher & Tyson, 2017). This lingering issue has fueled a national push for emphasizing college and career readiness in high schools to help youth experience successful transitions into postsecondary education and the workforce (Achieve, 2016; Fletcher & Tyson, 2017; Loera, Nakamoto, Oh, & Rueda, 2013). However, in an education system that is school-based with limited connection to work experiences, this push is often misconstrued as a need for higher-level academics (Gordon, 2014; Stone, 2013).

To help schools and districts provide students with relevant experiences beyond academics, school-business partnerships have been identified as an important element for school reform (Badgett, 2016; Fletcher & Tyson, 2017; Scales et al., 2005). In general, school-business partnerships are mutually beneficial with schools often receiving donations (e.g., small grants, equipment) and supports in a variety of ways such as guest speaking, mentorship, and internships (Badgett, 2016; Engeln, 2003; Fletcher & Tyson, 2017; Turnbull, 2015). Partnerships are typically enacted as school sponsorships (e.g. adopt-a-school programs), which in turn allow companies to promote and sell their products, and enhance their visibility in the community (National Association of Partners in Education [NAPE], 2001). However, this type of partnership has generated ethical

questions and concerns about the actual impact of sponsorships on reform initiatives (Mickelson, 1999; Shaul, 2000).

School-business partnerships connected to college and career readiness are more likely to be found in career and technical education (CTE). The reason stems from the mission of CTE and related legislative requirements involving work-based learning opportunities for students (Gordon, 2014; Fletcher & Tyson, 2017; Partnership for 21st Century Skills, 2010). CTE programs typically have an advisory board comprised of business partners who provide input and a variety of supports such as student internships, availability of mentors, and access for job shadowing and career awareness activities (Orr, Bailey, Hughes, Karp, & Kienzl, 2004). Nevertheless, the level of involvement by business partners may vary greatly, from peripheral support (e.g., donations, talks) to active engagement with input on curricular issues and long-term program support. Further, CTE programs operating within a comprehensive high school rarely have time and influence to develop highly engaged business partnerships (Badgett, 2016; Falconer & Pettigrew, 2003; Scales et al., 2005).

Within CTE, career academies are better positioned to develop sustained and active partnerships with local business partners. Career academies operate as small schools within comprehensive schools or as stand-alone schools, featuring career-oriented curriculum (Brown, 2003; Kemple, 2008; Stern, Dayton, & Raby, 2010). In this regard, the occupational focus facilitates targeted recruitment of business partners to support the implementation of required work-based learning opportunities for academy students. For career



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academies, business partnerships are essential for promoting career awareness and ensuring work-based learning experiences for students (National Academy Foundation [NAF], 2013). For business partners, given the specific preparation of career academy students, the benefits translate into talent identification and recruitment (Badgett, 2016; Falconer, & Pettigrew, 2003; Turnbull, 2015). Thus, career academies have become a popular design for engaging students in a variety of career pathways such as finance, information technology (IT), engineering, health sciences, and other fields (Kemple, 2008, NAF, 2013).

To be sure, there is extensive evidence about the impact of participation in career academies on student outcomes (Kemple, 2008; Stern et al., 2010). However, there is limited research on the nature of active and sustained academy-business partnerships in specific sectors such as IT (Fletcher & Tyson, 2017; Scales et al., 2005). Therefore, IT provides the grounds for an examination of school-business partnerships given the field's strong employment outlook (Bureau of Labor Statistics, 2015). IT represents a cluster of occupations (e.g., hardware and software engineers, programmers, and systems analysts), all sharing a computer-related focus and residing in all types of organizations found in any given community (Wright, 2009).

Thus, given the potential availability of IT business partners in a community, the purpose of this study was to explore the nature of a partnership between a career academy featuring an IT curriculum and local business partners. Specifically, we sought to discover the strategies used to facilitate the creation, operation, and sustainability of a network of support within the business community around the IT academy participating in this study. We were particularly interested in understanding the development of shared purpose and goals, the means for achieving goals, and the types of supports. The research questions undergirding the study were:

1. What is the nature of local supports and level of partnership engagement needed to effectively implement and sustain an IT academy?
2. How are effective school-business partnerships established and sustained?

Review of Literature and Conceptual Framework

This study was informed by a conceptual framework grounded in the literature on school-business partnerships and capital-building theories in the context of a career academy model.

School-Business Partnerships. The benefits of establishing school-business partnerships have been recognized over the years and have grown from a mere philanthropic relationship to a push for more active engagement in preparing students for productive lives beyond high school (Badgett, 2016; Brown, 1998;

Fletcher & Tyson, 2017; Manning, 1987; Scales et al., 2005). In general, business partnerships have the ability to provide an array of supports to schools through funding, commercial relationships, and other ancillary contributions such as guest speaking and mentorships (Engeln, 2003; Council for Corporate and School Partnerships [CCSP], 2002; Fletcher & Tyson, 2017). However, the engagement and impact of business partnerships have generally received mixed reviews and have been characterized as peripheral to school reform (CCSP, 2002; NAPE, 2001).

In recent years, the role of school-business partnerships has received renewed attention as an important element of school reform to promote college and career readiness. According to Badgett (2016), school-business partnerships have the potential to provide students with the opportunity to apply skills learned in the classroom to real problems that exist in everyday life. Scales et al. (2005) further argued that to prepare students for successful transitions beyond high school, it is necessary for schools and the local business community to have a close relationship. Further, school-business partnerships need to move from loosely articulated relationships to more engaged and sustained modes of operation building upon a shared understanding of purpose (CCSP, 2002). The problem is that school-business partnerships are typically established without specific guidelines, limited participation, and varying understanding of purpose (CCSP, 2002). And, the literature on school-business partnerships is rather scant and primarily focused on guidelines for implementation (CCSP, 2002, 2004; NAPE, 2001). Nevertheless, successful school-business partnerships should be developed under a shared understanding of purpose, driven by specific goals, an action plan with defined outcomes, and reflect an extended network of support for sustainability (CCSP, 2004).

The Career-Academy Model. In the K-12 system, CTE programs provide the grounds for the development of school-business partnerships given the mandate to integrate education and work-based learning opportunities (Brown, 2003; Fletcher & Tyson, 2017). As such, school-business partnerships are associated with career academies given their requirement to provide students with work-based learning experiences such as job shadowing and internships (Brown, 2003). Career academies are small learning communities featuring an occupational curricular theme designed to help students develop skills necessary to pursue further education or careers, as well as provide students with transferable skills they can utilize should they change career paths.

Due to consistent evidence suggesting positive impact on high school students' college and career readiness, the career academy model has grown in popularity over the last two decades (Castellano et al., 2007; Kemple, 2008; Kemple & Snipes, 2000; Stern et al., 2010). However, despite the growing popularity of career academies and the evidence of the impact of

participation on student outcomes, we know very little about the nature of successful partnerships in this program context.

Further, the theories of human and social capital provided an integrated explanatory basis for the promotion of career readiness through business partnerships. Human capital has been defined as the skills and overall occupational preparation that can be developed through investment in education, training, and work experience (Keeley, 2009; One Million Degrees [OMD], 2016). Thus, promoting high school students' career readiness to ensure successful transition to postsecondary education and/or work is a form of human capital development in a community (Keeley, 2009; Putnam, 2000; Symonds, Schwartz, & Ferguson, 2011). In turn, social capital refers to the development of network supports to ensure access to authentic and sustained opportunities to develop skills of interest (Adler & Kwon, 2002; Diez-Vial & Montoro-Sanchez, 2014). That is, the development of social capital requires a network of partners *bonding* together toward a common good, *bridges* to facilitate cooperation, and meaningful *linkages* between members and service recipients (Inkpen & Tsang, 2016; Shahjahan & Evers, 2005).

Conceptual Framework. To summarize, there are several descriptive reports about the types and benefits of school-business partnerships. However, there is limited evidence regarding the nature of school-business partnerships representing active, extended, and sustained engagement. The lack of related research is even more evident in the context of career academies and specific occupational contexts such as in IT. The occupational theme is important because it may reveal the extent of alignment between a career academy focus and the scope of support from the local business community. Thus, taking what we know about business partnerships, the career academy model, and tenets of human-capital building theories, we posit that active and sustained school-business partnerships should be underlined by a strong sense of common purpose (*bonds*), supported with the promotion of career readiness (*bridges*), and fostered through purposeful planning (*linkages*). That is, social bonds (common identity, purpose, goals), specific collaborative structures, and linkages should be in place to sustain the network identity and collaboration between the school and business community.

Methods

We used a case study design to explore the nature of a distinguished IT academy to document the development of the academy – goal setting, supports, and implementation. The goal was to gather thick and rich descriptive information about the setting and the collaborative strategies used to provide students with opportunities to boost career readiness. According to Stake (2006), case studies allow researchers to focus on

the description of ordinary relationships and practice in natural settings targeting aspects of particular concern. Thus, in this project, the focus was on an IT academy (the case) that has been recognized as distinguished based on its high fidelity of implementation according to the standards of the NAF and consistently highly positive student outcomes (NAF, 2013). The academy is located in an urban community within a larger metropolitan area in a southeastern state. The academy enrolls about 700 students annually, with a typical student population composed of 54% White, 25% Hispanic, 13% African American, 2% Multiracial, 5% Asian, 0.5% American Indian, and 0.5% Pacific Islander. The academy is referred to hereafter as the “IT Academy.”

To promote college and career readiness, the IT Academy follows the NAF (2013) model, which emphasizes four components. The first component is based on the concept of smaller learning communities using student cohorts, career-themed and sequenced coursework, common teacher planning, career-themed guidance, and ongoing professional development. The second component focuses on integrated curriculum and instruction to promote career and academic learning around a relevant theme (e.g., IT) through project-based activities involving classroom and work-based learning experiences and internships. NAF encourages paid internships to ensure interns are compensated for their efforts and to make sure employers value their contributions and treat them as regular employees. The third component requires an advisory board consisting of at least 10 members, of whom 80% are industry, civic leaders, and higher education professionals. Finally, a work-based learning component includes career awareness, exploration, and practicum opportunities as part of the high school progressive experience (NAF, 2013).

Data Sources and Participants. To document how the IT Academy operates, we collected data during a five-day site visit. The academy principal agreed to provide access to the school and the career specialist assisted with the coordination of interviews with district and school administrators, school board members, technical and core academic teachers, school counselors, support staff, parents, postsecondary partners, business, and community partners. Interviewees were selected based on a high level of engagement with the school and were recruited as a result of contacts with the career specialist. Data collected focused on the setting and characteristics undergirding the implementation of the NAF academy model with particular focus on the promotion of career readiness. We collected implementation data through the review and analysis of school and academy documents, classroom observations, and interviews with administrators, faculty, staff and school partners. The focus of this component was on the educational stakeholders, while the following year will be on the students. Thus, we did not capture the perspectives of students in the current study.

Regarding document review and analysis, we collected documents pertaining to the structure and implementation of the IT Academy. These items were assembled within an electronic binder and included documentation and evidence of enacting NAF standards. Documents in the electronic binder were organized around four domains: academy development and structure, advisory board, curriculum and instruction, and work-based learning. Example items included videos of students, brochures with information regarding school performance, and examples of student capstone projects.

During the site visit, the research team conducted 18 classroom observations in order to understand the instructional environments, teaching and learning processes, and types and levels of assessments administered in the career academies. We used a protocol to take notes on the role of teachers, student behaviors and interactions, and nature of instructional tasks. In addition, we conducted five off-school site visits with business and industry partners for tours and interviews to learn about collaboration and contribution to work-based learning opportunities for students. Overall, we conducted individual and focus group interviews with 77 stakeholders. These semi-structured interviews were with district ($n = 10$) and school administrators ($n = 2$), school board members ($n = 2$), IT and core academic teachers ($n = 17$), school counselors ($n = 4$), parents ($n = 9$), staff ($n = 3$), postsecondary partners ($n = 4$), business and industry partners ($n = 17$), mentors ($n = 6$) and community partners ($n = 3$). Individual and focus group interviews lasted approximately 60 minutes in duration. Data stemming from these multiple sources allowed us to develop a consistent and triangulated understanding of the approach to promoting career readiness.

Data Analyses. All interviews were audio-recorded and transcribed verbatim. All data (curricular documents, classroom observations, and individual interviews) were analyzed using thematic analysis to capture contextual factors underlying program implementation (Boyatzis, 1998). We then identified recurring themes using the following steps: (a) read the transcripts in their entirety to seize a sense of the whole in terms of how participants talked about the academy and related practices; (b) re-read the transcribed interviews and demarcate transitions in meaning using a lens focusing on career readiness; (c) reflect on the emerging themes for critical verification of evidence within and across transcripts; and (d) synthesize the themes into statements seeking to represent the perspectives of the participants (Wertz, 2005).

Data triangulation allowed data analysis within and across sources (i.e., curricular documents from the electronic binder, classroom observation notes, and individual interviews) to establish cross-data consistency. The research team also conducted analytical triangulation through collective reading and analyses and discussion of transcripts and themes.

Findings

The analysis of individual interviews and focus groups with career academy staff and business partners resulted in the identification of three themes: an extended network of business partners, an extensive level of engagement, and making the business advisory council work.

An Extended Network of Business Partners.

Although the career academy is located in a suburban community as part of a large metropolitan area with a thriving business community, employer support was not taken for granted. At the onset of the career academy creation, support from the local IT employer community was purposefully sought and nurtured and was part of the discussion about the type of program better suited for the academy. Given the early engagement of the IT business community in the development process of the academy, the underlying relationship can be characterized as a close-knit community—an extended network of sorts that was developed over the years—with a shared understanding of purpose regarding the need to help students become college- and career-ready. For example, Deborah, a partner representing a global corporation said:

We want to promote careers in STEM. We want to feed our own talent pipeline with good, well-prepared students because we have a hard time finding qualified applicants in many areas. This is an investment in an upcoming generation that really, it pays off for us.

This perspective was evident through all interviews and interactions with business partners. The shared understanding regarding the need to invest in the promotion of college and career readiness in STEM-related areas, and in IT in particular, appeared to serve as motivation for willing engagement with and support to the academy. At the same time, business partners also recognized the benefits of contributing to the preparation of the next generation of workers.

Fueled by this shared understanding of purpose, a feature of the extended network of support in the academy was the level of longstanding involvement of industry partners representing a diversity of operations and size. As such, the academy went beyond the notion of having an Advisory Board including a small group of business partners who would meet quarterly – at best – and help identify and provide ancillary support. Instead, over the years, the academy sought to establish a Business Advisory Council (BAC) for widespread participation of IT partners in the entire community. At the time of our visit, the goal of the academy was to have 100 business partners involved in its BAC in support of academy work. As a result, business partners from small local banks (e.g., credit unions) to global corporations were represented in the pool of community support, spreading across and beyond the county boundaries. Bill, a partner representing an international corporation, summarized this perspective:

The business advisory council is one of the academy secrets to success [...] if you're gonna [sic] have your kids work within the community. I have been involved in it for, probably, seven or eight years now, and have been a chair on the scholarship side for two. On the business advisory council, our goal is to approach 100 business partners, and we've got somewhere along the lines of 70, currently.

This quote reflects the longstanding commitment, shared understanding of purpose, and direct buy-in on the participation process. Reports of participation from other business partners confirmed the level of commitment and involvement. It also revealed a deep sense of identity as a group of like-minded entities contributing to a common goal.

As part of this extended involvement of local employers, the school district represented a unique contribution through participation as a business with a large IT department. The school district also benefited from direct recognition and access to the larger IT business community and recruited employers for participation with other schools. As a business partner with the academy, the school district operated like a company with a mission of developing local talent for future hires in its large IT operation. Steven, the Supervisor of Information Services at the School District shared this outlook:

We've been able to kind of create a tiered system [to work with the student interns]. We've been able to hire some back as year-two interns at a little bit higher rate of pay, a little bit higher responsibility, a little bit more access than they may have had in the past because they're growing in their skillsets. We've actually hired some into our department post-graduation from high school. They are employed by the [school district]. It's been an interesting, instant career path for a few of them, to have jobs in information services.

To summarize, the academy developed an extended network of employer support, which can be characterized as sharing an understanding of purpose and identity. Business partners of all sizes shared views on the need to prepare local talent for STEM occupations and with particular interest in IT work. Therefore, business partners appeared to view involvement with and support of the academy as a form of investment, including the school district, which in this regard operated like a unique business partner.

An Extensive Level of Engagement. Given the extensive and longstanding involvement of business partners, another theme consistently corroborated throughout the interviews and focus groups was the comprehensive nature of the business partners' support network. The practice of providing the academy with whatever was needed to ensure its operational success translated into a wide range of business partner support for student clubs, such as fundraising and donations, serving as mentors, providing teacher training,

participation in career awareness events, job shadowing, and paid internships. In this regard, all stakeholders confirmed the extensive nature of support from business partners channeled through the BAC. Linda, a business partner representing a major restaurant franchise in the region, summarized the extensive support provided for the academy:

I've tried to teach classes here for the 9th and 10th grade modules that they offer. I've assisted with the reviewing of senior portfolios, so basically anything that the academy needs from a business perspective, you know, donations, cash, food, internships, anything that they need, we try to offer from a business perspective.

Business partners offered many concrete examples of contributions and confirmed the extensive level of engagement to provide the academy with needed supports. Roger, another business partner, best summarized this shared commitment as follows:

"We're gonna [sic] make sure that you're supported here. If you need transportation, we'll make sure you get it. Whatever you need to be successful, it's here."

At the core of such supports, the involvement of business partners in providing paid student internships was identified as one of the strongest contributions to the academy. Regardless of the company size, paid internships were available to all senior students in the academy. Typically, summer internships were available for academy students for 8-10 weeks and involving 25-30 hours of work a week. Internships emphasized authentic progressive work. That is, interns would be immersed in actual projects with increasing involvement during the internship. As Steven, the vice-president of a local bank noted, internships were not meant for students to make copies and get coffee. The goal was for interns to get real-world and challenging experiences. To this end, Mr. Henderson, a school district IT services administrator offered the following example:

I went to my intern, and said I needed to be able to emulate an Android phone. All of us have iPhones and we needed to be able to test on an Android device, so the project was to investigate and figure out how we could get the emulator on a PC. Not only did he get the emulator set up, he actually did it in a virtualized environment. That meant it was available globally to anybody in tech support. I was shocked that he got it done.

According to the interviewees, the majority of internships were paid and students were treated as employees. Hence, employers were able to make workplace expectations and behaviors such as meeting a professional dress code, completing employment paperwork, and receiving performing appraisals relevant and meaningful. This concerted strategy was evident across employers and revealed another important feature of business partners' involvement, that they were all proud of being part of the BAC and supporting the work of the academy. They were actively engaged with an understanding that they were contributing to a shared and

worthy cause as part of an extended network of support. Deborah, a senior-level representative of a global company summarized this perspective:

[The supervisors] have all the requirements that they need, and put it down in front of me and say, okay, we'll do that, that, that, that, and that. It's all on behalf of the students. They ask us what we get out of it. We get pride and passion. You can see that by us sitting here. It's trying to make it good for the students and such.

Robert, a representative from another global company reinforced this perspective noting, "all of us have full-time jobs and we do this on a volunteer basis." This commitment to volunteer and support the work of the career academy exemplified the shared sense of identity, purpose, and commitment for continued involvement providing paid internships and a quest to engage students in authentic work.

Making the Business Advisory Council Work.

The existence of this extensive network of business partners' support was not a given upon the creation of the career academy. It had to be established and nurtured to keep business partners motivated and engaged. To this end, the vision to create a BAC and keep partners actively engaged was a prominent strategy. To facilitate that vision, the role of a lynchpin was identified as another key factor in keeping the network of business partners engaged and sustained.

In this community, we found that the establishment of and the vision for the BAC went beyond the typical ribbon-cutting role and ancillary funding support of an advisory board. At the onset, the strategy was to create a council of business partners to draw support from the IT industry in the entire community. That is, the goal was to create a network of support with widespread representation and active participation of business partners to help support student career readiness. This is in contrast to the typical advisory board, including a small group of 8-10 employers, found in CTE programs and career academies. Instead, in this community, the BAC consisted of 70 members with approximately 20 to 25 members of the council attending the meetings in person on a regular basis, with the remainder of the members calling in to the meeting via conference call. To make the council work, members met quarterly with a spring mixer and a retreat in the summer. At the summer retreat, BAC members established priorities for the upcoming school year, discussed the details of jobs, internships, job shadowing and site tours that their respective companies would offer. The BAC also prioritized goals and supports and established a timeline for completion. This approach provided the grounds for a strong sense of identity that kept partners on board for years, unified toward the common goal of supporting the academy. The success of the BAC resulted from buy-in from senior level partners, CEOs, vice-presidents, and other key stakeholders in the IT community. Senior level partners were instrumental in the growth of the council by using their leverage to recruit

others business leaders and employees to become involved in the council. Through our inquiry, it became clear that business partners were enthused to collaborate with the academy.

The role of the career specialist—Sandy Thomson, was another critical element of the academy's success in building a strong and engaged community of business partners. In this regard, Sandy was unanimously identified as the lynchpin keeping the network of business partners engaged and sustained. Everyone we talked to identified Sandy as the lynchpin that connected members of the BAC and enabled them to work toward common goals. As Jerry, the CEO of a manufacturing company noted:

Sandy is the key to the success here. It wouldn't happen without the support of everything else, but Sandy is the key there, of building relationships. To me, that's the key. Sandy is just such a warm, wonderful person that you're like, even if I didn't wanna [sic] do this, I would be here because you're so amazing. In fact, I said the same thing, the very first year that I volunteered.

In this case, we found Sandy's position to be quite unique, as it was specifically created to promote and sustain the development of external organizational capacity. In most schools, this role is often found as part of many other duties assigned to an assistant principal, a lead CTE program teacher, or an academy coordinator. As part of the vision for the academy's implementation, the founding principal funded the career specialist position with the primary responsibility to bridge a strong partnership between the school and the IT business community. Jennifer, the founding principal, reported they were given \$100,000 in the year prior to opening the academy to hire and train staff, and the district superintendent was very supportive of the idea of creating the career specialist position. Leonard, a BAC member confirmed the fact that this was a unique position:

The academy may have the unique [career specialist position] to itself. Other schools have teachers with similar roles as career and technical facilitators who communicate with the assistant principal and with school counselors, but just deducing from that, those schools may not have a dedicated career specialist, like here [at this academy].

Nonetheless, it was apparent that finding the right person to serve as a lynchpin that bonded school and business partners while also expanding support for the school was critical. Initially, Sandy was hired as the on-the-job training teacher and according to Arthur, a school administrator, Sandy's role morphed into the career specialist upon recognizing that she possessed the traits necessary to serve in the latter capacity. In that regard, Sandy has a friendly disposition and a natural ability to network and build relationships in the community. She was also passionate and driven by attention to planning and making concrete requests to business partners. All of the business partners we interviewed agreed that Sandy was the right person to serve as the lynchpin holding the

school-business partnership together. Deborah, a senior executive at a large corporation was eager to point this out to us:

Now, a lot of it is the right fit for the right person, and [Sandy's] certainly the right person. She's textin' [sic] you and me. She's makin' [sic] sure this happens...She's crucial to those relationships. It's a model that the other schools don't have. That's been a model that's been very successful.

Part of Sandy's success in her role was her approach to meticulous planning and timely follow-up to ensure that business partners were motivated and engaged in providing very specific supports. This approach was highlighted repeatedly in the interviews, characterizing her way of operating as business-like, involving concrete requests with prompt and detailed follow-up with individual partners. It was also evident that she followed a similar approach to facilitate the overall work of the BAC to identify, prioritize, and deliver supports to the academy. Peter, a senior executive of a large industrial manufacturing company stated:

If I had to boil it down to one word about the BAC works, it's the relationship, that everybody knows everybody. The business advisory council is involved. The teachers are involved. Nothing stands on its own as an island. All the dots are connected with Sandy in the thick of things.

In summary, it was evident that the lynchpin was an integral component of business partnership engagement. Sandy extended herself beyond the standard responsibilities of a career specialist to bring forth unprecedented student opportunities.

Discussion and Conclusions

In general, we found a very strong and extended community of employers committed to supporting the academy. In this community, business partners were involved beyond ribbon-cutting events and took pride in being part of supporting the academy. Given the strong and extended commitment of support, the contributions of business partners were comprehensive, from donations to paid internship experiences for students. We also found that the career specialist was the lynchpin that kept the network of business partners together, growing, and engaged. Further, the advisory board met NAF's implementation thresholds of having at least 10 members of which 80% are from industry, civic leaders, and higher education professionals (NAF, 2013).

The findings supported the tenets of social/capital-building theories reinforcing the notion of the need for a strong sense of common purpose bonding partnership members, structures to bridge partners, and relationships to link and sustain collaboration (Keeley, 2009; Inkpen & Tsang, 2016; OMD, 2016). In this case, the BAC had a strong sense of identity and purpose to help academy students become career-ready. That is, it was apparent that the business partners were committed to investing in

the development of local human capital in order to prepare career-ready youth for the IT industry. Thus, the BAC was a critical bridge linking the academy and IT employers, and the source of comprehensive supports to promote students' career readiness. In turn, the career specialist served as the lynchpin keeping the BAC engaged and sustained through the promotion of social capital (i.e., relationships) and strengthen the common bonds and linkages.

Despite general agreement with existing literature on business partnerships and human/social capital-building theories, our findings revealed important nuances contributing to the success of the local partnership. In this community, the school-business partnership went beyond the typical concept of an advisory board including a small group of business partners. Instead, the academy engaged in a grassroots and inclusive approach targeting widespread collaboration with local employers through an advisory council including much larger participation of business partners. As such, the creation of the BAC took time and had to be nurtured over several years. In this regard, it appears that the nature of the academy theme played a role in attracting and retaining partners on the BAC. That is, although business partners represented companies of different sizes and market operations, they all shared a need for IT talent and were spread throughout and beyond the county. In this context, the local roots and need for IT talent development provided the grounds for a shared identity and compelling motivation to keep partners engaged in providing continued support to the academy. Under these conditions, the BAC represents a network of support that would be difficult to replicate in other communities seeking to establish a school-business partnership within a short duration of time, when a new academy is created (Inkpen & Tsang, 2016; OMD, 2016). As a result, it was not surprising to find small advisory boards involving token representation of business partners as the typical strategy in career academies (Brown, 2003; CSSP, 2002).

Our findings also brought to the forefront conditions that were needed to make a school-business partnership successful – engaged and sustained. In this regard, our findings reinforced the premises of human/social capital theories regarding the need for social bonds, bridges, and linkages to keep a network engaged and sustained (Keeley, 2009; OMD, 2016). However, this is an area where related literature has been challenged for the broad implications to practice in terms of specific conditions and strategies for building social capital (Diez-Vial & Montoro-Sanchez, 2014; Inkpen & Tsang, 2016; OMD, 2016). In our study, it was evident that this was an inclusive process that takes time to develop. In this community, business partners were involved in the historical development of the academy since it was created. The advisory council was a true network of support deeply rooted in the community and strongly identified with the academy by virtue of the IT career theme.

In conclusion, schools operate in a complex environment of expectations and require external support from the local district, education agencies, parents, and the business community. To help students become career-ready, schools need financial, technical, and political support from community stakeholders to develop the organizational capacity to meet the intended goal. We found a very strong and extended community of IT employers committed to supporting the career academy in our study. We also found that the career specialist was seen as the lynchpin keeping network partners together, growing, and engaged. In this community, business partners are involved beyond ribbon-cutting events and take pride in supporting the career academy in many ways, from donations to paid internships. Overall, study findings provide descriptive evidence that career readiness can be viewed as a form of investment in human capital development serving as an incentive for school-business partnerships in a given community. To that end, the development of social capital also requires keeping a network of partners *bonded* toward a common goal, *bridged* through a Business Advisory Council to facilitate planning and related supports, and *linked* in meaningful ways (Inkpen & Tsang, 2016; Keeley, 2009; Shahjahan & Evers, 2005). Study findings add to the limited literature on the interface of school-business partnerships, career academies, and the promotion of career readiness in particular occupational contexts such as IT.

Recommendations for Practice. Further, to develop external organizational capacity, it was critical to invest in related development through appropriate staffing (Diez-Vial & Montoro-Sanchez, 2014). In this case, the role of the career specialist keeping the BAC engaged and sustained was a salient finding as this was a unique position carried out by the right person. The practical significance of this position is important in two ways. First, the development of external organizational capacity requires the full time attention of an individual whose sole responsibility was to bridge academy-community connections, relationships, and supports. Related work requires investment in a full-time position and buy-in for this strategy from school, district, and community stakeholders. And even so, it also required the identification of the right person to build school-community bonds, bridges, and linkages. Yet, at a time when budget constraints and pressure for short-term results are becoming a constant, schools and communities may not have the foresight, political/social capital, and resources to fund a full-time position to develop external organizational capacity. Given these caveats, it is not surprising that the extent and quality of school-business partnerships vary greatly, and may help explain the reliance on business advisory boards with only ancillary involvement and support.

Recommendations for Further Research. Findings from this study shed light into the development

of an academy including goal setting, supports, and implementation. However, further research is needed using a multiple case study approach to determine how school-business partnerships are formed, developed, and sustained across high performing academies and under different conditions (i.e., diverse community contexts, geographical areas, and school configurations/structures). Lessons from such a study should reveal factors that lead to effective school-business partnerships that could be replicated across school contexts.

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References

- Achieve. (2016). *The college and career readiness of high school graduates*. Retrieved from <https://www.achieve.org/files/CCRHSGrads-March2016.pdf>
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospect for a new concept. *Academy of Management Review*, 27, 17–40.
- Aasheim, C., Li, L., & Williams, S. (2009). Knowledge and skill requirements for entry-level information technology workers: A comparison of industry and academia. *Journal of Information Systems Education*, 20(3), 349–56.
- Badgett, K. (2016). School-business partnerships: Understanding business perspectives. *School Community Journal*, (26)2, 83–105.
- Boyatzis, R. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage Publications.
- Brown, B. (1998). What's happening in school-to-work programs? *ERIC Clearinghouse on Adult Career and Vocational Education*. ERIC Digest No. 190: Columbus, OH.
- Brown, B. (2003). CTE and work-based learning. *ERIC Clearinghouse on Adult Career and Vocational Education*. ERIC Digest: Columbus, OH.
- Bureau of Labor Statistics. (2015). *Computer and information technology information occupations*. Washington, DC: Office of Occupational Statistics and Employment Projections.
- Carnevale, A., & Smith, N. (2013). Workplace basics: The skills employees need and employers want. *Human Resource Development International*, 16(5), 491–501.
- Castellano, M., Stone, J.R. III., Stringfield, S.C., Farley-Ripple, E.N., Overman, L.T. & Hussain, R. (2007). *Career-based comprehensive school reform: Serving disadvantaged youth in minority communities*. St. Paul,

- MN: National Research Center for Career and Technical Education. Retrieved from <http://www.nrccte.org/>
- Council for Corporate and School Partnerships. (2002). *Guiding principles for business and school partnerships*. Retrieved from <http://www.project10.info/files/School-BusinessGuidingPrinciples.pdf>
- Council for Corporate and School Partnerships. (2004). *A how-to guide for school-business partnerships*. Retrieved from <http://www.project10.info/files/School-BusinessHowtoGuide.pdf>
- Diez-Vial, I., & Montoro-Sanchez, A. (2014). Social capital as a driver of local knowledge exchange: A social network analysis. *Knowledge Management Research & Practice*, 12(3), 276-288.
- Engeln, J. (2003). Guiding school/business partnerships. *The Education Digest*, (68)7, 36-40.
- Falconer, S., & Pettigrew, M. (2003). Developing added value skills within an academic programme through work based learning. *International Journal of Manpower*, 24(1), 48-59. doi:10.1108/01437720310464963
- Fletcher, E., & Tyson, W. (2017). Bridging technical skills gaps between high school students and local employers. *Journal of Research in Technical Careers*, 1(1), 20-31.
- Gordon, H. (2014). *The history and growth of career and technical education in America*. Long Grove, IL: Waveland Press.
- Inkpen, A.C., & Tsang, E.W.K. (2016). Reflections on the 2015 decade award: Social capital, networks, and knowledge transfer: An emerging stream of research. *Academy of Management Review*. 41(4), 573-588. doi: 10.5465/amr.2016.0140
- Keeley, B. (2009). *Human capital: How what you know shapes your life*. Paris: OECD Publishing.
- Kemple, J. J., & Snipes, J. C. (2000). *Career academies: Impacts on students' engagement and performance in high school*. Retrieved from <http://www.mdrc.org/publications/41/full.pdf>
- Kemple, J. J. (2008). *Career academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood*. New York: Manpower Demonstration Research Corporation.
- Loera, G., Nakamoto, J., Oh, Y.J., & Rueda, R. (2013). Factors that promote motivation and academic engagement in a career technical education context. *Career and Technical Education Research*, 38(3), 173-190.
- Manning, A. (1987). *Why school-business partnerships? Adopt a school, adopt a business*. Bloomington, IN: Phi Delta Kappa Education Foundation.
- Mickelson, R.A. (1999). International business machinations: A case study of corporate involvement in local education reform. *Teachers College Record* 100(3), 476-512.
- National Academy Foundation. (2013). *National Academy Foundation performance measurement system: 2012 status report*. New York: Author.
- National Academy Foundation. (2014). *Statistics and research: 2013-2014*. Retrieved from <http://naf.org/statistics-and-research>
- National Association of Partners in Education. (2001). *Partnerships 2000: A decade of growth and change*. Alexandria, VA: Author.
- One Million Degrees. (2016). *Beyond a degree: Identity development and community college student success*. Chicago, IL: Author.
- Orr, M., Bailey, T., Hughes, K., Karp, M., & Kienzl, G. (2004). *The National Academy Foundation's career academies: Shaping postsecondary transitions*. Institute on Education and the Economy (IEE Working Paper No. 17). New York: Teacher's College, Columbia University.
- Partnership for 21st Century Skills. (2010). *Up to the challenge: The role of career and technical education and 21st Century skills in college and career readiness*. Washington, DC: Association for Career and Technical Education, National Association of State Directors of Career Technical Education Consortium and Partnership for 21st Century Skills.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
- Scales, P., Foster, K., Mannes, M., Horst, M., Pinto, K., & Rutherford, A. (2005). School-business partnerships, developmental assets, and positive outcomes among urban high school students: A mixed-methods study. *Urban Education* 40(2), 144-189.
- Shahjahan B., & Evers, H.D. (2005). *Social capital and sustainable development: Theories and concepts*. ZEF Working Papers Series No. 2. Bonn: Center for Development Research, University of Bonn.
- Shaul, M.S. (2000). *Public education: Commercial activities in schools*. Washington, D.C.: United States General Accounting Office.
- Stake, R. (2006). *Multiple case study analysis*. New York: Guilford.
- Stern, D., Dayton, C., Raby, M. (2010). *Career academies: A proven strategy to prepare high school students for college and careers*. Berkeley, CA: University of California Berkeley Career Academy Support Network.
- Stone, J. R. (2013). *Programs of study, college, and career readiness: Career and technical education and making high school matter*. Paper presented at the 2013 annual meeting of the American Educational Research Association.
- Symonds, W.C., Schwartz, R., & Ferguson, R.F. (2011). *Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century*. Cambridge, MA: Harvard University.

Turnbull, V.G. (2015). *The profitability for businesses in school-business partnerships* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (10101169)

Wertz, F. (2005). Phenomenological research methods for counseling psychology. *Journal of Counseling*

Psychology, 52(2), 167-177. doi: 10.1037/0022-0167.52.2.167

Wright, B. (2009). Employment trends and training in information technology. *Occupational Outlook Quarterly*, 53(1), 34-41.