

Cross-Sector Collaboration to Support College and Career Readiness in an Urban School District

Joel R. Malin, Assistant Professor – *Corresponding author*
Department of Educational Leadership
Miami University
Oxford, Ohio
malinjr@miamioh.edu
513-529-6840

Donald G. Hackmann
Frances S. and Arthur L. Wallace Professor and Director,
School of Education
Iowa State University

Ian M. Scott, MA
Department of Educational Psychology
University of Illinois at Urbana-Champaign
Champaign, IL
iscott3@illinois.edu

Joel R. Malin is Assistant Professor of Educational Leadership at Miami University-Oxford, Ohio. His research interests include leadership and policy in complex configurations, and research/evidence use and knowledge mobilization. He is coauthor of “College and career readiness and the Every Student Succeeds Act” (2017) and “Integrative leadership and cross-sector reforms: High school career academy implementation in an urban district” (2019), both in *Educational Administration Quarterly*.

Donald G. Hackmann is a Professor in the Department of Education Policy, Organization and Leadership at the University of Illinois at Urbana–Champaign. His research interests include college and career readiness policy and reform, the principalship, characteristics of leadership preparation programs and faculty members, and faculty mentoring. With Joel Malin, he is coauthor of “College and career readiness and the Every Student Succeeds Act” (2017) and “Integrative leadership and cross-sector reforms: High school career academy implementation in an urban district” (2019), both in *Educational Administration Quarterly*.

Ian Scott is a graduate student in the Department of Educational Psychology at the University of Illinois at Urbana-Champaign. Prior to studying at Illinois, Ian was a high school special education teacher. He has research interests in policy and program evaluation methods, special education policy, and education in carceral settings.

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Abstract

Background: School reforms requiring collaborations spanning multiple sectors are increasing in prevalence, but extant research has primarily focused only upon cross-sector partnerships involving education and social services. College and career readiness (CCR) reforms, such as the one highlighted in this study, are also often intrinsically cross-sectoral in nature. A need exists to understand how such complex collaborations are developed and maintained.

Purpose: This study examined how cross-sector collaboration has shaped the development and implementation of district-wide high school career academies in a large urban school district.

Research Design: Case study methodology was applied to examine a mature cross-sector collaboration that guides and supports the district's career academy reforms. A meta-framework concerning cross-sector collaboration, developed by Bryson, Crosby, and Stone (2015), supported our design, data collection, and analysis.

Conclusions: Findings disclose a complex system of structures and processes to support reform implementation and illuminate the role and nature of cross-sector collaborations. This study provides an initial step toward understanding the elements, processes, and leadership required to develop and sustain cross-sector CCR reforms. The findings hold relevance for practitioners (e.g., how to develop and strengthen such complex reforms), community partners, and researchers (e.g., theory building regarding reform-supporting elements and their interactions).

Keywords: cross-sector collaboration, partnerships, college and career readiness, high school reform, educational leadership

Executive Summary

This executive summary is intended to provide a detailed overview of the study, “Cross-Sector Collaboration to Support High School Career Academies in an Urban District.”

Introduction

A U.S. policy push is underway to strengthen K-12 students’ college and career readiness (CCR), and cross-sector partnerships are inherent in several such reforms. Robust implementation of the high school career academy model, for example, requires strong and extensive partnerships.

Cross-sector collaborations are both promising and challenging, and—especially in the educational context—are underexplored and insufficiently understood. This study, designed to address that need, investigated a mature high school career academy model that has been operating in a large, urban school district in the southern U.S.

Specifically, we asked: *How has cross-sector collaboration shaped the development and evolution of career academies in an urban school district?*

Background

College and Career Readiness Reforms: The U.S. economy has shifted such that post-high school training has become essential so that students can access skilled jobs affording middle-class salaries. Presently, there is a significant disconnect between students’ career aspirations, the applicability of educational training, and the quality of their educational preparation. To address these shifts, accumulating evidence supports a reform approach that involves integrated college and career preparation, a central feature of robust career academies. However, integral to such reforms are cross-sector collaboration components, and it is also clear that such integrated programming is not without tensions and challenges.

Cross-Sector Collaboration: Public school leaders have successfully collaborated with cross-sector partners (e.g., local businesses, civic organizations, higher education institutions, and community agencies) for years, though there is a dearth of research on school-centered partnerships that are aimed to promote student learning. Researchers have thus pointed to several critical issues requiring further research, including: (a) the need to examine the legitimation and entrenchment of cross-sector partnerships; (b) consideration of special challenges posed by education-centered collaborations, and how challenges are identified and resolved; and (c) a need to understand structures and rationales for data use and sharing among partners.

Career Academies: With career academies, high schools are divided into smaller learning communities (“academies”) that provide a career-focused curriculum, and schools partner with local businesses to offer work-based learning experiences. This increasingly popular reform is backed by a small body of research suggesting academy structures can positively affect student learning outcomes and increase participating students’ (particularly males’) longer-term success in the labor market. However, the research also suggests specific features of career academies

and, particularly, aspects of cross-sector collaborations that support and maintain them will mediate their strength and quality. The present study accordingly adds to the literature by reporting how cross-sector collaboration shapes the development and evolution of career academies.

Research Design

Case study methodology was applied to examine a mature cross-sector collaboration that guides and supports the district's career academy reforms. Two of the district's 12 high schools were studied in depth. Data collection occurred May 2016 through 2017, including five site visits to interview individuals involved in the collaborations and to conduct observations. Documents and annual reports were also collected and analyzed.

A meta-framework concerning cross-sector collaboration, developed by Bryson, Crosby, and Stone (2015), supported our design, data collection, and analysis. Based on their comprehensive review of the literature, Bryson et al. identified five interactive categories that are linked to the design and implementation of these collaborations: general antecedent conditions; initial conditions, drivers, and linking mechanisms; processes, structures, and links between them; endemic tensions or points of conflict; and outcomes and accountabilities.

Findings, Conclusions, and Recommendations

Findings revealed a complex system of structures to support reform implementation and illuminate the nature of cross-sector collaborations. In general, the study's conceptual framework was well equipped to elucidate the nature of this collaboration. However, several nuances were apparent; these nuances, we found, related both to the specific nature of this reform and the fact that it was centered upon a large and complex educational system. This reform was motivated by a sense of urgency, fueled by a shared understanding of the nature and extent of the problem, and a potential solution that would involve enhancing the relevance of student programming. Several new structures and positions were developed and leadership was widely distributed, with several educators and cross-sector partners performing boundary spanning functions. Initially, a key focus was upon developing internal and external legitimacy; more recently, a major focus of this initiative has been upon reinvention/refinement, with a continued emphasis upon maintaining commitment in the face of district administrative turnover and competing priorities. Certain patterned conflicts and tensions have emerged, as well, and not all have been fully resolved (rather, they are being continually and variously managed). Generally, it appeared that key decision-making authority rests with the school district/officials, which was uncomfortable and frustrating at times for partners, some of whom attempted to negotiate greater influence and also aimed to assure that accountability was largely assigned upon the district (e.g., to protect private sector and community investments in the partnership). Business leaders expressed some frustration at the slow pace of change, a tension related to competing institutional logics and operational realities. Efforts to assess the initiative's short-term and intermediate outcomes have been moderately successful, while the partnership has primarily been unsuccessful at studying long-term outcomes of the collaboration. In addition, the collaboration appears to have been minimally focused on assuring equity of the initiative, which we view as problematic particularly in light of historical and ongoing inequities in the U.S. related to students' CCR and attainment.

We also noted the reform's primary thrust was upon career rather than college preparation, a feature that represents an inversion of broader CCR policy patterns and one that adds to potential equity concerns: What, for example, are the implications of this predominant career focus in terms of students' future opportunities to access and succeed within postsecondary education and/or access middle- to high-wage professions? Given that U.S. jobs increasingly require postsecondary education and/or industry credentials, the K-12 curriculum must adequately prepare high school graduates to transition into postsecondary training.

This research is a single case study; therefore, while it may be valuable in terms of developing testable propositions and building theory, efforts to generalize should occur only with due caution and contextual considerations. Notwithstanding, through this study we were able to generate in-depth understandings of the key interactive features that have enabled this mature and complex cross-sector collaboration to persist and evolve over time. As well, we have tentatively uncovered some particularities relative to education-centered collaborations—perhaps especially those occurring in large urban school districts. These districts routinely face challenges including high levels of turnover, including at upper leadership levels, which can make it difficult to sustain a large-scale initiative over a long period of time. Certain key actors described coping with challenges such as these, as they worked to ensure continued commitment to the partnership. This study also provided insights into how a cross-sector initiative might evolve and be maintained, even within challenging circumstances, while highlighting certain challenges related to assuring students' equitable access to CCR programming and curriculum rigor. Accordingly, we have developed and presented an expanded “Framework to Address Education-Focused Cross-Sector Collaboration.”

Several recommendations were made, based upon findings from this study. From a research standpoint, we pointed to several fruitful avenues for expansion and confirmability. For instance, we encouraged future investigation into how mature education-focused collaborations can reinvent themselves, ensure their continued relevance, and maintain their potency as all partners recommit to future collaborative projects. From a practical standpoint, this study generated insights regarding both how—and why—to successfully engage in similar reforms and collaborations, while also committing to address areas of continued challenge. Most generally, we recommended that leaders and educational partners center an equity lens/focus within their reform efforts, including disciplined engagement in data use for equity practices. As we noted, school leaders are essential connectors among K-12 educators, business leaders, and higher education partners as cross-sector partners work collaboratively to ensure that the curriculum is sufficiently rigorous to assure students' preparation for college while also being relevant to their career interests.

Cross-Sector Collaboration to Support High School Career Academies in an Urban District

In the United States, a policy push to strengthen K-12 students' college and career readiness (CCR) is underway (Darling-Hammond, Wilhoit, & Pittenger, 2014), evident in various federal, state, and/or local reforms. Community partnerships spanning multiple sectors, including school districts, higher education, civic agencies, and businesses, are often intrinsic to CCR reforms and policies, especially those intended to augment students' transitions to postsecondary and workforce settings (Malin, Bragg, & Hackmann, 2017; Malin & Hackmann, 2017). The high school career academy model, for instance, aims to promote a career-focused curriculum and relevant, supplemental opportunities (e.g., job shadowing, internships, college visits) for students, through engagement with ongoing, cross-sector relationships involving multiple stakeholders.

Research highlights both benefits and challenges of cross-sector collaboration, noting how multiple stakeholders can work toward a common goal. Cross-sector collaboration is “the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately” (Bryson, Crosby, & Stone, 2006, p. 44). When applied to education, such collaborations represent an extension of longstanding efforts to coordinate services among government agencies, social service organizations, businesses, and schools to address persistent community problems and improve graduation rates (Henig, Riehl, Rebell, & Wolff, 2015). Partnerships are essential to address many challenges currently faced by schools (Henig, Riehl, Houston, Rebell, & Wolff, 2016; Miller, Scanlan, & Phillippo, 2017), including efforts designed to improve high school graduates' abilities to successfully transition to college or career.

Cross-sector collaboration represents a promising practice that can—and arguably *must*—be applied to the development of high quality career academies. However, school reform initiatives have been understudied within the broader cross-sector collaboration literature, with research primarily examining cross-sector partnerships to enhance social services provisions (Henig et al., 2015). The need exists to investigate how community partners work across sectors through an education-focused initiative to promote students' CCR.

This article reports on a case study of a CCR initiative involving a district-wide career academy model operating in a large school district in the southern U.S. In the decade since the academies were formed in August 2007, various community sectors have been involved and the high school graduation rate has increased from 58% to 81%. The study addressed the following research question: How has cross-sector collaboration shaped the development and evolution of career academies in an urban school district?

Literature Review

This section begins by providing context regarding the U.S. policy drive to enhance students' CCR, and we further establish that cross-sector collaboration is inherent to and under-explored in many education reforms. We then review the research regarding cross-sector collaboration, both generally and within the CCR context. Finally, we turn more specifically to career academies, a particular cross-sector CCR reform, and describe how it fits within broader school reform efforts.

College and Career Readiness Reforms: Background and Cross-Sector Aspects

High school students should have quality academic experiences to prepare them to transition into the next phase of their career development. In realizing this goal for the benefit of individuals and society, college and career readiness is essential (Malin & Hackmann, 2017;

Symonds, Schwartz, & Ferguson, 2011). Yet, a skills gap persists in the U.S. workforce, with many young adults lacking the necessary knowledge and skills for many well-paying occupations (Symonds et al., 2011). Although completing a rigorous high school curriculum is a reliable predictor of postsecondary success (Conley, 2010), there is a significant disconnect between students' career aspirations, the applicability of educational training, and the quality of their educational preparation. Post-high school training is essential, as occupations that provide middle-class salaries and benefits are increasingly restricted to those with college degrees and/or professional credentials (Carnevale, Jayasundera, & Gulish, 2016).

The Great Recession in the late 2000s prompted a shift in which jobs requiring a high school diploma or less declined significantly, replaced with occupations requiring some postsecondary education and technological knowledge (Carnevale et al., 2016). In response, numerous states have enacted policy goals designed to ensure all students graduate from high school prepared for college and careers (Conley, 2014). The Common Core State Standards (CCSS) were created in 2009, in part, to increase curriculum rigor and amplify the focus on CCR (Common Core State Standards Initiative, n.d.). Currently, 42 states and the District of Columbia are using the CCSS. More recently, the federal Every Student Succeeds Act of 2015 included policy provisions intended to strengthen states' focus on CCR (Malin, Bragg, & Hackmann, 2017).

Accordingly, economic data frequently have been used to encourage CCR reforms (Malin et al., 2017). However, there are concerns associated with a solely economic framing, as noted previously—for instance, the possibility that business needs could come to subordinate the school's and, related, the possibility that equity goals may be sidelined in favor of pragmatic aims to simply fit students and schools to preexisting social structures (Labaree, 1997). In this

vein, some scholars have asserted that equity must be addressed more prominently in CCR policy (Hackmann, Malin, & Ahn, 2019; Castro, 2013; Welton & Martinez, 2014). Without a clear equity focus, there is a danger that CCR reforms can reproduce longstanding inequities among student groups rather than opening up opportunities for historically marginalized students.

CCR rhetoric and policy also appear to have favored college over career, lengthening a longstanding debate over whether education should provide a liberal versus vocational education (Malin et al., 2017). Though these might only represent extreme poles of the debates (Bragg, 2012), we reject an essentialist conceptualization of CCR (e.g., the design of education solely to meet labor needs; Rojewski, 2002). Another concern can relate to perceptions that high school career and technical education (CTE) classes, typically integral to CCR reforms, are less rigorous than core academic courses, which may serve to restrict students' future opportunities (see Dougherty & Lombardi, 2016)—this concern may partially explain the prioritization of college over careers in CCR policy and practice to date (Malin et al., 2017). Notwithstanding, accumulating evidence now favors a third approach: integrated college *and* career preparation, as is intended as part of robust career academies. Students can benefit from such reforms, which can simultaneously prepare them “for both employment and a full range of post-secondary educational options” (Stern, 2015, p. 4). Delivering on such reforms requires educators and cross-sector partners to collaborate extensively so students can authentically experience this integrated preparation. Accordingly, we argue, inherent to high school CCR reforms are cross-sector collaboration components.

Cross-Sector Collaboration: Theory and Research

Public school leaders have successfully collaborated with local businesses, civic organizations, and community agencies as a way to countervail the effects of poverty (Miller et al., 2017), but there is a dearth of research focusing on school-centered cross-sector partnerships to promote student learning (Henig et al., 2015). Schools provide an advantageous setting in which to advance research on the significant gaps in the cross-sector collaboration literature, such as how leadership roles are developed and how power is shared across partnering organizations (Crosby & Bryson, 2005). Our study adds to the literature by providing a comprehensive view of cross-sector collaboration involving multiple schools, community organizations, and businesses within a single urban school district.

One of the most well-known iterations of school-focused cross-sector collaborations is the full-service community schools movement (Miller et al., 2017). Community schools, like the Harlem Children's Zone, are designed to provide students with access to a range of health, social welfare, and family support services at the school site through close collaboration with local community organizations (Dryfoos, 2005). Underlying this approach is the premise that providing access to comprehensive services for students and their families in one centralized location will provide the greatest outcomes for students in the most cost-effective manner (Henig et al., 2015). While studies have focused on the effects of community schools on academic outcomes (Child Trends, 2014), changed neighborhood conditions (LeGower & Walsh, 2014), and health outcomes (LaRocco, Taylor, & D'Annolfo, 2014), this research does not explore the dynamics of cross-sector partnerships in the design and implementation of community schools.

School-business partnerships have also been subject to study. Henig et al. (2016) noted 91% of formal programs established through collaborations with schools have at least one business member serving on the leadership committee. Historically, the business sector has

tended to occupy two roles in cross-sector partnerships: a source of financial resources and providing sites for students to engage in work-based learning experiences. Business officials possess insights into local labor market needs, and CTE programs ideally are aligned in high-demand career fields with the potential to earn industry credentials that command high wages. Partnerships can benefit the business community by addressing labor market needs through employing credentialed high school graduates and through philanthropic involvement in the community, which provides a marketplace for businesses to sell goods and services (Melendez, Hawley, & McCormick, 2012). However, some have voiced concerns that businesses could wield substantial influence over schools, which might lead to the adoption of school policies that—while favorable to local businesses—are not necessarily in the best interests of students or the district (Abowitz & Boyles, 2000). Indeed, such efforts appear largely driven by social efficiency goals for education, introducing tensions between the school and business sectors, and heightening the risk that they “subordinate schools to the needs of the market” (Labaree, 1997, p. 65) at a cost to other important educational aspects and educational partners. Others have noted local educators may experience difficulties maintaining the pace of innovation and changing work practices that can occur in some business sectors as they strive to keep the curriculum and instructional practices relevant (Flynn, Pillay, & Watters, 2016). Therefore, cross-sector partners must develop collaborative processes, as well as clearly articulated leadership roles, to eliminate potential sources of conflict and develop trusting relationships (Bryson et al., 2015).

A consistent finding is that open communication among school, community, and business leaders is key to successful cross-sector collaboration. Partnerships can facilitate community-wide consensus on values and norms, which positions relationships as authentic, collaborative, and interdependent (Aidman & Nelson Baray, 2016). Another factor influencing partnership

quality is establishing clear leadership structures, management roles, and lines of communication (Bryson et al., 2015); intergroup leadership is an essential feature to balance relationships across sectors and develop shared commitments (Pittinsky, 2009). Such structures can “offset the dependence of the partnerships on particular individuals” (Aidman & Nelson Baray, 2016, p. 271), although rapid turnover within the collaborative infrastructure can be problematic (Miller et al., 2017). Because K-12 educators are considered to be the curricular and pedagogical experts regarding CCR programming, they might be expected to assume the lead role in the initial design and implementation of the initiative. Aidman and Nelson Baray (2016) reported “a growing recognition that cross-sector collaboration can be an essential ingredient in improving educational achievement” (p. 264). However, there is little research examining processes and challenges to establishing the relationships necessary to promote this improved achievement.

In light of current research on cross-sector collaborations with schools, Henig et al. (2015, p. 29) pointed to several “critical issues that future research must explore,” three of which the present study directly sought to address. First, they underscored a need to examine how cross-sector collaborations become legitimated and entrenched over time (versus the predominate focus thus far on their initiation) as “the normal way to do business” (Henig et al., p. 30). Given the rarity with which collaborative efforts are successfully sustained (Swanstrom, Winter, Sherraden, & Lake, 2013), it is imperative for researchers to study long-lasting collaborations. Second, Henig et al. cited research showing that working with schools presents unique challenges; for example, schools must address state accreditation mandates and teacher licensure requirements, and they are bound by legalities regarding the sharing of sensitive information. These and additional education reform-related challenges can make it difficult for collaborators to develop trusting relationships with educators, and accordingly a focus on how

they are identified and resolved is needed. Related, there is discussion in the literature on cross-sector collaborations acknowledging the need for measures of accountability and success (Bryson et al., 2006), which in today's education accountability regime ushered in by the No Child Left Behind Act and continuing with the Every Student Succeeds Act often means maintaining records of longitudinal performance data. As a result, reviewing organizational structures and rationales for data use and sharing among partners is critical.

Effective partnerships are also considered with respect to the individual goals of the schools and business partners, with mutual benefit an important outcome (Aidman & Nelson Baray, 2016). Larson (2001) noted two primary types of school-business partnerships: school-to-career partnerships and "adopt-a-school" partnerships. These categories are dynamic, with goals often overlapping. The former approach views students as future workers while the latter views districts as recipients of charitable donations, providing access to financial resources that cannot be attained by the district on its own (Flynn et al., 2016). Such partnerships also may involve local business members as mentors and guest speakers. Bennett and Thompson (2011) noted, however, "the presence of adopt-a-school partnerships may provide needed human and physical resources but may not provide a lasting impact on student achievement outcomes" (p. 832). Bryson et al. (2006) described these arrangements as service-delivery partnerships, in contrast to system-level planning partnerships (such as the cross-sector career academy initiative, which is our focus in the present study) focusing on resolving systemic, persistent community issues.

Another line of inquiry has examined work-based learning (WBL) experiences provided to students through cross-sector partnerships. These field-based activities may include career fairs, field trips, job shadowing, internships, or other activities in which students explore career fields and interact with industry professionals (Conley, 2010). Conducting an international

comparison of WBL participation rates and student outcomes, Bishop and Mane (2004) found students living in countries promoting extensive WBL participation performed better in reading and math and earned higher wages, regardless of family background or postsecondary participation. Examining African American males' involvement in WBL in an urban high school district, Linnehan (2001) found greater participation in WBL programs increased mean grade point averages and attendance rates when compared to those students who did not participate.

Career Academies

The career academy model is a high school reform that can be located within the press to improve students' CCR (Malin & Hackmann, 2017) via "multiple pathways" approaches to promote college and career preparation (Oakes & Saunders, 2008). In this approach, high schools are divided into smaller learning communities ("academies") that provide a career-focused curriculum and schools partner with local businesses to offer work-based learning experiences (Brand, 2009). Academies allow students to engage in career exploration, select a career field, and complete career-aligned coursework, including rigorous academic and CTE courses. Initially appearing in Philadelphia in 1969, career academies have become a popular reform, with approximately one million U.S. high school students learning within career academies in 2009 (Brand, 2009).

In theory, students within career academies may simultaneously derive benefits related both to *community* (they can be part of a smaller, more cohesive school within a larger one) and *personalization* (their instructional program is individualized and flexible, aligned with student interests). This reform is backed by a small body of research suggesting academy structures can, at least under certain conditions, positively affect student learning outcomes and increase participating students' (particularly males') longer-term success in the labor market (Kemple &

Willner, 2008). Career academies also can enhance students' non-cognitive skills, including workplace skills, which can be accessed through cross-sector partnerships (Kautz, Heckman, Diris, ter Weel, & Borghans, 2014).

Noguera (2002) has noted, however, that the creation of personalized learning communities alone is insufficient to produce improved student outcomes. Attention to local factors and directed leadership is crucial to the success or failure of a small schools initiative. Considerations such as cross-sector leadership, open communication between school leadership and teachers, the presence of a shared school culture, and ongoing progress monitoring are all crucial to the successful implementation of small school reform (Noguera, 2004). Leaders working across organizations and schools guard against applying small learning communities as a one-size-fits-all approach to education reform and are instead sensitive to local economic and social conditions through ongoing collaboration among administration, staff, and community partners (Noguera & Wells, 2011). Through attention to context, purposeful collaboration across sectors, engaging the local community, and rigorous progress monitoring, schools can become centers of community development that support the academic and personal growth of students (Fergus, Noguera, & Martin, 2014; Martin, Fergus, & Noguera, 2010; Noguera & Wells, 2011).

Conchas and Rodriguez (2008) utilized a case study approach to examine two small career academies operating within a diverse, comprehensive high school in Oakland, California. Through interviews with students, teachers, and administrators, they identified several components key to the academies' success in creating a supportive and high-achieving learning environment. First, the academy staff worked with parents, counselors, and teachers to target recruitment efforts to specific students. Additionally, "teachers were key players in the creation of the academic environment that the students embraced" (Conchas & Rodriguez, p. 19); each

academy developed its own unique identity while sharing a common mission of student success. Finally, the smaller academy size allowed for personalized attention and hands-on career exploration, which students cited as important to their investment in the school's culture. These strategies worked in combination to create an environment that mitigated racial/ethnic conflict among students through the creation of "a community of learners who supported instead of competed against one another" (Conchas & Rodriguez, p. 28).

Despite the popularity of the career academy approach, its effectiveness has not been extensively researched. The most rigorous study to date (a randomized trial conducted by MDRC; Kemple, 2001; Kemple & Snipes, 2000; Kemple & Willner, 2008) found a high degree of "heterogeneity in impact, depending on the particular school and program" (Conn, Park, Nagakura, Khalil, & Corcoran, 2017, p. 46). As well, most research concerns individual or small-scale (versus school-wide—or, in the case of the present study, school-wide *and* essentially district-wide) academies; therefore, it is unclear whether results are transferable (see Stern et al., 2010). This research suggests specific features of career academies, and particularly, features of the cross-sector collaborations that support and maintain them, will mediate their strength and quality. Career academies require ambitious, sustained cross-sector collaborations that extend beyond the confines of the school, connecting the school district with numerous community entities; therefore, they involve many moving parts and require "adaptations on the part of the high school and efforts beyond those normally made" (Stern et al., 2000, p. 2). The present study accordingly is designed to add to the literature by examining how cross-sector collaboration shapes the development and evolution of career academies. Next, we describe the conceptual framework guiding the study.

Conceptual Framework

Our data collection and analysis activities were supported by a meta-framework set forth by Bryson et al. (2015), based on a comprehensive review of theory and empirical research regarding the design and implementation of cross-sector collaborations. They reviewed seven theoretical frameworks for understanding cross-sector collaboration and 199 empirical pieces, synthesizing their findings into five categories that transcend the different frameworks: “general antecedent conditions; initial conditions, drivers, and linking mechanisms; processes, structures, and links between them; endemic tensions or points of conflict; and outcomes and accountabilities” (Bryson et al., pp. 650-651). These categories, key definitions, and findings are summarized in Figure 1.

Insert Figure 1 about here

General antecedent conditions refer to factors that prompt the formation of the cross-sector partnership involving a sector failure, which is a persistent public policy issue arising within the political environment that has resource needs exceeding those available from a single agency. Bryson et al. (2015, p. 652) explained that cross-sector collaborations form due to “public managers’ and policy makers’ realization that government cannot remedy a public problem on its own, or at least that involving business, nonprofit, and community partners can spread risk and provide more effective remedies.” In the present study, *antecedent conditions* and *initial conditions, drivers, and linking mechanisms* were unobservable because we studied a mature cross-sector collaboration in operation for a decade. However, we aimed to develop reasonably solid understandings in these areas (primarily via interviewing key informants and reviewing archival documents) so we could better contextualize present activities, behaviors, and

designs as partners addressed college and career preparation. We describe these conditions primarily as part of our case description. We directly studied all other portions of their synthesis framework, utilizing their categories as a priori codes, focusing primarily upon what was observable but also attempting to contextualize these findings by seeking information about relevant histories through interviews of key actors.

Initial conditions, drivers, and linking mechanisms rely on the commitment of boundary-spanning leaders who are willing to champion and sponsor the cross-sector initiative. Crosby and Bryson (2010, p. 219) describe these roles: “By *champion* we mean a person who is a tireless, process-savvy organizer and promoter of the change effort; in contrast, a *sponsor* is less involved in the process but deploys authority, money, or connections to move the change effort forward.” Boundary-spanning leaders are collaborative, can powerfully frame issues, and possess the conviction to address a problem. Other key drivers or conditions include initial agreement relative to problem definition and the general sense that addressing the problem will require interdependence, the structure of formal agreements, authoring an “authoritative text” about the collaboration (e.g., its story, its norms), prior relationships and existing networks, the nature of the task to be addressed, and requests for proposals and other facilitators (e.g., projects, technologies) of collaborative efforts (Bryson et al., 2015). Within the context of career academy reforms, cross-sector leadership is an essential connector (Noguera, 2004) as key actors work across organizational boundaries to facilitate needed academy components and partner activities.

Collaborative processes and *collaboration structures* work together to foster effective cross-sector collaboration (Bryson et al., 2015). *Collaborative processes* are essential to develop a shared understanding of the problem and form a shared vision. Partners build trusting relationships with individuals engaged in the initiative, and the shared commitment reinforces

trust across the involved organizational actors (Bryson et al.). Communication is essential, and face-to-face interactions are important connecting mechanisms. Both internal and external legitimacy are necessary; Bryson et al. asserted stakeholders must “feel that they have gotten a ‘fair hearing’ in decision-making settings” (p. 653). *Collaboration structures* include such components as developing norms, rules, and standard operating procedures (Bryson et al., 2015) as partners manage their joint work. Ambidexterity is important, as collaborating organizations manage tensions that may occur across formal and informal networks.

In Bryson et al.’s (2015) estimation, *leadership, governance, technology, and capacity and competencies* are areas in which processes and structures intersect. As collaborations continue through the years, it is likely that original champions and sponsors will transition out of these roles; thus, strategies to manage these changes should be developed. Numerous individuals will exercise leadership within their respective organizations and across the collaboration; their skills and roles are necessary to ensure there is collaborative capacity to guide the collaborative activities. Governance, note Vangen, Hayes, and Conforth (2014), “entails the design and use of a structure and processes that enable actors to direct, coordinate, and allocate resources for the collaboration as a whole and to account for its activities” (p. 8). Technology, including work procedures and tools, “facilitate the work of the collaboration itself” (Bryson et al., p. 655). Bryson et al. reported that “key individual and organizational competencies include the ability to work across boundaries, analyze and involve stakeholders, engage in strategic planning, and participate in teamwork” (p. 655).

Endemic conflicts and tensions include power imbalances, multiple institutional logics, and tensions that may influence the overall functioning of the collaboration. Bryson et al. (2015) noted that “collaborating organizations differ in status (either because of size, funding,

constituency, or reputation” (p. 655). Different organizational logics can create tensions when “actions, processes, norms, and structures that are seen as legitimate given one institutional logic may be seen as less legitimate or even illegitimate when one uses other logics” (p. 656). With career academy reforms, although an implicit goal may be to prepare students for both college and workforce options (Stern, 2015), partnering organizations may have different aims (e.g., business partners may favor workforce preparation over college readiness), which may create tensions across sectors.

Accountabilities and outcomes include tangible and intangible outcomes, as well as complex accountabilities. The collaboration must have a public value that cannot be accomplished by single sectors acting alone (Bryson et al., 2015), and the outcomes must include immediate, intermediate, and long-term effects. Accountabilities across the sectors can be particularly complex, reflecting “distinct priorities and concerns” (Bryson et al., p. 657) within each collaborating organization.

Research Methods

We applied case study research methods (Creswell & Poth, 2018) to examine how cross-sector collaboration has shaped the development and implementation of career academies in an urban school district. Winterdale School District (WSD, pseudonym) was selected due to its long-standing community-wide partnership, which has been in existence since the academies were created in 2007; the district’s 12 neighborhood high schools operate under the academy structure. WSD has numerous partners who support the academy project through in-kind contributions, field-based experiences for students, and volunteering in the 12 high schools. In the initial phase of our research, we examined integrative leadership practices, focusing on actions of key community partners and school district educators as they worked across

organizational boundaries to share leadership activities to support academy design and implementation (Malin & Hackmann, 2019). We found this reform required restructuring leadership roles within the school system, as well as forming a cross-sector leadership team to provide oversight and guidance, with community leaders contributing to partnership activities in accordance with their expertise and available resources. In this second phase, we conducted an in-depth review of the cross-sector collaboration, bringing the five interactive categories developed by Bryson et al. (2015) to our data to examine how Winterdale community partners have worked collaboratively to develop, implement, and sustain the academy model throughout the past 10 years.

Data collection occurred May 2016 through July 2017, involving five site visits to interview individuals involved in the collaboration and in the schools and to observe partner retreats, professional development activities, and school activities. We also reviewed documents and annual reports created by the school district and community agencies reporting on academy progress, student performance, and community collaboration. To assist with our understanding of the organizational structure and academy functions, we conducted site visits of two schools that were recommended by school district leaders as being led by experienced executive principals who were deeply committed to the academy approach and collaborative partnership. During high school visits, we met with school leaders to discern how they organized their schools to promote the academy structure, toured the facilities to observe classroom spaces dedicated to various career pathways, observed classroom activities, observed an academy board meeting, conducted interviews, and informally visited with educators, students, and partners. Through observations of cross-sector meetings and retreats, we focused on how collaborative processes and structures had formalized over time to promote the academy initiative. School visits provided opportunities

to experience several academies in operation, as we observed school leaders, teachers, students, and cross-sector partners engaged in academy-specific learning activities.

We conducted semi-structured individual and focus-group interviews of 53 individuals. Interview participants external to the school district included 4 leaders of civic organizations, 8 business/industry partners, and 2 higher education professionals. (See Appendix 1 for sample interview questions.) Those interviewed in school positions included 2 school district administrators, 2 executive principals, 2 academy coaches, 6 academy principals, 9 academy lead teachers, 8 counselors, and 10 students.

Our analysis of data proceeded as follows. First, interviews were audiotaped and transcribed, and we returned transcriptions to participants for member checks. We maintained field notes during and immediately following site visits and reviewed documentation related to the academies and the partnerships that supported them. To these data, we applied a qualitative analysis sequence recommended by Bazeley and Jackson (2013). As a first step, we familiarized ourselves with the raw data, detecting initial patterns and noting interesting, unusual, or significant points. For example, certain conflicts and tensions—e.g., concerning the pace of change, the curricular content within certain programs—became apparent to us at this stage. We also engaged in a period of unstructured exploration of the data in an effort to see themes, subthemes, and connections (Bazeley & Jackson). As a third step, we brought *a priori* codes (e.g., the interactive components and subcomponents) from Bryson et al.'s (2015) cross-sector collaboration framework to our analysis. Our decision to proceed in this manner reflected our shared view that the Bryson et al. framework was well suited to assist us as we worked to reduce and draw meaning from extensive data, while also according with Creswell and Poth's (2018) recommendation that researchers who are making some use of pre-figured codes remain open to

additional, emergent codes. In this study, this openness primarily enabled us to attain greater depth from *within* certain of Bryson et al.'s categories—for example, driving us to identify and analyze the specific conflicts/tensions that were apparent, and to analyze the qualities of the accountabilities and outcomes that were developed/tracked and discussed. Fourth, we turned our attention especially to connections among the codes—for instance, seeking to understand when and how they were organized hierarchically and/or were interactive in nature (Gray, 2018). At this step as well, the Bryson et al. framework and extensive review were helpful (e.g., in providing concepts and explanations that we could compare against what we were identifying). Finally, we reviewed and refined our codes. As a research team, we met on numerous occasions to review our data, discuss our thematic analysis and tentative themes, and reach agreement, both in terms of our findings as well as how to report them. (See Appendix 2 for examples of raw data being linked to specific codes, by data source.)

Researchers' Positionality

It is important to describe our positions relative to this study in recognition that these positions might influence aspects of study access, design, and analysis. Joel, a White male, is formerly a school psychologist and district-level administrator, primarily in suburban and rural settings. He has also served as a curriculum specialist at a federally-funded research and resource center designed to strengthen college- and career pathways programming in a large Midwestern state. Donald, a White male, was director of the center. Prior to his time in academia, he served as a high school and middle school principal within urban and rural communities. Ian, a White male, is currently a graduate student at a large midwestern university where he also coordinates a trauma-informed psychoeducational program for incarcerated adult students. Prior to entering graduate school, he was a high school special education teacher in a large urban school district.

Collectively, our research is focused upon enhancing equity and access, as well as smoothing students' high school to college/career transitions.

Our positionalities might have influenced the study in a few key ways. First, our prior research and professional experiences in similar areas helped us secure access to this research site. Our previous research into college and career readiness practices also shaped our interview protocol development and informed our development of a conceptual framework guiding this study. Third, our backgrounds as educators and school and district administrators, and our abilities to communicate respectfully with community partners, were helpful in demonstrating credibility and facilitating rapport with educators and research participants. An important aspect of qualitative interviewing relates to the development of rapport and comfort (Bogdan & Biklen, 2007). We also acknowledge our gender and racial/ethnic backgrounds could influence our perceptions and interpretations as well as our relationships with participants (Milner, 2007), sometimes in ways we might not fully grasp, and accordingly we do not wish to minimize how these aspects of our identities could affect a qualitative study of this nature.

Case Description

Located in the Southern U.S., Winterdale and the surrounding metropolitan area contains approximately 2 million residents, including major corporations, healthcare services, publishing and entertainment industries, and several colleges/universities. Winterdale is racially/ethnically diverse, comprised of 60% White, 27% Black or African American, 10% Hispanic, and 3% Asian residents. Winterdale School District (WSD) enrolls over 80,000 students; nearly 70% are non-White and three fourths qualify for free or reduced-price lunches. City leaders have a long history of collaboration, sharing a commitment to promote the region's economic prosperity. In 2004 Winterdale Connected, a community empowerment organization, was formed. Its primary

aim is to improve the health and education of the community's youth, through shared involvement of government agencies, school districts, civic organizations, businesses and industries, and faith-based groups. A task force was created, charged with reviewing the high schools, and its members identified numerous issues experienced within the local public schools, including a 58% graduation rate, student discipline issues, chronic school absences, and the threat of state takeover of several high schools due to low academic performance. The group's consensus was that students were disengaged because they viewed the curriculum as irrelevant to their current and future lives. Consequently, some students were dropping out of school, and many who did graduate did not possess sufficient skills to meet community workforce needs or transition to college/university. These *public problems* (i.e., *sector failure*) affected the entire community, because the ability to attract new businesses and families to Winterdale was dependent, in part, on perceptions of school district quality.

Acknowledging that ineffective "band-aid" solutions had been previously attempted, school leaders agreed systemic reforms were needed. A few high school principals located a federal smaller learning communities grant opportunity, and an ambitious plan was proposed to implement high school career academies that collaboratively engaged the school district, civic, and business sectors. By partitioning schools into academies, the partners intended to create more personalized learning environments, while realigning the curriculum to address career interests. The grant proposal was submitted and subsequently awarded.

In 2007-08, eight neighborhood high schools began implementing career academies schoolwide, with the remaining four beginning in 2008-09. Each of Winterdale's 12 high schools are structured under a schoolwide model, with each school containing a "freshman academy" and 2-5 college/career academies for grade 10-12 students. More than 40 academies are offered

across the district, with academy pathway offerings based upon local workforce projections. Entering freshmen are automatically accepted into their neighborhood school or may apply for admission to another school if it offers an academy that better fits their career interests, though acceptance is not guaranteed at a school of choice. Freshman engage in career exploration, minimally, as part of a required seminar; later in the year, they apply for admittance into an academy of their choosing. Example academies include the Academy of Hospitality and Marketing and the Academy of Business and Innovation. Each academy contains specialized career pathways; for instance, the Academy of Digital Design and Communication includes audio production, broadcasting, and design communications pathways. Students must minimally complete three courses within a pathway, and many earn industry-recognized credentials and/or college credit. Academies and career pathways are offered and reviewed annually, with revisions made based on local labor market needs.

The organizational structure generally is uniform across the 12 schools. Each high school is led by an Executive Principal who provides full oversight, and each academy is led by an Academy Principal, responsible for all activities therein (e.g., hiring, supervision and evaluation, student discipline, curriculum). Academy Team Leads work with each Academy's teachers. Each school has a full-time Academy Coach serving in a non-administrative appointment, who is a liaison between the school and cross-sector partners, coordinates advisory board meetings, monitors academic data, coordinates activities, represents the school on district committees, and designs and leads professional development for educators.

The academies strive to shift teaching and learning, and particularly to include problem-based learning (PBL) and instruction focused on students' CCR. As a community-wide initiative, academies rely heavily on the active engagement of a broad network of leaders across sectors.

Five organizations are considered the core partners: Winterdale School District; Winterdale Connected; Winterdale Civic Network, the community civic organization; Support Our Schools, the education foundation serving the community; and Epsilon Foundation, a national corporate philanthropic foundation based in the community. Business and civic leaders participate on a Business Leaders Council, Commercial Partner Committees, and local school Academy Advisory Boards. More than 300 community partners are involved, providing \$3 million in in-kind contributions and volunteering more than 25,000 hours annually.

Business partner involvement facilitates students' career exploration (e.g., business partner classroom presentations, career fairs, industry field trips, job shadowing) and work-based learning experiences. Since implementation, the graduation rate has greatly improved, and an estimated 13,000 more students have graduated than who would have, had high school graduation rates held steady. District officials have calculated (based on earnings differentials of graduates and non-graduates) an annual positive impact on the community exceeding \$100 million. Student discipline and attendance have markedly improved, student proficiency scores on state-required tests have increased in English I and Algebra 1, and the number of students accessing advanced coursework (e.g., Advanced Placement [AP], International Baccalaureate [IB], and dual credit) has substantially increased.

Findings

This case study revealed an interrelated system of structures and relationships necessary for the implementation, sustainability, and continuing evolution of the academy model. Using Bryson et al.'s (2015) framework to guide and shape our data collection and analysis, we sought to understand how cross-sector collaboration supported the career academy initiative. As such, we divide our findings into sections corresponding with this framework, focusing on components

that emerged through our analyses. Drawing on our interviews from several stakeholders, we document the landscape of cross-sector collaboration and its influence on the academy initiative.

Initial Conditions, Drivers, and Linking Mechanisms

In the initial stages of the collaboration, the task force expanded to involve additional community stakeholders. Consensus was reached on the need to reorganize to “engage kids as to why they are in school,” which they believed could be achieved via personalized learning environments. One principal located the federal smaller learning community grant and shared it with Carol, who was assistant principal at the time. She recalled, “I started reading the grant and looking up, and I’m like, ‘This is it! This is it!’ because they had already done the research on the dropout data and how the small learning community affects and gives personalization to the kids.” Although dividing the school into smaller teams of students and teachers could resolve the relationships concern, it would not address the issue of relevance. Adam, a Civic Network official, described business leaders’ desire for well-prepared graduates

who are smart and can really communicate and adapt and change and be trainable.

Ideally, they have access to credentials but in this new world that gets disrupted with every new technology change, even credentials will soon, in some ways, lose their value if the person holding them can’t adapt and change to new skills.

Thus, the career academy concept held additional and slightly different appeal to business and civic members, because this realignment could address needs for a more capable workforce.

Partners agreed the academy model would serve as an effective linking mechanism to relationships (through smaller learning communities) and relevance (through a focus on rigorous career preparation). It also provided a mechanism connecting educators and cross-sector collaborators (e.g., business leaders, civic officials, higher education), as each group could

visualize fulfilling an important role. A key driver of cross-sector collaborations is an ability to frame an issue in a way that can enable diverse partners understand its significance (Bryson et al., 2015). In this case, we discerned the concept of relevance has had significant organizing and long-term motivating power.

Although the group coalesced around the career academy reform idea and began to pursue grant funding, the Winterdale district administration objected, preferring an approach to strengthen core academic courses. Karen from Winterdale Connected said the Chief Academic Officer perceived it as “vocational education. She really misunderstood it. She actually did a lot to try to block it.” Several high school principals lobbied the administration and ultimately obtained approval, but then the school district’s grant writer declined to write the proposal, citing insufficient time. At that point, Winterdale Connected assumed a lead grant writing role. Citing a sense of urgency and emphasizing the collective power of the coalition to overcome these setbacks, Carol explained the task force’s resolve: “we did not have any district support, but...let’s go for it because what else—we don’t have anything else to lose at this point because the state is coming in to take us over.” Ultimately, they received the \$6.6 million federal grant.

While receiving external funding was essential, several interviewees also highlighted the burgeoning relationships that were necessary to conceptualize, initiate, and sustain the reform. Adam explained, “the model doesn’t work without business engagement,” and key actors agreed that an extensive network of partners was needed to support the career-focused activities inherent in the model. These observations align with Bryson et al.’s (2015) suggestion that the nature of the task (in this case, to develop robust career academies) can significantly influence the shape and direction of the collaboration as it develops and evolves. As tasks were clearly defined and each organization’s contributions became clearer, leaders saw their status and demand elevate.

Collaborative Processes

Collaborative processes are necessary to “help partners establish inclusive structures, create a unifying vision, and manage power imbalances” (Bryson et al., 2015, p. 652). As Winterdale partners worked to design and implement the academies, as well as to assess needed modifications through the years, trust and commitment, communication, legitimacy, and collaborative planning were found to be essential.

Trust and commitment. Through our observations of cross-sector retreats and interviews, we noted trust has deepened among partners, although they acknowledge the ongoing importance of nurturing relationships. Support Our Schools is tasked with expanding business involvement, and Harrison described how his role has become easier as the partnership has matured:

We are salesmen in the sense that we are selling that experience of being involved with the public school here in Winterdale, but the sell is not difficult because there is such an army of business support. You know, if you think about who all is at the table as a business, you want to be at that table as well, because your peers are there.

Inherent within the concept of trust is a concomitant expectation of accountability, with partners required to demonstrate continuing investments in the initiative. For example, Adam explained the business community stressed the necessity to create processes

to make sure that the district isn't reducing its commitment, it's not off-loading its responsibilities to the private sector. So, as the private sector steps up and donates... several million dollars a year, time and money, we want to make sure that school systems are honoring their commitments.

From the business community in particular, several participants revealed a common stance of “trust but verify” in relation to activities and decisions of the educator partners, with the verify

portion requiring a variety of methods and processes, including the development of complex accountability structures and reporting procedures, which are described later.

Communication. As a complex cross-sector initiative, the academy model requires multiple communications processes. In schools, site leadership teams have been created to facilitate school-wide communications, and district-wide monthly meetings ensure consistency across schools. The academy coach position serves a key boundary-spanning role, as described by Harrison: “We look at the academy coaches as the communicator for their school to the business community.” Academy coaches connect business partners with teachers and help negotiate between educators’ requests and the demands and available resources of businesses. Harrison, likewise, was recognized as pivotal in communicating and brokering across sector boundaries (particularly between school and businesses); Academy Coach Patrick explained, “I go shop for business partners [with Harrison] first.” Cross-sector councils meet regularly to maintain communications channels across all participating partners.

Legitimacy. External and internal legitimacy were found to be necessary not only to maintain collaborative processes but also to demonstrate the effectiveness of the academy model. The importance of external legitimacy came to the forefront due to misperceptions within the community. Adam from Civic Network reported, “we had uninformed elected officials popping off about the academies and didn’t really understand what they were.” Consequently, an outside marketing firm was hired to create an academy brand and marketing materials, and Civic Network and the school district publish annual reports to document the academic performance of each school. In addition, cross-sector partners opened the schools for visits, as Adam explained:

We hosted six VIP tours one year, the other six schools the second year, and we got state legislators, metro council members, neighborhood association leaders, faith-based

leaders, school board members, and that was a concerted effort to make sure our elected leadership...understood what the academies were and saw them first-hand.

Early in the collaboration, internal legitimacy became an issue when principals made changes to their academies without consulting cross-sector partners, creating conflict because modifications were not based upon local workforce needs. Thus, principals needed to redefine their understandings of “internal:” within the context of the academy initiative, collaborative partners are also involved in internal decision-making processes. As a result, principals now must present proposed academy changes to the Commercial Partner Committees, obtaining their input before the district administration acts on them. Monica, a school district administrator, clarified the power dynamics, noting “the business partner has a louder voice than we do here.”

Thus, the perceived legitimacy (internally; involving business partners in particular) of core reform aspects relates closely to being involved during the process of developing changes to pathways. This stands to reason because business partners representing these fields possess strong insights relevant to local trends and provides additional support to the notion that the nature of the task impacts the shape and direction of partners’ activities and their perceptions of the effectiveness of activities.

Collaborative planning. System-wide planning is grounded in projected employment needs of the local community. Carol explained, “first and foremost, we look at the workforce data.” Harrison reported partners need an “understanding of current industry trends” and job forecasts as they consider potential changes to pathway offerings. We observed cross-sector partners involved in a 2-day summer retreat intended to review their progress over the past 10 years and begin formal planning for “Academies 2.0.” Through this retreat, partners identified future goals and proposed new academy directions.

Collaboration Structures

Within cross-sector partnerships, networks and collaborations do not replace each organization's structures but instead function in complementary roles (Bryson et al., 2015). This section reports on contextual influences on structure that we found, as well as the role of structural and related processual ambidexterity.

Contextual influences on structure. A multi-tiered structure has been created to support partner activities, offering opportunities for cross-sector leaders to contribute their expertise and provide input into decision-making processes. Monica explained how Civic Network helped design a system with this tiered approach: "We have Advisory Board advocacy at the school level, we have Partnership Councils at the city level...and then [Business Leaders Council] at the very high level of advocacy where all the big CEOs in the city sit." The Business Leaders Council, an elite group including CEOs of major corporations, the mayor, and a school district official, serves an important accountability function by providing cross-sector leadership, monitoring academy progress, and ensuring public and private partners contribute adequate resources to support the academies. This council can flex considerable political muscle to advocate for the academy initiative, when needed. Commercial Partner Committees monitor academy needs within their occupational areas and provide insights on local workforce trends. Academy Advisory Boards meet quarterly in each school, chaired by a business partner and with members including the Academy Coach, academy principal, teachers, parents, and students, provide guidance to the academy team. Academy coaches from the 12 high schools meet regularly with district leaders, ensuring that academy structures and activities are coordinated across the schools. Thus, these structures operate at the appropriate level (e.g., school, district, cross-sector) of oversight.

Structural and related processual ambidexterity. The Winterdale collaboration showed ambidexterity, using their authority to respond to emergent needs on behalf of the school district. Business leaders, who are unaccustomed to dealing with state regulations, sometimes express impatience with educators' passive acceptance of restrictive state policies. Lynn, an Academy Coach empathized, "It gets very frustrating to see the bureaucracy of a school." Consequently, Adam described how cross-sector partners used their agency and political influence to resolve a persistent problem that the school administration was unable to address:

We initiate legislation and back in 2008 initiated a bill to change CTE class size...CTE teachers had this arbitrarily outdated 1:15 ratio...there are a lot of CTE courses that there's no reason why you can't have 30 kids in there or whatever if you need to...It made it really hard to schedule and team those teachers together and give them some common planning time....We were hearing the frustration of the school system..., saying "we can't change it." Well I said, actually, "let's introduce a law." So, we drafted a bill, got a sponsor, lobbied it, passed it.

Leadership, Governance, Technology, and Capacity and Competencies

Processes and structures are interrelated components to ensure the development of effective cross-sector partnerships. In this section, we address leadership roles, practices, and skills; governance; and collaborative capacity and competencies identified within this case.

Leadership roles, practices, and skills. Key sponsors and champions are essential to the success of the cross-sector collaboration (Bryson et al., 2015). Sustaining the Winterdale partnership involves numerous individuals in leadership roles, with leaders prized for the talents they contribute to cross-sector activities as well as within their own organizations. Civic Network is both a sponsor and advocate for the academy structure. Through establishing tiered

committees, Civic Network brings together key community and school district leaders to work collaboratively. Support Our Schools vets potential business partners, conducts background checks, and assists with matches between businesses and schools. A business leader described how cross-sector committees provided forums for input and involvement:

We have the business voice talking to Winterdale public schools, Civic Network, and Save Our Schools—all the community entities. And that’s where we raise that voice, putting it there saying, “This curriculum isn’t right, or this needs to change, or this is part of the pathway,” so we unite that voice there and become an advocate.

Within the school system, academies create new leadership roles and opportunities for educators. Academy Principals have more expansive duties that would be assigned to the typical Assistant Principal position operating in traditional high schools. An Academy Principal explained: “we...treat our academies like it’s our own schools, and the way I look at our academy—for better or worse—I’m in charge.” Academy Team Leads, self-described “guides” “organizers,” and “boots on the ground,” assume a leadership role in facilitating the work of each team, encouraging teachers to create interdisciplinary, career-focused curricula that engage business partners and collect, analyze, and track data related to their academy students’ performance. The full-time Academy Coach is an essential leadership role, with this individual connecting the school with business partners and monitoring student progress data.

Governance. Because the academy initiative is centered within the district, most activities occur within the 12 high schools and district leaders are accountable for its implementation, daily functioning, and student learning activities. A complex communications network and governance system has been created to provide oversight and mobilize leaders to work together to hold one another mutually accountable, as well as to coordinate the work of

over 350 business partners. For example, Karen described Winterdale Connected's advocacy role and involvement on administrator search committees to ensure newly hired principals and school district administrators were committed to the cross-sector initiative. She noted, "We've got representatives on the selection panels for the finalists of this past superintendent search, so we're able to ask questions and make sure that they understand that this is an important priority of the community." She reported her organization "developed the academies' guiding principles...that all principals know about before they sign on to be a principal of an academy school." Governance structures operate both inside the school system and across the cross-sector partnership, and partners actively work to ensure that, as key sponsors and champions move on to other roles or positions, their replacements are fully committed to this collaboration.

Collaborative capacity and competencies. Key leaders work in boundary-spanning roles to facilitate the academy initiative. Cross-sector partners agree the initiative represents a community-wide commitment to increasing the number of high school graduates from their school system who were adequately prepared for college and careers. They acknowledge enthusiasm could wane over time if the partners did not examine their past successes, review their collective capacity and cross-sector leadership competencies, commitments, and skills, and look to the future. Noting that the partnership has been in existence for a decade, Adam explained the importance of cross-sector engagement in envisioning the future: "Inevitably, you've got to anticipate that at some point you've got to recharge, renew, refresh, and you can't...coast on what you've done in the past. And so, that's the notion behind the Academies 2.0 also, is that can we reinvent ourselves, can we innovate further." Through ongoing summer planning retreats, as well as in-district professional development for educators, partners work to ensure competent and committed partners are involved.

Endemic Conflicts and Tensions

Conflicts can occur through tensions arising from the “differing aims and expectations that partners bring to a collaboration, tensions in loyalties to home organizations versus the collaboration, differing views about strategies and tactics, [and]... attempts to protect or magnify partner control over the collaboration’s work or outcomes” (Bryson et al., 2015, p. 655). We observed few conflicts, possibly because partners resolved them during the early years of the initiative, but found evidence of power imbalances, competing institutional logics, and tensions.

Power imbalances. Business partners generally acknowledged ultimate decision-making authority remains with the district, due to instructional standards and content requirements public schools are beholden to implement. School leaders sometimes must make decisions based on state policies instead of industry best practices, which can occasionally frustrate business leaders who sometimes feel powerless to influence curriculum. Academy Coach Patrick recognized this tension in negotiating curriculum revisions:

[A business partner] is stuck on the idea that his organization should be the contracted curriculum for the collision repair pathway because it is industry-specific...If that is the industry standard then we probably should consider doing that, but we are confined because the state has standards for the actual courses...We can probably institute one or two modules of your instruction into our course...but we can’t usurp and overthrow the state standards in a class...even though it may be...more relevant to what the industry requires.

Although there is recognition of the obvious benefit and applicability of utilizing a curriculum recognized throughout the region as representing the skills and knowledge future employees

would be expected to adhere to, the reality of changing a curriculum is not so simple. As a result, students considered qualified by the school may be deemed “untrained” by industry standards.

Business leaders noted how state regulations supercede their practical experiences within their industries, with regard to instructor expertise. Specifically, they reported the designation of an individual as being qualified to teach an industry-aligned course often differs between the business community and schools, and individuals with essential industry expertise often lack required teaching credentials. Creative solutions are often required to address this reality. For example, Academy Coach Lynn recalled a conversation where they “talked about finding a math teacher going out to [university] or wherever, and you're saying, ‘Hey you think you want to teach math, but did you know with those three classes in computer science you can teach web design or programming?’”

Multiple institutional logics. A conflict that remains unaddressed between partners involves the speed at which work takes place and change occurs. Business leaders, used to top-down decision making in private industry that results in immediate solutions, described the difficulty of making changes and the slow pace of reforms within the district. Academy Coach Lynn acknowledged this frustration: “businesses and schools aren’t always on the same page, and they don’t understand us, and we don’t always understand them, and things in the world of business go really quickly, and they get done and they don’t understand it.” The fear among some business leaders is that the slow pace of change puts students in a constant state of disadvantage when entering into the job market because “things change so quickly, so if you take 4-5 years to implement something, it might be outdated.”

In addition, there is some conflict arising from a perceived inability to engage in long-range planning within the schools. Harrison highlighted these issues:

The business community likes immediate response to a phone call, to an email. They want things to work...on schedule and rhythmic, whereas many times in the public-school setting, fires arise, emergencies happen, change occurs quickly, transitions occur...The business community does not necessarily always like the, "We need help next week or in two weeks from now." They like to know what's happening over the course of the next few months.

While business leaders prefer planning far in advance and making needed changes immediately and with little deliberation as a project goes along, schools do not operate at the same pace or logics of change.

Tensions. As can be expected over a 10-year collaboration, turnover has occurred with school district leaders, cross-sector leaders, and partners. In these situations, questions arise regarding levels of flexibility vs. stability in the design and implementation of the model. Some of this results from the predisposition of school leaders toward traditional accountability metrics used to judge success in most schools, such as student test scores. Also, the model was developed to focus on careers that do not necessarily require 4-year college degrees and partners increasingly are focusing on students' attainment of industry credentials that may not require postsecondary training. As accountability demands and district goals have evolved, other factors are considered important in the district, including college preparation. Karen observed, "You can look at the overall data on paper, but then the things that are...intangible...And I think the danger from that, too, is so we get a new Director of Schools, he doesn't have that perspective."

Further, there is a concern the new district administration is not as devoted to the partnership as previous administrators. Monica noted:

That's really the biggest threat right now is, does he think this is worthwhile? Is he as enamored...as the other people used to be?...Is it relevant enough and vigorous enough that people are willing to continue to support it with their dollars and their time?

If cross-sector partners perceive newly-hired district leaders are not fully committed to the initiative, they could withdraw their support, which is vital to the success of the academy model.

Another potential source of tension involves differing levels of career integration within classrooms. An academy principal reported the career focus "varies among our academies as well, as far as how well we're integrating thematic pathways into the general education curriculum." Managing this tension was key to establishing effective working relationships among general education teachers, CTE teachers, and business partners. Monica observed:

If it's a math teacher who says, "for whatever reason when I'm teaching statistics the kids just aren't getting it," if I can bring in a business partner that has an artifact of "here's what I use every day around statistics, and here's how I use it right then," maybe that math teacher can connect, tell that story in class and that would be the way they make the connection.

On a related note, some educators reported academies were not universally embraced, particularly by college-bound students and their parents, who may not appreciate the relevance of the career emphasis. A team lead explained:

But I think we do have one issue that is kind of beyond us, is that we have some kids who don't want to be a part of the academies, at least the ones we have here. They are very college focused and their college focus may not be the academy offerings that we have.

An effective cross-sector partnership requires positive working relationships between educators and community partners. Leaders needed to support mechanisms to connect teachers

and business partners that respects their individual expertise while also highlighting their interdependent roles in supporting student learning, while also considering how academies could better address the learning needs of college-bound students who may not perceive how career pathways were applicable to their future plans.

Accountabilities and Outcomes

Cross-sector collaborations are intended to generate public benefits and services that cannot be adequately addressed by any one sector (Bryson et al., 2015). As a result, it is important to assess whether intended outcomes are being achieved, to identify how sectors learn from each other and improve service delivery, and how sectors hold each other accountable.

Immediate, intermediate, and long-term effects. Developing and tracking metrics that go beyond traditional school performance measures to demonstrate the purportedly distinct effects of the academy concept has been challenging for Winterdale school and business leaders. Existing statewide school data systems permit the collection and analysis of information useful for monitoring some of the immediate and intermediate academy goals. Yet, leaders across sectors recognize their current inability to gather information on long-term goals aligned with the mission of the career academy model, such as post-graduation employment rates.

To demonstrate the immediate and intermediate effects of academies on student outcomes, school and district leaders leverage current state reporting requirements. Karen, from Winterdale Connected, noted this data shows the success of the academy model:

When you look at the overall district outcomes, we've been able to go from a 58% to almost 82% [graduation rate]. Now I know it's almost impossible to prove direct correlation but it's the only major transformation that's happened in [Winterdale]. So, you look at...there's graduation rates, so many of our achievement score data is also

improved. Other things like disciplinary rates, attendance rates, daily attendance rates, all of those things that really kind of show culture, engagement, things like that are drastically improved.

Student data are used not only to demonstrate school improvement as a result of transitioning to the academy model but also as a proxy for some academy goals that are difficult to measure, such a positive and engaging school culture. A school counselor explained how course enrollment data are also used to track outcomes related to course and certificate completion rates: “A lot of the data that I look at is relatively simple...how many students signed up to take an industry certification test this year over last year, how many students sign up to take a dual-credit class.”

Although these data can be used to describe certain student behaviors, there is no certainty these outcomes have improved as a result of the academy model. Further, student data are not widely shared with partners. For example, Trent, a business leader, stated he “guessed” the academies were effective, but the data was better suited for “someone beyond my paygrade.” Throughout interviews, student outcomes generally were discussed in the aggregate (e.g., “all students”), and subgroup performance was rarely mentioned. Although some academies have created goals related to increasing females’ participation in their academies, in general those interviewed did not describe commitments to equitable practices or to increase the performance of historically underrepresented students.

Partners acknowledge the need to track and analyze long-term outcomes for students, including postsecondary enrollments. Valerie, an executive principal, noted these data are unavailable:

We do not do a good job here in tracking where kids are going to college... Although I would like to say I had really hard, specific data about how many of my kids went to college, how many persist... I don't know that I have that data as clear as I would like. While acknowledging tracking students beyond graduation is desirable, Carol explained, "it is almost impossible. Our state does not help us. We can only track kids that go to public institutions, not private." Thus, with only have "anecdotal" evidence of student effects, as district administrator Monica observed, most agreed that access to more comprehensive data is sorely needed. This means developing ways of evaluating success of the cross-sector partnership because, as Adam noted, "What gets measured, gets done, right?" As an initial step toward this goal, Harrison reported:

We're looking at how the business community can help us create assessment tools and resources to understand was that field trip opportunity a success and how do we know that? What were the preliminary or pre-experience goals and how do we make sure that those were met.

Complex accountabilities. When discussing accountability, it is helpful to clarify accountability in relationship *to whom* and *for what* (Bryson et al., 2015). Accountability within the academy partnerships emerged in two primary ways: accountability for student outcomes and accountability to the business community.

As noted previously, tracking student outcomes is challenging, which creates confusion over who ultimately is accountable for certain outcomes. This lack of clarity demands leaders constantly refocus on goals, with Valerie observing, "Why does this still matter? It's got to be attainment. Our ACT scores have to go up. I need to have strong growth and strong achievement and test scores at the end of the day." In discussing the demands of the district and business

partners on schools, Adam observed that district leaders must address multiple expectations: “I think they’re focused on both [sets of demands]. They’ve been held accountable for the academic performance, they’ve been held accountable by the district for the academy implementation.”

As accountability systems and measures aligned to the demands of the business community become more formalized, the current push-and-pull dynamic may become less complex.

One of the strongest areas of accountability comes from the collaborative practices supported by Civic Network. One activity advanced at partnership council meetings is collaborative data reviews looking at student performance and attendance data, as well as business data, such as the number of hours logged working with students. For Adam, this activity serves a purpose in advancing accountability: “It’s that peer pressure sort of transparency tool. No one wants to show up at that meeting with their school having a zero on partner involvement or something like that.” As noted previously, this accountability emphasis did not include commitments to equity and access. Ultimately, Adam observed that Civic Network sees itself as an independent arbiter capable of facilitating difficult conversations between partners, viewing their role as “a key thought partner, strategy builder, an initiator, a catalyst, a critical friend.” Yet, he acknowledged most of the accountability is focused on protecting the investments of the business community.

Discussion

In this study, we examined how cross-sector collaboration has shaped the development, implementation, and sustainability of career academies in one large urban school district. We acknowledge our study has some limitations. First, the ability to generalize findings from case study research can be limited (Yin, 2014), and this case may be unique in ways that complicate its extension. For example, forming productive cross-sector partnerships may be more feasible in

metropolitan regions than in rural communities, which may lack an industry presence to support extensive collaboration. Nonetheless, case studies can promote generalization by providing concepts and recommendations for further research in related contexts (Punch, 2005). A second limitation relates to the fact that we studied a mature initiative. As such, addressing initial conditions and drivers required primarily relying on informants to draw upon their long-term memories. Finally, we conducted interviews and observations in two high schools recommended by school officials, which may not be fully representative of career academy implementation across the district's 12 neighborhood high schools.

Examinations of cross-sector collaboration have left the education sector understudied (Henig et al., 2015) and, especially relative to this case, where the education sector has been the primary focus of the intervention. To guide data collection and analysis, we applied Bryson et al.'s (2015) framework for cross-sector collaborations. We sought to understand this district's complex initiative, and also to test and extend the framework within a school-district centered reform context. As such, we aimed to address three critical issues Henig et al. identified related to the study of cross-sector collaborations involving schools. In so doing, we also provided a detailed accounting regarding the development, evolution, and sustainability of *career academies* (the specific cross-sector reform being implemented), which is important in itself given their proliferation and their inherent implementation complexities. The remainder of this discussion is structured in an effort to foreground study contributions and recommendations.

First, Henig et al. (2015) suggested researchers should examine how cross-sector collaborations become legitimated and entrenched over time. Here, and more generally, the framework we employed held considerable utility, focusing our attention and providing analytical tools to examine each of these aspects. We perceived both initial and ongoing need to

legitimate—internally and externally—this reform. The notion of *relevance* (e.g., student programming needed to connect to students’ current and future career aspirations, as well as to local workforce needs) was crucial to the adoption of career academies and appealed to various stakeholders, albeit in slightly different ways. This shared notion also elevated certain actors due to their needed talents and expertise: business partners who possessed expertise regarding valuable real-world skills and knowledge of emerging training needs within their occupational fields, CTE educators to staff the academies and develop the curriculum, teacher leaders to guide career-focused learning activities on academy teams, and civic leaders who were needed to advocate for the school district and promote state-level policy reforms. Tapping into expertise both within and external to the school district helped strengthen the partnership’s civic capacity (Shipps, 2003) to implement and sustain this reform. To enhance external legitimacy, partners developed a consistent message, through the assistance of a marketing firm, to promote their “brand” and messaging to the community. Presently, the focus has shifted somewhat toward reimagining and keeping the initiative on a progressive course. Mature cross-sector collaborations centering on education reforms are both relatively rare and understudied, as Henig et al. (2015) highlighted. Thus, we encourage future investigation into how mature collaborations can reinvent themselves, ensure their continued relevance, and otherwise maintain their potency as all partners recommit to future collaborative projects. Some recent research (e.g., Vangen et al., 2014) reports that cross-sector collaborations can be adaptive and adjustable, which in turn suggests it is more useful to ask (as we did) how these collaborations continually adapt and evolve than to ask how they become entrenched or institutionalized.

Henig et al. (2015) noted that public education presents unique challenges, and they recommended that researchers study how these challenges are resolved. Further, Agranoff (2012)

claimed collaborations relying upon a public bureaucracy—as this reform has—are especially dependent on consistent sponsors and champions at or near the top of their organizations. Issues such as high-level turnover within the school system (e.g., superintendent, district, and principal leadership) made developing and sustaining requisite support additionally challenging. Similarly, Miller et al. (2017, p. 209S) reported “leadership voids” occurring due to turnover of key actors could affect the stability of cross-sector relationships. One way in which external stakeholders coped was to advocate for and build in processes to influence the school system and hold it accountable, including negotiating a community presence on administrator hiring committees to ensure candidates were knowledgeable about, and committed to, career academies. This advocacy represents an extension from what Bryson et al. (2015) observed; whereas these authors referred to sponsors and champions *within* their respective organizations playing key roles, in this case it seemed external leaders were in a real sense infiltrating the district (the key reform decision-making site) to ensure they were viewed as equal—and internal—members of this partnership. Collaborative partners serve as initiative sponsors and champions at pivotal moments, apparently feeling this to be necessary to the successful continuation of the initiative within a school district that was faced with high turnover, competing demands, and other challenges. On the basis of this finding, we suggest mature, longstanding cross-sector collaborations featuring urban school districts as the main reform site may sometimes require extraordinary actions on the part of external partners, beyond what is typically required when reforms are centered within less complex/turbulent organizations. In education-focused initiatives, school district leaders must ensure that principals design school structures and communications channels to ensure regular participation of cross-sector partners.

Civic leaders also leveraged political and social capital to promote policy changes and persuade those holding positions of influence within the community and state on the reform's merits. As another example, business partners expressed frustration that school leaders sometimes needed to make curricular and programming decisions based on state policies instead of industry best practices. There were some questions regarding the extent to which certain programs were preparing students for industry standards. Questions like these can impinge upon collaborators' trust in each other and may ultimately erode trust in the overall enterprise in some partners' eyes. Stepping back, our sense is that some tensions arising from unique aspects of public education have not yet been—and perhaps never will be—fully *resolved*, but rather they are being actively and continually (re)negotiated. Our overall appraisal is that the collaboration is imperfect and in a constant state of flux, but is being perceived as 'effective enough' or 'rewarding enough' to justify stakeholders' continued efforts. Again, we suggest this insight might adjust researchers' focus going forward. In addition, school leaders engaged in career pathways reforms should ensure district processes include regular mechanisms for business partners to suggest curriculum revisions, based upon changing industry regulations and skills.

Related, we were surprised to note considerable and ongoing challenges with respect to accountabilities and outcomes, coupled with what seemed to be a general sense of resignation (or at least a low level of urgency) regarding whether and how they could be resolved. Two major challenges related to tracking long-range outcomes (e.g., high school students' success in landing jobs in their preferred pathways or enrolling/completing college), and attributing positive short- and intermediate-range trends to the reform. Even more importantly, we saw very few systematic efforts to examine important reform-related indicators in a disaggregated manner. We view it as essential that a cross-sector initiative aimed to promote students' college and career readiness

would attend closely to the distribution of student opportunities and outcomes by student subgroups, with a goal to increase access and participation of historically underrepresented students in career academies that can lead to high-wage occupational fields. College and career readiness proponents have previously highlighted the importance of data use for *equity*, in light of longstanding race-, class-, and gender-based inequities in students' access and attainment (e.g., see Darling-Hammond et al., 2014). Students' academy selections, for example, are not random and could reflect inequities related to students' backgrounds and identities. Stern, Wu, Dayton, and Maul (2007), mindful of these issues, argued disciplined data use can facilitate districts' implementation and refinement of career academies, and accordingly they discussed the strengths and drawbacks of a large set of quality indicators. Thus, we recommend that principals and district administrators regularly analyze career academy selections and outcomes by student subgroups, and we further suggest that academy teams should formulate annual goals to increase historically underrepresented students participation in their academies and related coursework.

Although Bryson et al. (2015) did not incorporate equity considerations into their meta-framework (illustrating a larger gap in the literature), we propose that *any* cross-sector initiative concerning public education—and especially one concerning college and career readiness—must place such considerations at the forefront and should collect and analyze data with equity goals in mind. An initiative such as the one studied could, based on its design and implementation, serve either to reinforce or disrupt historic patterns of inequity. Strategic data use for equity could play a key role in promoting positive outcomes (see Datnow & Park, 2018; Hackmann, Malin, & Ahn, 2019). In this instance, our equity concerns are elevated, in light of observations that this initiative was seen by some as serving more so to prepare students for career than college; we suggest educators and partners should redouble their efforts to promote rigorous

academic and career-focused pathways for all students. This career over college emphasis also represents an inversion over what has been typically observed in the U.S. policy context, a fact that gives us particular pause given that this is an urban, majority-minority context in which the majority of students and families have been historically underrepresented in postsecondary institutions and in certain high-skill, high-wage fields. Therefore, we recommend that school and district leaders engage with cross-sector partners and teachers in conversations about the effectiveness of students' college preparation within the existing career academy model, identifying ways in which schools can more aggressively promote career pathways that assist high school students as they transition into postsecondary educational experiences.

Further complicating matters, school leaders and cross-sector partners may have differing perspectives on success. School leaders may define success through increased graduation rates, improved academic performance, reduced disciplinary incidents, and improved student attendance. In contrast, civic and business partners may be more focused on public perceptions of school district quality and the ability to employ skilled high school graduates to fulfill local workforce needs. Taking all of this together, we therefore point to outcomes and accountabilities as an area for future research and practical consideration when studying and implementing similar school-centered, cross-sector collaborative reforms.

When more broadly considering conflicts and how they were navigated or resolved, overall in this case we detected a complex interplay across power, institutional logics, and accountabilities. Specifically, we discerned: (a) the business and community partners believed the "final word" invariably resided within the school system because of state-imposed policies and procedures (power); (b) the method and pace of creating change was biased toward public sector logics (institutional logics); and (c) given their greater control over decision making, the

public sector (school system) was assigned most of the accountability responsibilities (e.g., to protect private sector and community investments in a process over which they have little control). Regarding the second point, the pace of change was perceived by business leaders as frustratingly slow. Likewise, relative to the third point, we noted Civic Network's desire to protect the community's investments and ensure the district was not "off-loading its responsibilities." We discerned, however, that certain leaders, structures, and designs were effective at ameliorating or easing conflicts and tensions. For instance, the district's solicitation and incorporation of business partners' expertise relative to pathway selections was essential to building a true collaborative spirit and a sense they were genuinely involved in key decision-making processes. Likewise, Harrison from Support Our Schools was cited by multiple individuals as a skillful boundary spanner who communicated clearly with varied stakeholder groups, managed conflicts, and tempered unrealistic expectations. Related to this finding, we suggest researchers who study cross-sector collaboration may do well to draw from theory and literature regarding brokerage (e.g., Burt, 2004) and boundary crossing (e.g., Akkerman & Bakkar, 2011). Also, and as previously noted, we found little consensus regarding how to define, operationalize, and measure outcomes: Partners were unclear about which factors could show the model was meeting the needs of students, the school district, and community. In particular, partners acknowledged some conflicting messages, as the academy model initially was designed to focus on career readiness, with college preparation being a secondary consideration. As partners consider the continuing evolution of the academy initiative, they acknowledge the necessity to integrate rigorous, advanced coursework into academy programming so that students are more fully prepared for postsecondary education.

Regarding career academy reforms more specifically, our conceptual framework was assistive in terms of illuminating several key interactive elements that supported their functioning. Extant research both within and beyond education has not sufficiently clarified the salience of the task at hand on subsequent features of the cross-sector collaboration (e.g., membership, structure, and process; Bryson et al., 2015). In this study, we concluded the central task faced by the initial partners—to develop robust career academies—considerably influenced the size, shape, scope, and nature of subsequent collaborations. Career academies are relatively well-developed reform packages including several key components (e.g., career exploration, integrated and sequential curricula, work-based learning opportunities, business partnerships), and when a large urban district such as this one adopts this model, a broad-spanning and efficiently-functioning collaborative network is arguably imperative. The framework was lacking, however, in the sense that it does not explicitly include equity considerations.

Therefore, although the Bryson et al. (2015) framework was quite helpful to our analysis, we suggest that aspects of this framework can be strengthened when applied to education-focused cross-sector collaborations, including—but not limited to—career academy initiatives. In Figure 2 we propose an expansion of this framework, which highlights features within Bryson et al.'s categories that are applicable to education initiatives. In particular, we stress the importance of boundary spanners who can work across the education system and collaborative partners to facilitate the work of the initiative and communication between disparate organizational structures. In addition, we underscore unique accountabilities and outcomes present in education-focused initiatives that must be addressed, including the need to maintain a commitment to equity, while also using data not only for student accountability purposes but also to analyze the effectiveness of the cross-sector collaboration. Scholars investigating education-

centered cross-sector initiatives may find this revised framework helpful to their research, and educators and partners may find that it supports their designing and decision-making.

Insert Figure 2 about here

Conclusion and Implications

To summarize, although more could be explored regarding this complex case, we have outlined this arrangement's broad contours, including many of its salient features and their interactions. Accordingly, we generated several provisional insights that may be useful for policymakers, school practitioners, and community partners who are considering or entering into similarly ambitious reforms and cross-sector collaborations. We have also presented or refined several recommendations for researchers. To grow this incipient knowledge base, we also propose that scholars should continue this line of research into effective community collaborations that involve education reforms, perhaps instituting multiple case design to accelerate theory building and practice-relevant (i.e., socially robust, *how-* and *why-*to) information. Likewise, given the formidable complexities inherent in cross-sector collaborations there is a need for research that can identify essential factors including accountabilities, collaborative leadership, or institutional logics, rather than looking at the organized-whole, as we did in this case. Current theory and literature, we appraise, is not yet adequate to explain or inform policy officials, educational leaders, and community partners who are increasingly entering into cross-sector collaborations. The framework employed herein was facilitative as a starting point, but additional, careful education-specific work is paramount.

The insights gleaned from this case present some implications for educational policy, school leaders, and CCR reforms in secondary schools. As state education officials strive to address CCR expectations included in the Every Student Succeeds Act in local school districts, they must be cognizant of the importance of emphasizing college *and* career preparation. Given that U.S. jobs increasingly require postsecondary education and/or industry credentials (Carnevale et al., 2016), the K-12 curriculum must adequately prepare high school graduates to transition into postsecondary training. School leaders are essential connectors among K-12 educators, business leaders, and higher education partners as cross-sector partners work collaboratively to ensure that the curriculum is sufficiently rigorous to assure students' preparation for college while also being relevant to their career interests.

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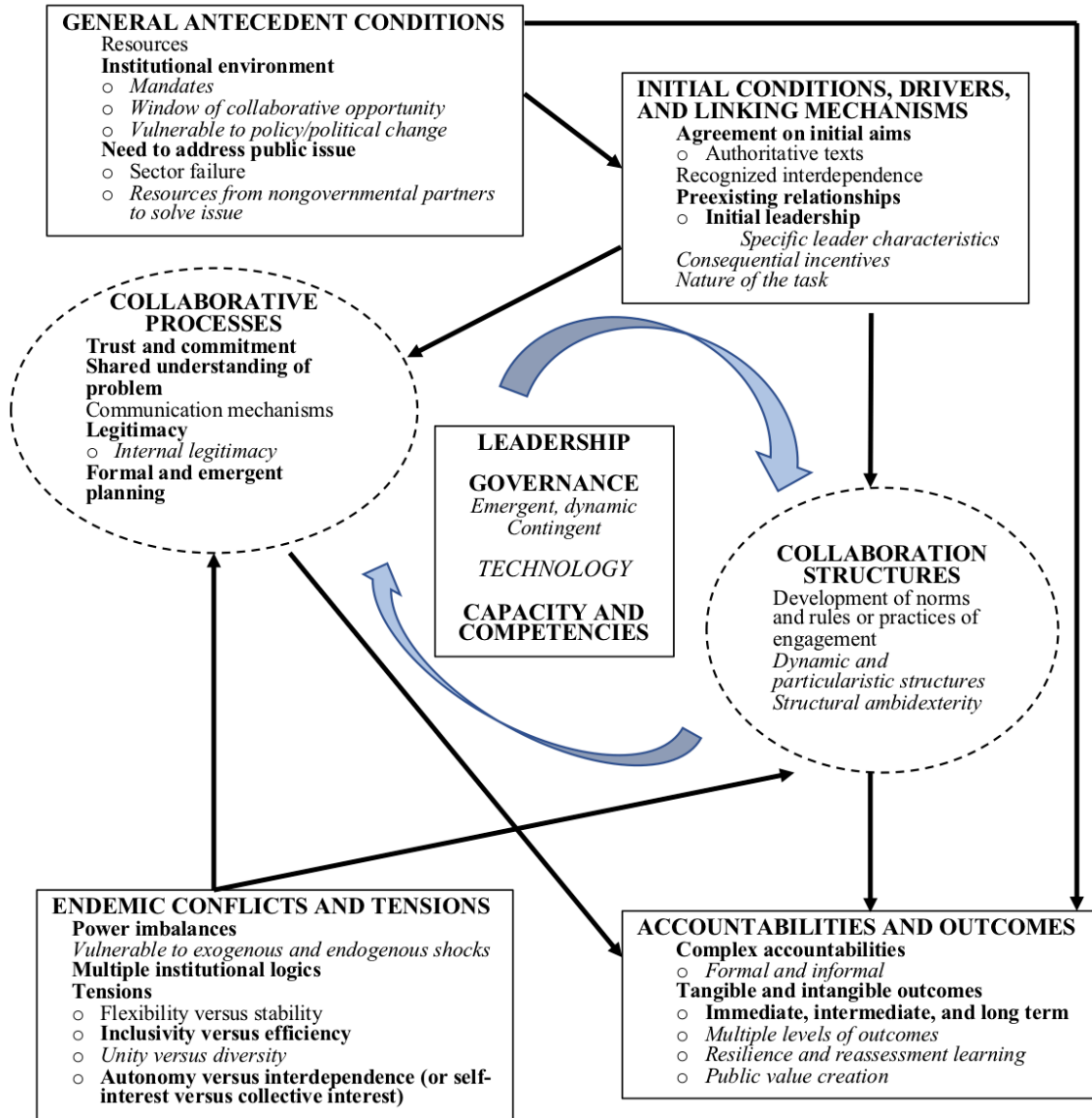
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Figure 1. Summary of Major Cross-Sector Collaborative Theoretical Frameworks (Bryson et al., 2015)



Appendix 1. Interview Protocol: Civic Network Official (Semi-Structured)

1. We would like to gain an understanding of the role of the cross-sector partners in the academy initiative. What was the role of the [Civic Network] as the academy concept began to take shape and was proposed? What is the current role of the [Civic Network]? What is the role of other cross-sector partners? How have these roles changed over time?
2. Concerning the various cross-sector structures and committees, would you describe the decision-making processes within these structures?
3. In what ways, have career academies helped [Civic Network] meet its goals for the community? From a community perspective, is there evidence that businesses are more likely to locate in [Winterdale]? Are parents more interested in moving into the community due the successes of the academies?
4. Generally, how well do you perceive the academy model to be working in the district? Please explain. What are positive outcomes for students? For the district? For the community? For cross-sector partners?
5. Does it appear that the academy approach is helping high school graduates be more fully prepared for college and career success? Is the academy model integrating both rigorous academic and CTE coursework to promote both college and career preparation? Do cross-sector partners feel that graduates are more prepared for employment opportunities in the community, through attaining industry certifications? Are you also reviewing graduates' enrollment in colleges and community colleges?
6. How well, and in what ways, do you feel the academies are (or could be) helping historically underrepresented or underserved students (e.g., African American, Latinx students; females) to achieve better long-term outcomes?
7. Through the 10 years of the academies, are there particular challenges you and/or other community agencies and businesses have faced with respect to this cross-sector collaboration? If so, could you describe tensions and challenges, including successful efforts to overcome these challenges? Are there persistent, stubborn challenges that you are still working to resolve?
8. What leadership roles do [Civic Network] officials take on, when working with the career academy initiative?
9. We are also interested in learning about how business/community members and other sector partners serve in leadership roles, through school-business connections and committee structures, in supporting the academy model. Could you share some ways that this has occurred through the years?
10. We are also interested in learning how the school district and other partners have collected and analyzed data (e.g., student learning gains, graduation, employment, etc.) through the years, and they have used this data to make changes with the academy structure. Could you share any information you have regarding the academies' effectiveness and what changes have been made through the years, as a result of this data analysis? What data does [Civic Network] collect related to academy effectiveness? How are data used to hold partners accountable for their commitments?
11. Is there anything else you would like to share regarding the cross-sector progress with academies, particularly as it relates to [Civic Network's] involvement?

Appendix 2. A Priori Codes, Definitions, and Examples

Code Category and Definition	Key Components	Examples
<p><i>General Antecedent Conditions:</i> Factors that prompt the formation of the cross-sector partnership involving a sector failure, which is a persistent public policy issue arising within the political environment that has resource needs exceeding those available from a single agency</p>	—	—
<p><i>Initial Condition, Drivers, and Linking Mechanisms:</i> Commitment from boundary-spanning leaders who are willing to champion and sponsor the cross-sector initiative</p>	—	“I started reading the grant and looking up, and I’m like, ‘ This is it! This is it! ’”
<p><i>Collaborative Processes:</i> Development of a shared understanding of the problem and formation of a shared vision; Communication; Sense of legitimacy</p>	<ul style="list-style-type: none"> – <i>Trust and Commitment</i> – <i>Communication</i> – <i>Legitimacy</i> – <i>Collaborative Planning</i> 	<p>“as the private sector steps up and donates... several million dollars a year, time and money, we want to make sure that school systems are honoring their commitments.”</p> <p>“We look at the academy coaches as the communicator for their school to the business community.”</p> <p>“that was a concerted effort to make sure our elected leadership...understood what the academies were and saw them first-hand.”</p>

Appendix 2. A Priori Codes, Definitions, and Examples

Code Category and Definition	Key Components	Examples
<p><i>Collaboration Structures:</i> Development of norms, rules, and standard operating procedures; Ambidexterity in managing tensions</p>	<ul style="list-style-type: none"> – <i>Contextual Influences</i> – <i>Structural and Related</i> – <i>Processual</i> – <i>Ambidexterity</i> 	<p>It made it really hard to schedule and team those teachers together and give them some common planning time.... We were hearing the frustration of the school system..., saying “we can’t change it.” Well I said, actually, “let’s introduce a law.” So, we drafted a bill, got a sponsor, lobbied it, passed it.</p>
<p><i>Leadership, Governance, Technology, and Capacity and Competencies:</i> Areas where processes and structures intersect; Individuals who champion collaboration within and across organizations; Structures and processes that facilitate the allocation and coordination of resources; Innovative procedures and tools</p>	<ul style="list-style-type: none"> – <i>Leadership Roles, Practices, and Skills</i> – <i>Governance</i> – <i>Collaborative Capacity and Competencies</i> 	<p>“And that’s where we raise that voice, putting it there saying, “This curriculum isn’t right, or this needs to change, or this is part of the pathway,” so we unite that voice there and become an advocate.”</p> <p>“at some point you’ve got to recharge, renew, refresh, and you can’t...coast on what you’ve done in the past. And so, that’s the notion behind the Academies 2.0 also, is that can we reinvent ourselves, can we innovate further?”</p>
<p><i>Endemic Conflicts and Tensions:</i> Conflicts and tensions resulting from differences in status, organizational power, organizational norms, or collaborative logics</p>	<ul style="list-style-type: none"> – <i>Power Imbalances</i> – <i>Multiple Institutional Logics</i> – <i>Tensions</i> 	<p>“If that is the industry standard then we probably should consider doing that...but we can’t usurp and overthrow the state standards in a class even though it may be more relevant to what the industry requires.”</p> <p>“That’s really the biggest threat right now is, does he think this is worthwhile? Is he as enamored...as the other people used to be?”</p> <p>“The business community likes immediate response to a phone call, to an email. They want things to work...on schedule and rhythmic, whereas many times in the public-school setting, fires arise,</p>

Appendix 2. A Priori Codes, Definitions, and Examples

Code Category and Definition	Key Components	Examples
<p><i>Accountabilities and Outcomes:</i> Immediate, intermediate, and long-term effects of the collaborative effort; Accountability and evaluative structures to identify success of collaboration and individual roles</p>	<ul style="list-style-type: none"> – <i>Immediate, Intermediate, and Long-Term Effects</i> – <i>Complex Accountabilities</i> 	<p>emergencies happen, change occurs quickly, transitions occur”</p> <p>“So, you look at...there’s graduation rates, so many of our achievement score data is also improved. Other things like disciplinary rates, attendance rates, daily attendance rates, all of those things that really kind of show culture, engagement, things like that are drastically improved.”</p> <p>“The positive in all this is that now the state’s accountability system is now going to reward the things that the academy should be set up to do very well...So, we should be able to do all of that, and to now finally get rewarded and incentivized for doing it, that’s a positive.”</p>

Figure 2. Revision of Bryson et al. (2015) Framework to Address Education-Focused Cross-Sector Collaboration

