

**Pursuing Collaborations to Combat Increasing Costs: An Opportunity for Efficiency with  
School Operations**

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# **Pursuing Collaborations to Combat Increasing Costs: An Opportunity for Efficiency with School Operations**

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Financial challenges are a major concern for school leaders, a concern that was particularly pronounced during the COVID-19 pandemic. Increased academic expectations, insufficient funding, and rising mandated expenses in the face of declining enrollment constrain budgets and put pressure on student programming. In this environment, collaboration and resource sharing among school districts helps mitigate financial pressure.

In this Dissertation in Practice (DiP), I seek to mitigate the impacts of increased costs in School District #1 through resource sharing across district boundaries. In the private sector, collaborations across organizations “expand the pie of benefits” (Jap, 2018). With declining enrollments and escalating costs, School District #1 can improve operational efficiency by implementing a similar resource-sharing approach.

I surveyed school leaders associated with the Tri-State Area School Study Council in southwestern Pennsylvania, conducted interviews with seven superintendents about successes and obstacles with collaborations, and engaged in a shared collaboration with cooperatives. The survey questions were developed as a result of a literature review on topics including models of shared resources and collaborations across district boundaries, the ways shared resources and collaborations impact districts, and factors that influence the type and scope of potentially shared

resources. Through this inquiry, I hypothesized that collaboration with other districts will help School District #1 achieve increased efficiency in school operations.

The survey and interviews with superintendents revealed successful working models of collaborations across districts with cost sharing of staff, professional development, student programs, and operations with shared transportation. Sharing staff across districts had the largest financial impact. Several obstacles to collaborations emerged, ranging from political forces to district culture. An unexpected finding was that leadership and relationship-building were vital to initiate and sustain collaborations.

Given the limited time and sample size of this study, School District #1 was unable to engage in a collaboration with another district nor review a cost analysis of districts that engaged in successful collaborations. However, School District #1 achieved efficiency with school operations by engaging with multiple state and nationwide cooperatives. While the district achieved minimal cost savings with expenditures over two months, it achieved operational efficiency with its purchasing function.

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## **1.0 Naming and Framing the Problem of Practice**

### **1.1 Broader Problem Area**

Declining enrollments and rising costs place increasing pressure on district school budgets. To reduce cost and improve operational efficiency, schools are reviewing programs offered and the costs incurred in funding them. As part of this effort, districts are more frequently collaborating to share services and the funding required to sustain them.

In the private sector, a collaborative effort is defined as one that aims to pool and/or share resources such as finance, staffing, skills, expertise, and information or knowledge in organizations. This approach has been shown to benefit the collaborators (Nelson et al., 2005; Samans, 2005) and also allows them to focus on common objectives through such collaboration (e.g., “strengthening of neighborhood”) (Mandell, 1999, p. 47). To advance the collective good of stakeholders involved, collaborations should be guided by shared visions (Gray, 1989).

However, the unique challenges posed by public education have impacted school districts seeking to implement collaborative efforts. Funding mandates impede school district operations and any efforts to implement collaborations—both longstanding challenges that have been amplified by the COVID-19 pandemic.

The pandemic has magnified the need for school districts to collaborate in order to combat costs. Operations are complex, presenting “wicked problems,” and outside agencies are changing the rules by which the problem and pain must be solved (Conklin & Weil, 1997). Specific to the COVID-19 pandemic, school districts have to comply with guidelines from the Centers for Disease Control and Prevention (CDC) and their local Departments of Health. School districts must

procure specialized safety materials and protective equipment in order to remain open. While there is increased federal funding to offset these costs, the pandemic has affected the supply chain to procure such materials.

### **1.1.1 Public School Funding Uncertainty**

Funding in public education is subject to the vagaries of political forces at the federal, state, and local levels (Chignos & Blagg, 2017). School districts have no control over the first two sources of revenue (i.e. federal and state funding) and frequently have to rely on local taxes in order to raise revenue. Local revenues remain a crucial source of funding (Chetty et al., 2011).

However, to prevent the indiscriminate taxing of local taxpayers by school districts, lawmakers in this state passed Act 1 of 2006, which limits the ability of school districts to raise local funding to meet rising costs (Odden et al., 2008). For lawmakers, there is a fine balance between promoting equity for students and for taxpayers (Berne & Stiefel, 1999). There are programs that are vulnerable to cuts when budgets are faced with a funding shortfall to meet rising costs (Roza et al., 2009). These include those correlated with increased student achievement and student outcomes in schools – small class sizes, early childhood education programs, after-school activities and mentoring, teacher training and professional development, and arts programming (Berliner, 2013).

The local community plays a significant role in the challenges with revenue generation in public education funding and with collaborative efforts to ease funding challenges (Berne & Stiefel, 1999). The economic uncertainty with COVID-19 makes it challenging to increase local revenue, and the ability to raise property taxes varies among local school districts (Augenblick et al., 1997).

### **1.1.2 Rising Public School Costs**

Another factor that affects school districts is mandated costs, such as pensions for employees. A briefing paper from Keystone Research Center showed that state funding has not kept pace with rising costs, such as pensions (Price, 2018). In a Pennsylvania School Business Officials (PASBO) survey, mandated cost increases ranked as one of the top three drivers in 2019-20 school district budgets. A major area of cost growth for the 2019-20 school year reported by the PASBO survey was special education costs. Special education services to eligible students are determined by state and federal mandates, and school districts have minimal control over these costs (Weatherly & Lipsky, 1977). Special education student enrollment and corresponding costs incurred for such specialized services vary by school district.

### **1.1.3 Declining Enrollments**

Declining student enrollment is an important factor that further complicates traditional public school district costs. The number of students attending traditional public schools increased by 1.3 million between 2000 and 2005, and then decreased by 0.7 million between 2005 and 2017, according to the National Center for Education Statistics (NCES, 2020). School districts receive basic education subsidies in this state based on a measure called average daily membership (ADM). This measure refers to the average number of students enrolled in a school district. Any fluctuations with ADM will affect state funding for school districts. COVID-19 has adversely affected enrollments in kindergarten and pre-kindergarten nationwide (NPR, 2020). State-wide data show that student enrollment (Appendix A) in public school districts in Pennsylvania continues to decline (Pennsylvania Department of Education, Division of Data Quality).

Compounding declining enrollment in traditional public schools is the growth of enrollment in publicly funded charter schools. Charter school enrollment from 2000 to 2017 has

increased from 0.41 million to 3.1 million (NCES, 2020). When a student enrolls in a charter school, the home school district loses its subsidy from the state for that student, further constraining funding. The problem is not just the loss of the state subsidy but the fact that the district must now pay tuition for that charter school student, thereby increasing public school costs (Act 88, Public School Code). Since COVID-19, enrollment nationwide in public school districts has declined (NPR, 2020) while fueling increasing enrollments in cyber charter schools (Education Week, 2020). School District #1 student enrollment in cyber charters doubled in 2020-21 compared to 2019-20, resulting in increased unbudgeted expenditures of approximately \$600,000.

## **1.2 The System**

School District #1 is a small suburban school district with minimal diversity in demographics (see Appendices B and C). The district has traditionally had funding reserves thanks, in part, to local tax revenues generated by a vibrant commercial hospitality corridor. Budget expenditures have increased an average of 3 percent every year since 2010, while enrollment in the district has continued to decline from approximately 1,000 in 2010 to the current 927 students.

However, the budget faces shortfalls because estimated expenditures outpace estimated revenues in the school district. During COVID-19, revenues from the usually vibrant commercial corridor comprising hotels and restaurants have dropped by 30 to 40 percent according to the Bureau of Labor Statistics (Statista, 2020). The school district cannot rely on this local revenue funding stream as it did in the past.

The district also faces rising mandated costs associated with retirement, special education, transportation, and charter school tuition, which continue to compound and rise along with



healthcare costs. The district has a higher than state average number of special education students with needs requiring intensive autistic services (Table 1).

**Table 1. Special Education Services Data Comparison as of 2018**

|  | <b>School District #1</b> | <b>State</b> |
|--|---------------------------|--------------|
| Enrollment   | 927                       | 1,721,195    |
| Total Special Education Enrollment                           | 160                       | 290,986      |
| Percent Special Education                                    | 17%                       | 17%          |
|  | <b>School District #1</b> | <b>State</b> |
| Percent of Special Education Enrollment by Disability Autism | 14%                       | 11%          |
| Emotional Disturbance  | 9%                        | 9%           |
| Other Health Impairment                                      | 18%                       | 15%          |
| Specific Learning Disability                                 | 36%                       | 40%          |
| Speech or Language Impairment                                | 16%                       | 15%          |

Dipping into district reserve funds to combat rising costs takes resources away from capital projects and facilities improvements (Thompson, Crampton, & Woods, 2019). The condition of school facilities impacts student learning (Earthman, 2012), especially with learning environments and specialized facilities needs of students with disabilities.

School District #1 and another district in close proximity (within 10 miles) with similar small size (approximately 1,000 students each) both face similar budgetary pressures. According to 2018-19 data from PDE, they rank #41 and #38 respectively in costs per student among 44 districts in the region. Both districts could collaborate or share many resources in order to mitigate financial pressures.

Any collaborative effort between school districts is usually formalized by approval from a school district's board of directors. The ensuing savings or program expansion as a result of shared collaborations is reflected in the district budget. During the budget planning and preparation process, districts preview, plan, and prepare budgets to ensure that resource allocations sustain student programs and other expenditures in the following year, based on local, state, and federal revenue assumptions (Everett, Lows, & Johnson, 2003).

### **1.2.1 Organizational Analysis**

Budget planning and preparation in all school districts has to align with regulations prescribed by the state legislature (PA General Assembly, Act 14, 1949). Balancing school district budgets annually requires curtailing programs/staff, raising local taxes, and/or dipping into reserves when expenditures outpace revenues. School District #1 and a neighboring school district experience declining student enrollments and increasing costs. But the districts have not engaged in purposeful collaboration even though such efforts could reduce costs. What are the inhibitors to sharing resources between small neighboring school districts?

According to the mission statement of School District #1 and data from informal interviews (Appendix B), the mission would be allocating financial resources to ensure effective student programs for all students. However, feedback from informal interviews with administrators, staff, and community suggest there are forces that obstruct both the district's mission and the efforts to mitigate rising costs. For example, collaborating with stakeholders and optimizing resources can help fulfill the district mission, but the bureaucracy and expensive initiatives can impede the process. (See the Polarity Map in Appendix D, which illustrates the balance required among competing forces.)

The problem of practice (PoP) is further informed by data from empathy interviews with stakeholders. They evoked stories and explored emotions (Empathy Field Guide, Institute of Design at Stanford) illustrating the opposing forces fueling the problem (Appendix F). The interviews illuminate the root causes and effects of a lack of collaboration in School District #1. A cause and effect analysis of my PoP reveals primary and secondary drivers ranging from fiscal pressures rising from mandates to turf control or ownership with programs that influence the problem space. (See the fishbone diagram in Appendix E for an illustration of these drivers.) Studying the system and analyzing the causes from the fish bone diagram will help fine tune operational processes and relationships in School District #1.

Since I joined the Ed.D. program in 2018, I have been studying my workplace and trying to understand its closely held beliefs and practices (Heifetz et al., 2009) and the norms, processes, and structures (Bennett & Provost, 2015) in place with my PoP. This process involved reviewing the root causes by having informal conversations with district stakeholders, focused interviews with administrators, and a literature review. One of the common themes that emerged was the lack of time (Duncombe, 2007), knowledge, or initiative on the part of administrators to pursue collaborations to reduce costs.

In an effort to enhance program capacity with collaborations and relieve budgetary pressures, I explored sharing mutually beneficial programs with neighboring districts. As a central office administrator charged with maximizing scarce fiscal resources (Mintrop, 2016), I formalized with both the superintendents, after reviewing contracts with the solicitor, student program opportunities between School District #1 and a neighboring school district (School District #2):

1. Athletic program – Student athletes from School District #1 join a sports team in neighboring School District #2. School District #2 hires coaches and makes all decisions about the program. School District #1 splits costs of coaching salaries, transportation, and equipment based on a per student cost. Both boards approved a formal agreement in 2018-19. This venture has been successful as it offered another sport for School District #1 students. It also saved the district operating costs in the amount of approximately \$5,000. The district incurred total expenditures of approximately \$2,500 by sharing this program with School District #2 and maintained operational efficiency. This program is vulnerable to budget cuts without a formally executed collaboration.
2. 2019 Extended School Year (ESY) program – School Districts provide ESY services for special education students beyond the regular 2019 school year. School District #1 ran the program (for six weeks in the summer, for four hours each day). The district has a higher-than-state-average enrollment of special education students with certain intensive needs. Cost per student based on program costs was determined. Both boards voted on the agreement for summer 2019. However, no student attended from School District #2 because the other parents wanted full day services. This is an annually mandated program approved by the school board.

The two collaborations yielded mixed results. The athletic program was successful. The overall cost savings with the athletic program were minimal. However, the two districts did review other opportunities with another athletic program. But there is no formal agreement in place. The second program did not meet the needs of School District #2 and special education costs continue to increase in School District#1, straining the PoP further.

### 1.3 Stakeholders

Semi-structured interviews with key administrators in my district, and empathy interviews with teachers, board members, a parent, and administrators. revealed that they each want financial resources allocated to meet their needs. The business operations in a district are neither simple nor predictable and seek “mutually transforming power” (Sherman & Torbert, 2000) from multiple stakeholders to propel initiatives forward. Unless stakeholders in School District #1 are educated and involved in initiatives with sharing resources, strong restraining forces can extinguish the driving forces, as illustrated in the Force Field Analysis map (Appendix F) and Stakeholder Chart (Appendix G).

The stakeholders for the purposes of this inquiry were superintendents who make key decisions in their districts within this southwestern region. Their leadership influences all aspects of the school district, including, but not limited to, fiscal management, curriculum and instruction, human resources administration, educational program offerings, and relationships with the community. With the pandemic, they have the added responsibility of making decisions regarding preparedness and response efforts, purchasing technology to ensure equity and access, providing mental health and support and other qualifying materials related to COVID-19 (Pennsylvania Department of Education, 2021).

School business administrators are usually concerned with the total fiscal structure of the district (Everett et al., 2003). However, with the pandemic, they emerged as strategic partners to superintendents (Webb & Norton, 2003). For instance, the business office functions of purchasing and receiving equipment and supplies related to technology or safety were vital for school re-openings during the pandemic. Also, if safety equipment or supplies were not available, it affected compliance with mandates from the CDC or local departments of health with school re-opening.

## **1.4 Statement of the Problem of Practice**

Declining enrollments and rising costs place increasing pressure on financial resource allocations, affecting student programming in district school budgets. My Problem of Practice (PoP) is increasing costs in School District #1.

Mintrop (2016) describes problems of practice as having “focal or core practices that need improvement” (p. 25). The PoP needs to be addressed and improved upon. If not, it will continue to place downward pressure on financial resource allocations in the school district, affecting student programming.

It is framed by reviewing the larger context of public funding, costs, enrollments, and the impact of a pandemic for public school districts. Public education operates in a highly regulated sphere with historically diminishing funding for budgets competing with increasing resource allocations (Baker, 2014; McClure & Krekanova, 2016). The PoP examines the unique factors that inhibit sharing between school districts with increasing costs.

## **1.5 Review of Supporting Knowledge**

A literature review will help clarify the guiding questions below that frame the problem of practice (PoP):

1. What are working models of examples of shared resources across district boundaries, and what have been the lessons learned?
2. How might shared resources (e.g., cooperative purchasing, educational programs) impact districts?

3. What factors might influence the type and scope of potentially shared resources?

### **1.5.1 Question 1**

**What are working models of examples of shared resources across district boundaries, and what have been the lessons learned?**

Urahn (1988) defines collaboration across boundaries as the voluntary sharing of resources between multiple districts. Resources can include personnel, including students, teachers, administrators, support personnel; physical plant and equipment, such as facilities and technology equipment; or back-end operations like transportation and procurement of supplies. They may also include specialized instructional services such as distance learning and higher education coursework.

A Deloitte research study illustrated that the most basic forms of sharing are mutual agreements between districts that allow communities to share assets and avoid duplication (Deloitte Research, 2005). One of the motivations for sharing services is to save money. According to the study, there is evidence that sharing assets and services can save money. Sharing services can also help districts avoid consolidation, though Beem (2006) suggested that sharing some administrative services may actually be a precursor.

#### **1.5.1.1 Programs and Personnel**

There are numerous working models of program and personnel sharing among districts. Jimmerson (2006) found California rural districts implemented collaborations with professional development to address declining enrollments. Bowden (1994) found that to enhance curriculum, four districts voluntarily cooperated to improve school program offerings through technology.

Berliner (1990) found that many small rural school districts share educational programs with foreign languages and sciences. Her study, in North Dakota, revealed a unique program from a group of rural districts sharing a woodworking van equipped with a teacher, tools, and work space.

Research also provides evidence of shared principals and superintendents between districts (Decker & May, 1989; Decker & Talbot, 1991). Students participate in shared programs with athletics or extra-curricular activities or academic programs (Berliner, 1990; Ditzler, 1984). According to Galvin (1986), resource and services sharing included special education programs, gifted programs, and agricultural and vocational programs in his study of rural schools in New York. Regional cost/service sharing or the informal sharing of services could help alleviate budgetary pressures. Alexander and Rogers (1988) found such district cooperatives in Illinois. Research also highlights that districts engage in sharing because of fiscal distress, depending on the shared services (Rees & Woodward, 1998).

#### **1.5.1.2 Resources and Services**

District program services, such as transportation or food service, can also be shared. Howley et al. (2012) studied four districts collaborating in Ohio. Shared services varied from educational programs central to the mission of the districts, to sharing ancillary services with district operations. In another study on school district consolidation, Mendez (2003) reported that sharing transportation for special education students saved one school district in New Jersey approximately \$200,000. The district partnered with a pool of other districts to share transportation services. Darden (2005) found rural districts in New York State shared resources with utilized joint purchasing and bidding and reaped savings. Berliner (1990) found that health services can also be shared between districts, as can nurses and bus drivers in remote, rural districts. Districts may also share facilities for athletics, supplies, and equipment such as snow ploughs.



### **1.5.1.3 Distance Learning**

Working models of distance learning help rural and small schools offer additional programs. Clark (1996) found that using technology was an effective educational practice. It provides a cost-effective way to deliver high quality instructional programs for students in remote districts.

Similarly, Berliner (1990) found a working model with distance learning between districts in Kansas - Hillsboro and Marion. The districts utilized distance learning by sharing one staff member between them. The medium of instruction varied, with live interactive sessions or taped sessions in classrooms across districts. The shared program helped school improvement needs in one and enhanced curriculum of the other. The Louisiana Department of Education (2003) commissioned a study. It found that districts in a shared distance learning program had access to student programs that they would not have had the ability to access independently.

### **1.5.1.4 Higher Education**

There are working models of higher education partnering with school districts or clusters by providing college credits for classes taken. Berliner (1990) found an arrangement with a local community college in Iowa where high school students attended classes for half the day. The immersion of college classes in a high school schedule varied in content from agriculture to vocational training. Walters (2005) in central Arkansas identified services such as dropout prevention programs, professional development, and school improvement assistance provided by university to districts in remote areas. The study focused on aligning performance initiatives required by the legislature with school improvement and fiscal accountability.

### **1.5.1.5 Partial Reorganization**

Partial reorganization is also a form of sharing resources to avoid consolidations. In her study on inter-district sharing, Berliner (1990) found three models – sharing high schools, developing student clusters, and instituting student exchange programs. The advantage for small districts with a shared high school is that they avoid the cost of operating their own high schools. Clusters initially emerged as a school improvement effort by the state. They are a formal arrangement between districts for educational and administrative support. Student exchange programs for tuition is common in rural and remote areas. The tuition varies depending on the district's size and wealth, used to calculate a tuition rate. Berliner (1990) found that tuition exchanges are a common practice in remote areas such as the Utah-Wyoming border and upstate New York. Monk and Haller (1986) found that the tuition could vary with increase in aid corresponding to the increased enrollment in the district that runs the program (Monk & Haller, 1986). Examples of partial reorganization in small remote schools were shared by Ditzler (1984) and included sharing academics, distance learning, and extra-curricular activities.

Jimmerson (2006) found Joint Power Agreements (JPA) encouraged by the North Dakota legislature. Each district has a representative on the JPA board, and decisions made collectively address individual district needs. The services ranged from administrative support with grant writing and professional development to student program support (North Dakota Department of Public Instruction, 2007).

A targeted incentive is offered for districts to consolidate or build the framework with other measures, such as New Jersey's share-a-superintendent program. (Boser, 2015). According to Beem (2006), while such sharing of superintendents results in saving costs, it can be a precursor to a merger between the districts.

### **1.5.1.6 State Mandates**

Collaborative arrangements can also emerge through either state law or court orders. The structure of these inter-district programs is designed to increase integration from high poverty and racially isolated schools by allowing students to transfer across school district boundary lines. According to research by Finnigan et al. (2015), such across-district magnet programs could involve coalescing students from different districts into a single building to address racial isolation and socioeconomic status. The study involved the Omaha, Minneapolis, and Hartford regions. Most of the programs are “one-way” programs, allowing students living in high poverty, segregated, urban districts the chance to attend more desegregated or racially diverse suburban schools. However, according to research, two-way programs in Milwaukee allow inter-district transfers between urban and suburban districts. The urban students can transfer to suburban districts, and suburban students can transfer to districts located in the city.

In another context, Foster and Barnes (2012) found engagement through capacity and purpose rather than a state mandate or court order. They studied a three-region collaborative, drawing students from Rochester, New York; Omaha, Nebraska; and Minneapolis, Minnesota. The common goals involved multiple layers of capacity and cooperation, and the degree of authority given to the regional collaborative board by the local districts determined its success (Weir, Rongerude, & Ansell, 2009).

This form of sharing among districts by state or court order is not well publicized. For example, an unintentional effect was the state transfer law in St. Louis allowed students from the mostly black Normandy school district to attend Francis Howell, located in a wealthier, white district. The black students had access to the same quality instruction and the quality teachers that the white students had and thrived (NPR, 2015).

### **1.5.1.7 Intermediate Units**

According to PASBO, Pennsylvania has 29 intermediate units (IUs) that provide instructional support and other services to school districts within their boundaries. The legislature established Intermediate Units to provide cost-effective programs. The size of IU and the type of programs offered by the IUs vary across the state. Some services include special education programs, professional development programs, cyber education programs, and joint purchasing programs with utilities. In addition, the IU serves as the liaison between school districts and the Department of Education.

Research by Berliner (1990) found inter-district sharing facilitated by the Intermediate Units (IU) that exist apart from the districts and facilitate inter-district sharing. The study included IUs funded by the state to assist districts with curriculum and staff needs and professional development. The IU provides specialized services to small rural districts with few students. Without an IU, the districts may not be able to afford such mandated services on their own.

The research also highlights that with the pooling of resources and needs of multiple districts in the region, the IU can provide help with programs and services. For example, a study in Arkansas by Monk and Haller (1986) found that the intermediate units assist schools with personnel (e.g., teachers who travel between buildings). They also helped with programs (professional development for staff encompassing teachers and administrators, curriculum and grant writing assistance, and centers for early childhood and adult education) and materials (mobile centers related to instruction). The research also found joint pooling with districts for print shop services and supplies with cooperative purchasing.

Research by Berliner (1990) also found in Virginia cooperatives facilitated by the IU offer programs for visually impaired, hearing impaired, and disabled students. In Massachusetts, a

cooperative offers vocational training programs to operate a restaurant in collaboration with regional businesses and industries.

Intermediate units in this region offer student programs (ranging from academic to alternative education programs); administrative services (legislative updates, initiatives from the department of education, special education, technology support, etc.); and professional development programs. They support community engagement as well. There is also evidence of innovative programs such as “transformEd” that assist staff to engage in collaborative practices. The IU’s technology lending library helps districts meet a shifting education landscape (Allegheny Intermediate Unit, 2021). The IUs help districts, both large and small, offer the same educational opportunities whether located in rural or urban settings. However, Monk and Haller (1986) found that some districts overlook gains made with equity because of a loss of programmatic control.

#### **1.5.1.8 Municipalities**

Cooperative agreements also exist between schools and municipalities to use parks or playground facilities, swimming pools, and tennis courts, among other facilities. In addition, mandates require intergovernmental cooperative agreements between police departments and schools. They are for emergency services. In practice, most local governments have formal and informal agreements to lend support to each other. Agranoff and McGuire (2004) provided in-depth discussion of collaboration in public agencies. However, other forms of cooperation between public agencies and municipalities are not the focus of broad attention of current research (Girard et al., 2009).

### **1.5.1.9 Youth Programs**

School districts provide spaces for outside organizations to collaborate and operate youth programs, such as after-school sports, academic activities such as chess, or after-school care such as the YMCA. Such youth programs are sometimes shared across district boundaries.

The research above illustrates that the sharing of resources between school districts does exist. Moreover, there could also be informal sharing of resources between school districts that has not been documented nor received scholarly attention.

### **1.5.2 Question 2**

**How might shared resources (e.g., cooperative purchasing, educational programs) impact districts?**

Literature is available on the effectiveness of programs and efficiency of operations by utilizing shared organizational arrangements (Ditzler, 1984; Galvin, 1986; Schmidt, 1983; Sederberg, 1985). Overall, research indicates that sharing resources generally reduces school district costs, bolsters students and community outcomes, and improves teacher performance. However, the literature also suggests that some districts lose control over programming through collaborative agreements. In addition, the financial savings accrued through them does not address systemic inequities and the associated budget issues within the educational system.

#### **1.5.2.1 Cost Reductions**

A body of evidence suggests that collaborative agreements between individual districts have reduced costs by streamlining expensive services between school districts and have allowed districts to continue providing vital services despite tighter budgets. According to Ditzler (1984), small districts stretch resources and save by sharing transportation, classes streamed with cable television, and extra-curricular activities. For example, many central districts in Maine and

California reduce administrative costs and streamline administrative practices by sharing superintendents. Berliner (1990) explored other examples of cost-reduction measures, including an inter-district alternative school in Alabama, a substance abuse prevention program between districts in Kansas, and joint curriculum planning activities in Idaho and Wisconsin.

According to Monk and Haller (1986), advantages are comparable to those experienced with the private sector by accessing services at a competitive rate through sharing resources. School districts are also able to reap cost savings with cooperative purchasing of office supplies through an IU. Partnerships with Allegheny County School Health Insurance Consortium helps thousands of school district employees avail themselves of low-cost, premium health insurance plans in Pennsylvania. Outside district cooperative agreements with local businesses for internships, or collaboration with on-the-job training, help students get credit and extend goodwill and publicity for the local organization (Berliner, 1990).

A feasibility study to share resources among districts commissioned by the Office of Performance Evaluations in the Idaho Legislature revealed that the primary motivation was cost savings through leveraging resources. Sharing resources helped districts to provide better services to staff and students that they could not offer independently (Idaho Legislature Office of Performance Evaluations, 2009). Functions shared among districts, including professional development, joint purchasing and sharing of supplies, and student transportation were identified as functions that could be shared among districts. Overall, the research shows that sharing personnel in collaborative programs, including teachers, administrators, and support personnel, helps alleviate costs. Additional collaborations with cost savings are observed in transportation, maintenance, and food services.

### **1.5.2.2 Improved Educational and Community Outcomes**

According to Duttweiler and Hord (1987), the effective administration of school collaborations among school districts influences community cooperation. Keeping community schools open improves educational opportunities and supports local autonomy. By pooling scarce resources, districts increase their overall enrollment base. Students gain access to expanded curricular and extracurricular options. Collaborations help students attend a specific course or an entire grade level in another district. In addition, the home district could save transportation expenditures as there is no transportation to the district that offers the shared program.

Reforms implemented by school districts through collaborative agreements can also improve the academic achievement of their students. For example, school districts in Minnesota have implemented strategies like distance education, a four-day school week, collaboration, consolidation, and open enrollment, all of which contribute to reducing facilities' costs (Abshier et al., 2011; Arnold, 2004; Center for Policy and Development, 2009). Other research indicates that distance learning has the potential to improve educational quality and provide additional courses for students in small or rural districts that may not deliver the courses on site (Bilodeau et al., 2009). According to Berliner (1990), partial reorganizations such as collaborative agreements can also help respond to school improvement needs.

### **1.5.2.3 Stronger Professional Development for Educators**

Evidence suggests inter-district collaboration can improve educator performance. For example, in South Dakota, four tiny districts formed a cluster to expand curriculum when faced with enrollment declines and budget constraints and pressures (Berliner, 1990). Collectively, the districts funded staff such as speech therapists, and administered programs ranging from driver education to software exchange. Funding also helped the parent helpers' organization, adult



courses, and teacher in-service activities. Other successful cluster activities included joint curriculum planning, in-service training, student sports, community education programs, and coordination of itinerant specialists (Mid Continent Regional Educational Laboratory, 1985).

Clusters also bring together staff members in isolated, rural school districts who could be the lone teachers in their grade levels. The cluster across district boundaries creates common spaces for staff to share issues, problem solve, and collaborate on teacher practices. This system promotes extra-curricular and professional development offerings and achieves cost effectiveness. They are most prevalent in regions that have contiguous small communities committed to preserving and improving the local schools. For example, Rees and Woodward (1998) described how community members in two Ontario districts supported shared services as a way to retain their community schools while at the same time bringing the two communities closer together.

Clusters also benefit districts by bridging the distance between communities. They facilitate inter-district contact among teachers and create opportunities for administrators to discuss common problems, leadership styles, and their application of effective school research. However, it requires coordination of resources and communication with multiple stakeholders. Goodwill alone does not form clusters; instead, they need a joint commitment to sharing resources for mutual benefit.

#### **1.5.2.4 Reduced Local Control**

Despite its considerable financial and pedagogical advantages, the principal objection to inter-district collaboration is the perception among district stakeholders that such agreements reduce local control. In 1974, Massachusetts legislation allowed districts to form voluntary educational collaboratives in order to provide specialized services at a low cost. Subsequent study by Popper (1982) found that while local superintendents perceived a growing trend toward use of

collaborative services, they also anticipated the risk of reduced local control over services and duplication of administrative responsibilities among participating districts. Similarly, when districts send students to neighboring districts, the sending district loses all formal influence over the secondary program (Popper, 1982). A district can threaten to withdraw its students from the receiving school to increase its control over the shared program. However, the district may have few options or no alternate options when dissatisfied with the receiving school due to the remoteness and small size of many communities.

#### **1.5.2.5 Logistical Challenges**

Initiating and sustaining a commitment to sharing is also difficult because of the instability of staffing and enrollments, the complexity of inter-district relationships, changing district priorities, and the expense of providing additional programs and services. From their research on rural schools in South Dakota, Heath and Vik (1993) found that sharing superintendents or principals affected instructional leadership between the sharing districts.

While sharing resources within districts has proven to be an effective academic tool, there is little evidence that it is consistently effective. Scheduling of the shared program can also be a barrier to successful implementation (Monk & Haller, 1986). It may require extensive changes in instructional strategies (Berliner, 1990). Research also suggests that the best distance learning experiences are not as helpful as the presence of a teacher and direct contact with students (Bray, 2008).

According to Berliner (1990), sharing may lead to cost-effectiveness without a reduction in overall costs. The cost increase could relate to investment in technology. However, the technology is needed to ensure that all students who might need distance learning have access leading to cost-effectiveness. Infrastructure upgrades would also enhance the teaching (Clark,

1992). For example, not all schools are wired for high speed internet connections that would facilitate distance learning (Bilodeau et al., 2009). Overall costs with a shared distance learning program could therefore increase.

#### **1.5.2.6 Failure to Address Underlying Inequality**

Collaborative agreements also fail to address underlying social and policy trends in the education system that are primary drivers of school budget fragility. Some researchers have noted that increasing costs due to the expansion of charter schools have negatively affected district enrollments (Ericson & Silverman, 2001) and exacerbated racial isolation (Frankenberg, Siegel-Hawley, & Wang, 2011). Also, school finance reform, which has helped to equalize tax bases in these contexts, often leaves other equity problems largely untouched. For example, societal challenges in addressing disparities with social welfare, health, housing, and community services will also impact educational opportunities (Allison et al, 2009). According to Ryan (1999), urban core districts in many other contexts have been affected by similar dynamics - declining tax base, increasing poverty, and inequitable finance systems - and have filed school finance lawsuits aimed at addressing these inequities. Collaborative agreements do not address these underlying trends.

Inter-district agreements may even amplify social and racial inequities, as is the case with the state transfer law in St. Louis. The district that loses students to a wealthier community still has to pay for that student's education. For example, the impoverished Normandy district sent more than \$1 million a month to a whiter, wealthier district, spending a total of \$10.3 million for the year. The Normandy district was close to bankruptcy, and the state took over. The students who left for neighboring white district Francis Howell returned back to the district as the state transfer law negatively impacted the district's finances. The educational devastation in Normandy finally got the attention of the state's legislators and the governor, and the state sent teacher-

coaches from wealthier neighborhoods. The idea was to try anything they could to keep Normandy students inside their district (NPR, 2015). This attempt at collaboration adversely impacted the Normandy district.

### **1.5.3 Question 3**

#### **What factors may influence the type and scope of potentially shared resources?**

Several factors determine the ease of successful collaborations or difficulty of sharing (Furtwengler et al., 1997; Gavin, 1986; Monk & Haller, 1986). From the literature, federal and state mandates, staff involved with the shared programs, or commitment from the districts are some of the factors that influence collaborations.

##### **1.5.3.1 Human Capital and Program Coherence**

Shared school programs are influenced by mandates, enrollments, or changing priorities of districts. Federal or state funding requirements with collaborations, declining enrollments across district, state or federal mandates with program offerings, or changing student interests can complicate the shared programs. Turnover of staff overseeing such programs affects program offerings. Lack of staffing with the shared program can lead to the disbandment of the program or affect coordination amongst districts. Shared organizational arrangements require coordination, and it can be difficult for small districts with small administrative staff to establish, maintain, and oversee the programs (Duncombe, 2007; Frase & Melton, 1992). Conversely, when the same staff members work together over time, they develop mutual trust and a common instructional and administrative vision.

For the program considered, collaboration requires a solid framework and foundation with executing formal district administrator agreements and board policy instruments between districts. Once the collaborative process works and there is an understanding of the programs between districts, administrators should expand on such collaboration.

### **1.5.3.2 Achieving a Shared Vision**

Duttweiler and Mutchler (1990) emphasized the importance of shared visions for collaborative efforts. Districts should lend individual stakeholders the opportunity to share concerns, issues, and needs periodically. Gray (1989) recommended the involvement and training of all stakeholders in the collaboration process. Data from assessments should be analyzed and shared with the program operators for refinement. Given the face-to-face dynamics and interaction vital to these programs, districts should provide adequate time for collaboration to build and flourish (Chalmers & Wasson, 1993).

### **1.5.3.3 Consensus Among Collaborators**

As districts plan and expand their collaborative efforts, they should ensure that all constituents be informed of the benefits obtained by the collaboration. Successful districts have strong agreement among the stakeholders about the purpose and implementation of the program. Such a process ensures that the relevant stakeholders are involved with planning, implementing, and evaluating their collaborative activities. Collaboration requires stakeholders working together (Nachtigal & Parker 1990) and allows a district to maintain its independence and its presence in the community (Urahn, 1988).

Sharing resources receives more community support than decisions with closure of schools or mergers with other districts (Decker & McCumsey, 1990; Jolly & Deloney, 1993). School boards agree to such arrangements to diminish the possibility of consolidation (Holmes, 1990).

#### **1.5.3.4 Mutual Benefits to Collaborating Districts**

Successful collaborations have mutually beneficial outcomes between districts. Benefits dictated by size, geographic location, and type of resources have to outweigh the costs for both districts. Economic wealth and district size can influence program sharing with larger or wealthier neighborhoods reluctant to share their resources with more impoverished, smaller communities. At the same time, the latter may feel a loss of control by sharing with the dominant larger district. Exploring strategies to increase autonomy ensures that both districts influence the program. Regularly scheduled meetings benefit both districts by increasing the amount and levels of communication and collaboration, ideally through person-to-person contact (Adler, 1994).

Districts should review expansion of existing program offerings or creation of new educational opportunities by expanding programs between communities. In districts where the only collaboration exists between the elementary, middle, or high schools, efforts should be made to expand the opportunities with other district schools. However, the most common roadblocks in districts could be logistics with geographic isolation and size (Brackenbury et al., 1990).

Program review and evaluation of collaborative activities and outcomes between the districts help to identify if agreements were reached and implemented, issues were addressed, and fiscal conditions in participating districts improved that mutually benefited both districts (Baugh, 1984).

### **1.5.3.5 Governance of the Program**

Collaboration may have districts competing for the governance of the shared program or service, or the distribution of resources. The evidence indicates that sharing resources can be successful. Still, it is more challenging when it requires extensive coordination or surrender of autonomy (such as sharing staff or combining sports teams). Long distances between districts also make inter-district relationships difficult to maintain (Berliner, 1990). Efforts to sustain sharing are influenced by school or community priorities. As the level of inter-district collaboration increases after implementing the process, districts should not lose sight of their focus with internal collaboration within their school and staff.

### **1.5.3.6 Tangible and Intangible Costs**

Sharing can generate additional tangible costs with the inception of a new shared initiative that did not exist before. Costs associated with new programs include acquiring equipment, technology, or other staff, and paying for the increased workload of those coordinating the arrangements can be substantial. Thus, distance education may require additional investment, primarily if it is an alternative to consolidation.

Long distances between districts may diminish efforts to build consensus. Additional expenses associated with sharing may be a significant hurdle for tiny communities that have few resources. Cost-effective school improvements can result in cost savings only when districts share their programs and services for a price. Studies on state education agency coordination efforts and rural delivery mechanisms have identified barriers to providing collaborative special education services. Some of these barriers are due to economics, lack of staff resources, “turf conflicts,” and political ideology, for example, backlash against the perceived costs and demands of special

education (Baugh, 1987; Farrow & Rogers, 1983; Greenan & Phelps, 1980; Helge, 1984; Schenet, 1982; Weatherman, 1983).

### **1.5.3.7 Autonomy for Small Districts**

In some districts, sharing only postpones the inevitability of consolidation (Howley et al., 2012). It has proven to be a feasible way to ensure autonomy and preserve the local school without sacrificing educational equity or operational efficiency. Educational collaboratives can evolve between the pressure to consolidate for efficiency and the need of local communities to preserve their autonomy and distinct identity. The communities in small towns want to keep schools open as they identify with the school as part of local infrastructure (Abshier et al., 2011). Rural districts, in particular, veer towards the increased use of educational collaboration, especially as they have had to face the more complex demands put upon them by the educational reforms of the 1980s (Demers, 1981; Fletcher et al., 1988; Helge, 1981,1984; Popper, 1982; Weatherman, 1983).

Collaborating with districts having considerable differences in geography and student needs can be difficult and affect autonomy. Local influence with community conflicts and differences in educational philosophies can also hinder interdependence and cooperation (Idaho Legislature Office of Performance Evaluations, 2009).

### **1.5.3.8 State Policy**

State policy is a critical factor in any comprehensive approach to address problems in education. The literature review highlights the importance of flexibility to address these challenges. For example, the shared superintendents incentive offered by New Jersey, grants for assistance in setting up inter-district distance education in Illinois, or subsidizing transportation



between districts in Iowa are state policies to encourage and foster collaboration between small districts.

States can help facilitate sharing by supporting small districts that choose to work together in order to increase efficiency and save costs by joining entities. Berliner (1990) suggested that states can help by setting policies that address inequities in the community, along with school reorganizational policies for economic renewal of the local landscape.

#### **1.5.4 Conclusions**

The bulk of the scholarly attention on sharing resources is confined to rural areas, with no prescriptive one-size-fits-all formula (Boser, 2015). Currently the relevant literature about collaborations and sharing resources among districts focuses mainly on rural midwestern school districts in the country. The paucity of available research provides an opportunity for new research on sharing resources among small districts that are not in remote areas.

It would be of interest to examine districts that successfully collaborate with multiple stakeholders and share resources over time. Dr. Diane L. Kirk, who is involved with the Superintendent's Forum and is the Executive Director of the Tri-State Area School Study Council, graciously extended her support in helping administer a survey (Appendix L) to district leaders in southwestern Pennsylvania. It helped me learn to apply working models of collaboration and resource-sharing from districts in this southwestern Pennsylvania county and their application to my PoP. This could lay the foundation for ensuing collaborations between School District #1 and other districts.

I also reviewed other dissertation studies to help with inquiry on collaborations and sharing resources in school districts. A qualitative study by Rauch (2015) to explore collaboration that ensued in four (mostly) rural school districts in Indiana showed that these districts gain from the collaboration efforts and will help better serve their students, while saving some money for their districts. Collaboration among rural districts widens opportunities for learners (Muijs, 2008).

Other scholarly research highlights communities of practice as groups of people who share a concern and interact (Wenger et al., 2002). Wenger also found that a community comes together as a “Joint Enterprise” with the domain of knowledge (Wenger, 1998). However, not much research devotes itself to factors that foster people’s voluntary willingness to share knowledge and interact (Tsai et al., 2012).

Russell et al. (2017) drew upon collaborative improvement with research about inter-organizational networks as a strategy to address complex problems. The complexity of school operations in a pandemic is unprecedented as it has emerged as a “black swan” (Taleb, 2007). Taleb used the term “black swan” to explain outliers with the financial upheavals after the last recession more than a decade ago. The pandemic is a similar outlier. It is extremely unpredictable but has an immense human and financial impact on public education.

In another study about collaborations, DeLucas (2013) researched whether economies of scale exist when school districts consolidate services to an ISD/Intermediate Unit. He found that operational programs are more amenable for consolidation or collaboration than instructional programs.

Bryk (2017) encouraged practitioners of networked communities to leverage economies of scale while still seeking to drive improvements with those working with the problem. Lucas and Nacer (2015) found that for improvement to happen, practitioners have to habitually and reliably

use their knowledge and skills in a real-world context. Research also suggests that when dealing with uncertainty in the private sector, leaders seek new data and engage in new partnerships to bolster organizational intelligence from new perspectives (Bennett & Lemoine, 2014; Johansen & Euchner, 2013).

The theory of improvement guiding this study is that pursuing mutually beneficial programs leads to improved efficiency. The aim of my inquiry and improvement effort was that by May 1, 2021, School District #1 would engage in one collaboration. To achieve this aim, I followed the improvement theory that pursuing mutually beneficial programs with other districts/agencies will save costs and improve operational efficiencies. The improvement science tools such as the Fishbone (Appendix E) gets to the root causes of rising costs in School District #1 and the causes with the Driver Diagram (Appendix H) helps build the Theory of Action.

## 2.0 Theory Improvement and Implementation Plan

### 2.1 Theory of Improvement, Proposed Change, and Aim

A theory of action is an indispensable tool for developing, verifying, and (re)adjusting theories to integrate theory with practice (Tellings, 2011). It is a multi-step process that involves stating the desired outcome (e.g., savings through mutually beneficial programs, such as cooperative purchasing between districts, and increasing or offsetting resource allocation towards student programs), and developing a theory of action. Another way to frame this is:

**If** School District #1 engages in mutually beneficial programs with other neighboring school districts, **and** administrators from School District #1 collaborate for purchase of supplies, equipment, or services, **and** accept shared responsibility and cost accountability for student programming, **and** leverage relationships with other school districts by building trust with contracts/agreements at the local level, **then** savings accrued through joint agreements should reduce costs.

Research substantiates the assumptions with the proposed theory of action:

- Parties collaborating must include appropriate stakeholders: school district central office administrators, principals, and supervisors. Some members might have competing commitments that could interfere with the collaboration. Kegan and Lahey (2011) suggested identifying challenges with the underlying assumptions driving these commitments, and to begin to change their behavior to accomplish the goals with the proposed theory of action.

- Parties collaborating should have a shared vision of the benefits of such cooperation. When fostering improvement to reach a desired outcome, City, Elmore, Fiarman and Teitel (2009) suggested deepening the work to build a strong culture with outcomes.
- The parties select mutually beneficial programs (Tyree, 2014).
- The collaborating parties accept shared responsibility and cost accountability for programs. To advance the collective good of stakeholders involved, collaborations should be guided by shared responsibility and visions (Gray, 1989).

Given the scope of such relationships, the theory of action illustrates the hypothesis that if certain actions can be accomplished, the result would lead to a more desirable state. If school districts share resources with neighboring or otherwise interested school districts, then both districts can reduce costs and improve operational efficiency. However, this also requires some assumptions and actions within both districts to obtain the desired end result.

Based on my “living improvement experiences” as a business manager and business operational areas in my “span of control” (Bryk et al., 2015); (Mintrop, 2016) the **Aim** is:

School District #1 will improve operational efficiency by May 1<sup>st</sup>, 2021, by engaging in one collaboration.

### **2.1.1 Driver Diagram**

A driver diagram helps make visible my PoP after reviewing the structures, processes, and operating norms and culture from the causal systems, literature review, and interviews with stakeholders. Primary drivers are key levers highlighting elements in the system that are general but guide the design principles with improvement efforts. The secondary drivers are key levers

that articulate the barriers, resources, culture, and attitudes that are actionable and can be changed (Bennett & Prevost, 2015).

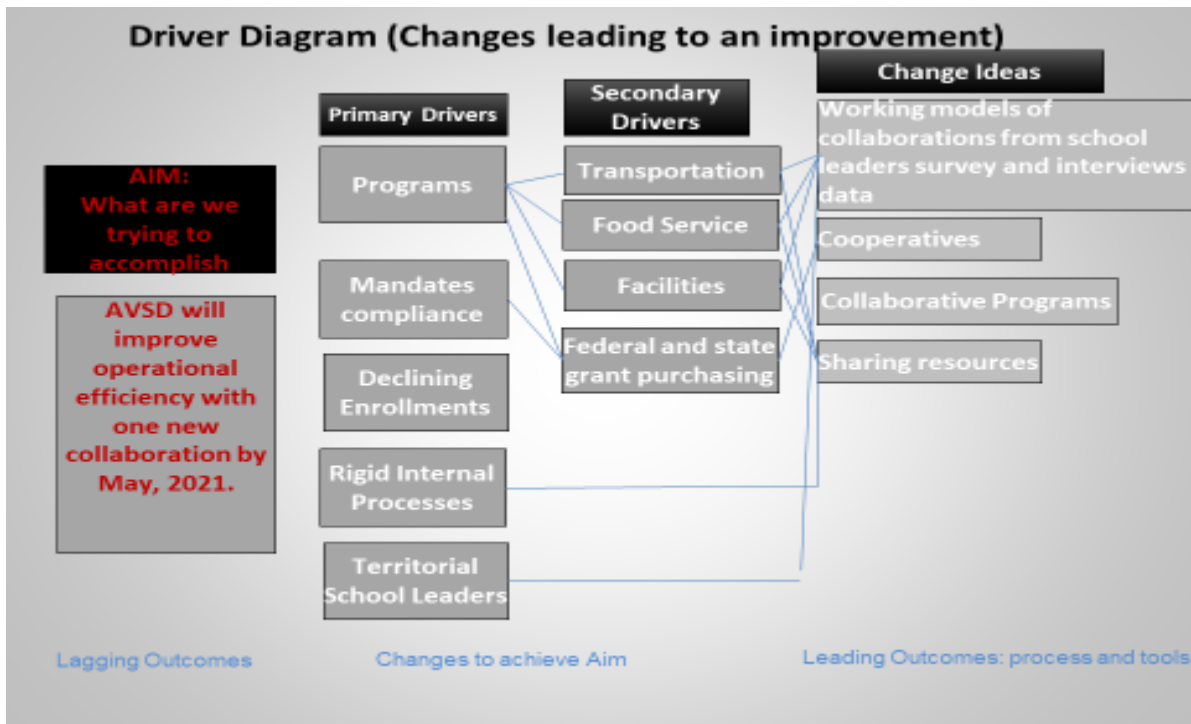


Figure 1. Driver Diagram

The primary driver that influences my aim statement is:

The cost of programs

- to improve operational efficiency. . . Why?

Programs are the primary driver encompassing all aspects of education in the district. As a lever it is a general but important function of the system.

Secondary drivers relating to the primary driver of programs:

Business operational areas are transportation, food service, facilities and federal and state grant purchasing. These secondary drivers bring about changes with the primary driver, i.e. cost of programs and makes progress towards the Aim.

The change ideas that can affect the secondary driver listed are:

Pursue mutually beneficial programs with other districts to save costs (e.g., cyber, healthcare consortiums)

Meet and build relationships with other district school leaders to establish programs or save costs with:

- i. joint programs
- ii. shared facilities, equipment, and transportation
- iii. combined athletic teams for niche sports (e.g., wrestling)
- iv. shared Extended School Year (ESY)
- v. joint purchasing and bidding

### **2.1.2 Study**

Reviewing the driver diagram, I pursued “working models from school leaders survey and interview data.” Therefore my project started with a survey administered to school superintendents belonging to the Tri-State Area School Study Council followed by in-depth interviews on the successes, obstacles, and impact of collaborations on their school districts. Such a change idea would help School District #1 pursue successful collaborations and achieve efficacy at scale (Yeager et al., 2013). This deep understanding and the sharing of institutional efficacy even during COVID -19 will help me reach the aim of one collaboration by May 1, 2021 in School District #1. Bringing about improvement in organizational effectiveness ensures resources are available for student programs.

## **2.2 Methods, Instruments, and Analyses**

The following are the methods, instruments, and analyses planned for this inquiry. The study is informed by a literature review about collaborations in school districts and my own experiences with pursuing collaborations.

A successful collaboration in the 2018-19 school year helped School District #1 achieve overall savings of approximately \$5,000 by participating in an athletic program run by School District #2. The latter also received revenues based on per pupil participation from School District #1. A formal resolution approved by both school boards offered an expansion of student program offerings in School District #1 and savings to both districts. In addition, to fulfill contractual obligations, this program was less vulnerable to program cuts during lean budget years.

However, another collaboration approved for special education services in late 2019 was not as successful. In this case, the program operated by School District #1 wasn't able to adequately meet the needs of School District #2. In the end, there were no cost savings to offset the program costs with such collaboration.

Given these mixed experiences, my plan was to learn about current collaborations among small regional school districts, learn about successes and obstacles to collaboration, and use the finding to move towards establishing collaborations in order to meet growing financial challenges in School District #1.

### **2.2.1 Stakeholders**

The stakeholders involved in my inquiry were superintendents in southwestern Pennsylvania. The information gathered from the inquiry assisted me in learning about



collaborations among school districts in the region. It helped to engage in such collaborations with other districts to address my problem of practice (PoP) of increasing costs in School District #1. Additionally, I hoped that the results of the inquiry would be useful to other school leaders looking to address financial challenges in their own school districts.

### **2.2.2 Participants**

The participants in my inquiry were school leaders from the Tri-State Area School Study Council (Tri-State) membership. Tri-State is a renowned organization that assists school districts with legal and administrative issues in Western Pennsylvania. The organization is led by Executive Director Dr. Diane L. Kirk, who is a former school superintendent and currently a faculty member at the University of Pittsburgh. The organization boasts over 70 school district members and also includes former school leaders, professors, and experts who specialize in matters related to education.

The sample for my study was drawn from the Tri-State membership whose districts have an enrollment capped at 2,500 students. This enrollment is close to the enrollment in School District #1. Confidentiality was maintained with all participants and their feedback by assigning pseudonyms (e.g. Superintendent #C in School District #C.)

### **2.2.3 Inquiry Design**

The study was IRB exempt. I utilized a mixed methods approach commencing with an open-ended survey to Tri-State school leaders (of school districts capped at enrollment of 2,500 students) to gather information about collaborations among school districts in this southwestern

Pennsylvania region. The survey was developed and distributed via Qualtrics software with an introduction to my inquiry. I had tested the surveys with five volunteers (including peers and adviser) as recommended by Perry et al. (2020). As a result of this process, I included a force field for contact information if a survey respondent gave consent for contact.

Dr. Kirk agreed to distribute the survey electronically to school leaders. I had initially planned to cap the district size but Dr. Kirk encouraged me to consider the experiences of school leaders in larger school districts as well. After consulting with her to get a better response, the survey was sent to all districts instead of the original plan to cap enrollment at 2,500 students. Participants had three weeks to respond. The survey sought demographic information and open-ended questions and included the following introduction:

*Dear Tri-State Council Member*

*My name is Hamsini Rajgopal, and I am the Business Manager at the [REDACTED] School District. I am also currently a student in the Doctoral Program (Ed. D, Education Leadership) at the University of Pittsburgh. I am contacting you to request your help with my research.*

*As some background, I have served in various central office administrative positions in three different school districts, including as Acting Superintendent. The broad purpose of my research is to study how shared resources and collaborations might benefit school districts through cost savings or improved processes. I believe that this work is timely in light of the financial crisis being faced by public school districts today with COVID-19.*

*If you are willing to participate, please click on the following link: \_\_\_\_\_. The survey has four questions. All responses will be confidential, and your participation is completely voluntary.*

*I am also happy to share my final results or findings with you. If you have questions, I can be reached at [HAR46@pitt.edu](mailto:HAR46@pitt.edu) or 412-\_\_-\_\_.*

The survey asked for the following information:

*Name of district: District enrollment:*

*Name: Current Position:*

*Years of experience in current district Years of experience as an educator*

- 1. Have you engaged in collaborations or sharing resources with other districts?*
- 2. Were any of the collaborations successful?*
- 3. What financial impact did the collaboration have on your school district?*
- 4. What barriers or inhibitors to sharing resources with other districts have you experienced?*
- 5. Are you available for a follow up phone interview/virtual meeting?*

*Contact Information:*

The survey instrument helped in gathering evidence of and information about collaborations in this southwestern Pennsylvania region. It captured demographics of participants, working models, obstacles, and the financial impact in learning to achieve the aim (Bernhardt, 2017). The response rate from the surveys was 30 percent, or 23 participants. According to Lefever et al. (2007), a web-based survey can reach a large but defined participant population. Questionnaires are a valid way to determine and compare changes in perceptions, while interviews allow for a greater understanding of the nuances of the topics and responses (Bernhardt, 2004). I coded the survey data to find themes and patterns about information relating to collaborations or sharing resources between districts. I finished the survey and conducted seven individual interviews with volunteer participants to gain deeper insight into collaborations in the participants’

school districts. The selection of interview participants was not purposeful. All seven responded back when contacted. Based on the themes that emerged from the coding, I refined the questions for the one-on-one interviews to help me dive more deeply into each related question from the survey. Virtual meeting/phone interviews allowed for more enriched conversations on an individual basis. The interviews were recorded using the Iphone recording app. I conducted thematic analysis to identify emerging themes. I used the interview notes first to identify initial themes and then the interview transcripts to supplement the analysis further. As a final measure, I planned an analysis of expenditures or cost analysis of collaborations based on information shared during the seven interviews. This would have triangulated the data collection, but I was unsuccessful in attaining this with my inquiry.

**Table 2. Triangulation of Data**

| Questions   | Tri-State Survey | Interview transcription | Interview Notes | Expenditure Analysis |
|---|------------------|-------------------------|-----------------|----------------------|
| What are working models of collaborations or sharing resources?                         | X                | X                       | X               |                      |
| Which collaborations were successful and the financial impact?                          | X                | X                       | X               | X                    |
| Any inhibitors or barriers to collaborations or sharing resources with other districts? | X                | X                       | X               |                      |

Member-checking during one-on-one interviews to review responses received from school leader surveys ensures the validity of the survey data and allows interviewees to expand upon their

written responses (Patton, 2014). The open-ended questions and follow-up probing questions helped me acquire more detail about the participants' experiences with collaborations or sharing resources in their school districts. The questions were the same for all participants in the interviews to ensure consistency and validity of data. However, with the semi-structured interview format, I allowed the conversation to veer from the script when it seemed productive to do so. Any other information shared was recorded on separate notes.

I conducted the interviews as a business manager with this inquiry. Perry et al. (2020) cautioned identity positionality either internally or externally with research. I previously served in the position of acting superintendent, so I was mindful of bias when collecting data. When conducting qualitative research to ensure trust with research findings, Shenton (2014) recommends that findings emerge from the data and not from a researcher's own predispositions.

#### **2.2.4 Analysis**

Data collection and analysis can be an on-going process (Merriam, 2009). It also affords the opportunity to refine the data collection and gather more reliable and valid data. After gathering the data from interviews, I transcribed the interviews using transcription software Otter.ai and listened to the recordings to verify the accuracy of the transcripts. Throughout this process I wanted to be vigilant with note taking during interviews, jotting down comments to narrow the focus of the study (Bogdan & Bilken, 2007). However, it was extremely hard to take notes while monitoring the recording on the iPad and talking on the phone. In the absence of face-to-face or virtual meetings, I was also unable to take note of non-verbal clues or expressions.

I analyzed each interview using an Excel spreadsheet that contained each of the main themes I explored in my research, described below (Table 3). If it included mention or discussion

of one or more themes, each theme was coded multiple times. Additional themes were added during the process of transcription of data analysis, assigning a separate code in order to better look for patterns relating to collaboration. Saldaña (2011) described this process with qualitative research as deductive (predetermined from scholarly research) and inductive (emerging from review of the data collected) coding.

**Table 3. Data Categories and Themes**

| Categories  | Phrases that could identify a theme   |
|---|---|
| 1. Collaborations among school districts                | Anything that relates to collaborating or sharing resources among school districts<br>Example:<br>“Shared transportation services”<br>or<br>Sharing resources helped both districts |
| 2. Successful collaborations                            | Anything that relates to continued collaboration among districts or positive engagements<br>"Cost savings"  |
| 3. Barriers or inhibitors to collaborations             | Anything that relates to a hindrance to sharing resources or a negative with collaborations<br>“Turf control”<br>“No time”  |
| 4. Willingness to collaborate during financial distress | Anything that relates to sharing or collaborating during budgetary stress<br>“Budget cuts”<br>“Eliminating programs”  |

I dove deeper to gather data on how often the themes emerged and the connections between them. But I was unsuccessful in gathering cost data from the seven interviewees to conduct an expenditure analysis. My plan was to create a separate expenditure analysis sheet and share a list of any identified cost savings by a district as a result of the collaborative activity planned. Such analysis would help me further connect the themes with my literature review guiding questions:

1. What are working models of collaborations or sharing resources?
2. What factors may influence the type and scope of potentially shared resources?
3. How might shared resources and collaborations impact districts?

The timeline for my inquiry is depicted in Appendix H. Based on the collective findings from the literature review, Tri-State survey, and one-on-one interviews with three school district leaders, additional improvements and change ideas could generate additional collaborations to reduce costs between School District #1 and other districts in the 2021-22 school year.

## **3.0 Inquiry Results**

### **3.1 Results**

School leaders are instrumental in encouraging collaborative and cooperative efforts in school districts (Uxer, 1982). The leaders, for the purpose of this study, are from member districts in the Tri-State Area School Study Council. This chapter focuses on data gathered from regional school districts in this southwestern Pennsylvania region about current collaborations among school leaders. The objective is to learn from school leaders about successes and obstacles to collaboration, and move towards establishing new collaborations in order to meet our district's growing financial challenges.

Data were drawn from surveys and phone interviews. The goal was to identify the lessons learned with collaborations (from the surveys and interviews with school leaders) and my own experiences with collaborations. The data include primarily qualitative measures to formulate a more complete understanding of the participants. Baugh (1998) found that financial data alone is insufficient when reviewing collaborations.

#### **3.1.1 Participant Demographics**

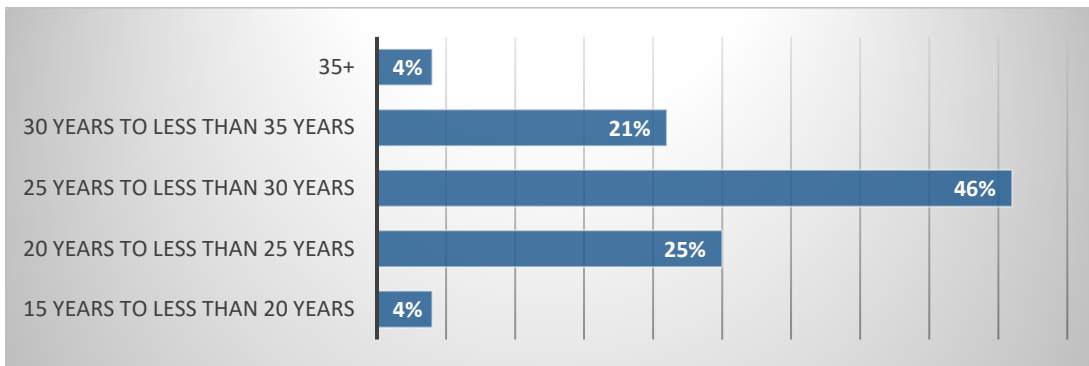
##### **3.1.1.1 Participants**

I distributed surveys to all school leaders in 79 school districts and intermediate units, with help from Dr. Diane L. Kirk, Executive Director of The Tri-State Area School Study Council (Tri-State).

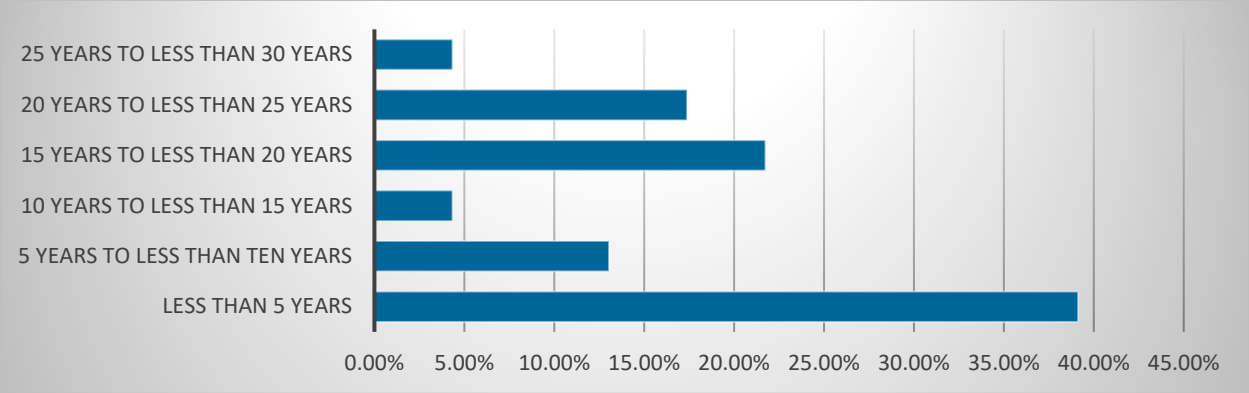


The initial email that was sent by her office on February 18, 2021 (Appendix K) introduced me and mentioned her support of my work with collaborations or sharing resources among school districts. Babbie (1992) suggested having someone of authority and importance contact the participants to whom the survey will be sent, inform them of his or her support of the survey, and explain its importance to a specific organization or population. The survey closed on March 8, 2021 after another reminder from her office on March 3, 2021.

The survey response rate was 30 percent, with participation by 23 leaders. I removed one survey result as it was duplicated by a school leader. Participants' educational experience and tenure in their current district appear below (see **Figure 2** and **Figure 3**). The participants were from districts with varied enrollments ranging from 500 students to above 7,000 students (see **Figure 4**).

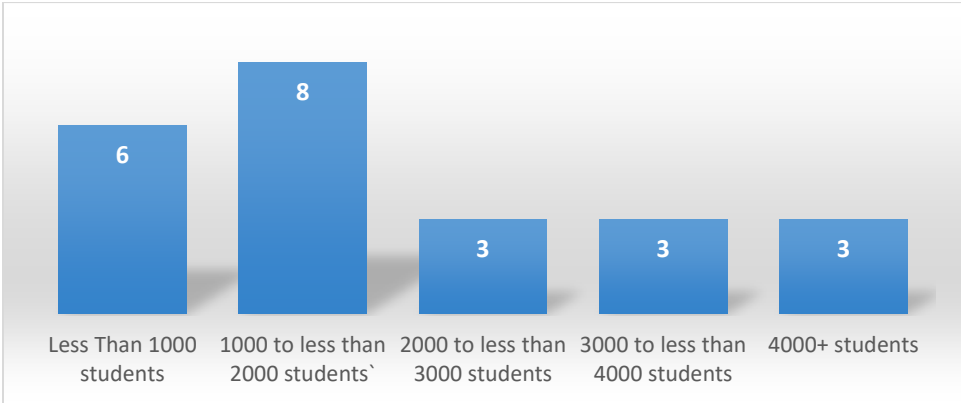


**Figure 2. Survey Respondents Years of Educational Experience**



**Figure 3. Years of Service in Current District**

The participants varied in their years of experience and in their student enrollments (see **Figure 2**). Several of the participants had risen through the district ranks before their current appointments as leaders in their school districts. The participants also included leaders at a charter school and two leaders from career and technical schools.



**Figure 4. Participant District Student Enrollment**

### 3.2 Survey Data

Seventy-nine school districts, intermediate units, charter schools, and career and technical schools were invited to take the survey, and 23 responses were received. This represents a completion rate of 30 percent, which is a typical response rate for web-based surveys (Bernhardt, 2004). The study is IRB exempt (Appendix J).

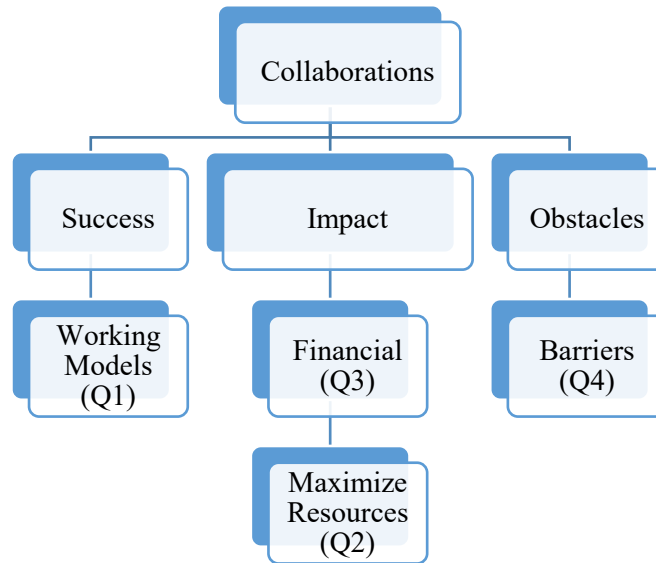
The survey included four open-ended questions:

1. Have you engaged in collaborations or sharing resources with other districts?

If so, please give a brief description of these collaborations.

2. Were any of the collaborations successful?
3. What financial impact did the collaboration have on your school district?
4. What were barriers or inhibitors to sharing resources with other districts?

The framework below (see **Figure 5**) guided the survey and interview questions about collaborations from school leaders and their experiences with successes or obstacles and the impact on their districts.



**Figure 5. Framework of Survey Questions**

The questions related to collaborations or sharing resources in school districts and the impact it has on the district. Eighteen out of the 23 survey respondents (78 percent) have engaged in collaborations or sharing resources. Seventeen of the 18 (94 percent) who engaged in collaborations responded that they were successful and had a financial impact in their school district, and all 18 who engaged in collaborations (or 100 percent) listed barriers to collaborations.

I analyzed the responses to open-ended questions using thematic content analysis to search for patterns and themes across the text of each survey. I first entered the open-ended responses into software called Voyant to help me visualize and suggest terms and frequencies. Figure 6 provides a visual word map of the responses to the survey questions captured in the software program. The predominant words illustrated in the figure below included districts, sharing, savings, consortium relating to collaborations.



**Figure 6. Text Phrases From Survey Data Using Voyant Software**

I next read through each survey response and made notes to make sense of the data. I reviewed each text phrase from Voyant software again to identify patterns and then proceeded to group similar data. There were also new themes - such as “forum” - that emerged, and I made note of it for interview questions.

Since this was an open-ended survey, many patterns emerged. I assigned codes by reading the responses and grouped the codes into similar categories or themes to narrow it down. I also included a broad theme (Operations) and split it into sub-themes (Transportation, Intermediate Units, Consortiums) to capture participant responses.

There were varied collaborations or shared services between school districts, career and technical schools, intermediate units, and consortiums. Many were established collaborative

programs or shared services over the years between these entities and had financial impacts on the districts. There were numerous working models of collaborations that varied between respondents (see Table 4).

**Table 4. Emerging Themes From Survey Data on Sharing Resources and Collaborations (Q1 and Q2) With Number of Participant Responses (n)**

| Collaborative success areas | Number of responses (n) | Definition   | Sample quote   |
|-----------------------------|-------------------------|--|--|
| Staff                       | 10                      | Sharing staff  | “Teacher sharing (Spanish and Music) with another local school district”   |
| Professional Development    | 9                       | Sharing training and professional development            | “STEM related professional development and instructional/technology equipment partnership with ... school districts” |
| Student Programs            | 8                       | Sharing student programs                                 | “We share a swim team with a private school. We travel together, share coaches, and other expenses”                  |
| Operations                  | 7                       | Sharing services with the Intermediate units/Consortiums | “We have engaged in sharing of ... Consortium bidding through the IU for gas, paper and supplies”                    |
|                             |                         | Sharing transportation services                          | “Sharing busing with a neighboring district when feasible cuts our run cost in half for those runs we can share”     |

*Note: Survey sample N=23*

The financial impact from the collaborations above ranged from cost sharing with 50 percent of costs of the program or operations, to the largest savings coming from sharing the salary and benefit costs of staff across districts. I combined some of the categories together with the themes. “Fit” included goals of the program, finding the right partner, and collective good. The theme “Time” included the categories “communication” and “program monitoring.” The survey data revealed multiple barriers to collaborations, ranging from political forces to time required for sharing resources (see Table 5).

**Table 5. Emerging Themes From Survey on Barriers to Sharing Resources and Collaborations (Q4) With**

| <b>Number of Participant Responses (n)</b> |                         |                                       |   |
|--|-------------------------|---------------------------------------|---|
| Barriers                                   | Number of responses (n) | Definition                            | Example quote   |
| Political                                  | 8                       | Political constraints                 | “Different school boards, political environment, and context of community.”   |
| Fit  | 9                       | Program goals, scheduling constraints | “Getting over the fact to share a program with a rival district.”<br>“The biggest struggle is getting all parties to work toward the common good. At times, it is easier for a financially stable district to do their own thing .... however, we are public education and we need to think broader than our own boundaries, resources and staff when building collaborations.” |
| Time                                       | 7                       | Lack of time, communication           | “Collaboration takes extra time ... Scheduling meetings.”   |
| Logistics                                  | 5                       | Location and coordination constraints | “Geography prevents some of the sharing of services and positions”  |
| Liability                                  | 5                       | Legal challenges with sharing         | “Potential barriers include areas where supervision of students could lead to potential litigation issues”  |

### **3.3 Interviews**

The survey included a forced response yes/no item that asked if participants were willing to be interviewed (Appendix L). Nineteen school leaders marked “yes” and shared their contact information to further discuss the collaborative efforts that they listed in their surveys. I scheduled interviews with seven of the superintendents by email and then followed up with a phone call at a mutually agreed-upon date and time. There was no purposeful selection with the interviews since all 19 respondents engaged in collaborations. The interviews were recorded with the permission

of the interviewees, and anonymity was maintained by assigning pseudonyms (Superintendent A, etc.). The interviewees represent different demographics with tenure, rural/suburban/urban setting, and student enrollment (see Table 6).

**Table 6. Demographic Data From Survey and Interview Respondents**

| Characteristic                 | Survey sample | Interview subsample |
|--------------------------------|---------------|---------------------|
| Experience in Education        |               |                     |
| 25 years+                      | 16            | 6                   |
| Fewer than 25 years            | 7             | 1                   |
| Experience in Current District |               |                     |
| 10 years+                      | 12            | 4                   |
| Fewer than 10 years            | 11            | 3                   |
| Setting                        |               |                     |
| Suburban                       | 18            | 4                   |
| Rural                          | 5             | 3                   |
| Student Enrollment             |               |                     |
| 2,000+ students                | 9             | 2                   |
| 1,000 to 2000 students         | 8             | 3                   |
| Below 1,000 students           | 6             | 2                   |

*Note: Survey sample N=23; Interview Sample N=7*

I posed the following standard open-ended questions to all interviewees, and then probed deeper depending on information shared.

1. Please describe the collaborations or sharing of resources with other districts that you shared in the survey.
2. Who initiated the collaboration?
3. Was the collaboration successful?
4. Does it continue currently?
5. What financial impact did the collaboration have on your school district?
6. What impact did the collaboration have on operations or with processes in your school district?



7. What particular successful collaboration results in your ability to better provide for meeting student needs – or which collaboration yields the most overall benefit to meeting students' needs?
8. What were barriers or inhibitors to sharing resources with other districts?
9. What areas will you be interested in collaborating in for the next school year?

If an interviewee had already answered a question in a prior response, I did not pose it again. I sometimes deviated in the order of questions asked in order to follow the flow of each conversation. I engaged in conversations with any superintendent who brought up other topics, such as schooling during the pandemic or federal funding. I also took notes on paper.

I recorded conversations on my iPad. I then uploaded the files and transcribed them using the software Otter.ai and revised any misspelled names, etc. to maintain accuracy. I printed interview transcripts and used open coding, reviewed the transcript line-by-line, and started coding. The process was similar to reviewing data from surveys. After grouping similar codes under a category, naming the category, and then grouping them, themes emerged with the data. I next grouped the data by successes and then obstacles with collaborations.

The one-on-one interviews provided data about successful collaborations as well as obstacles with all seven superintendents interviewed. (See **Table 7**).

**Table 7 Emerging Themes From Interview Data on Successes with Sharing Resources and Collaborations and Number of Participants' Responses (N)**

| Collaborative success areas | Number of responses | Definition       | Example quote   |
|-----------------------------|---------------------|------------------|---|
| Sharing Costs               | 5                   | Student Programs | "...school district cancelled the Pre-K program...we were able to repurpose a teacher and we actually service 20 additional preschool students..." Superintendent B |

|                        |   |                          |   |
|------------------------|---|--------------------------|---|
|                        | 3 | Personnel                | “What once was basically \$175,000 position for two people is now roughly a \$90,000 position for one person, and they share the expense.”<br>Superintendent B  |
|                        | 2 | Transportation           | “What we do is we try to combine transportation runs where then instead of me having to pay for the full amount of money for that student to go to ... pays half that bus costs, so then it costs half for both of us, as far as that bus run” Superintendent E   |
|                        | 6 | Professional Development | “Both wanted to implement Professional Learning Communities... it's very expensive to bring someone in from the agencies... we could split the professional development cost...we made that journey together initially, to help share the cost. Then we had our teachers on in service days, go back and forth between the two districts to learn how their counterparts were delivering it in their own districts.”<br>Superintendent C  |
| Efficiency and Savings | 6 | Consortium               | “Health care consortiums are reserved for school districts. And we have much greater purchasing power.” Superintendent A  |
|                        | 4 | Contracting Services     | “As a result of that work, we were losing their capacity to do other things in the school district... we both engaged in a contract with the same third party. And it benefited us in that the third party could dedicate an employee who managed.it really reallocated the work load and the workflow of the district, which then permitted leadership in new ways.”<br>Superintendent D   |
|                        | 1 | IU                       | “Collaboration with the intermediate units has probably been the one that's most effective with regard to student learning and best practices... they do have materials in a lending library that we can borrow. So maybe materials that we can't afford, maybe robots or different kits of devices that can help us teach science or social studies, we're able to actually borrow from their lending library to use within the district. So that's been beneficial.” Superintendent E |

*Note: N=7 Interview Respondents*

### **3.4 Successes**

From the survey and interviews, the findings with collaborations across school districts in this region is consistent with research on working models of collaborations in small rural school districts, their impact on the school districts, and the lessons learned. Resources shared could include students, teachers, administrators, support personnel, facilities, equipment, supplies, transportation, and purchasing (Frase & Melton, 1992). Successful collaborations reflected themes of sharing costs or efficiencies with savings.

### **3.5 Sharing Costs**

Research shows that rural school districts enforce staff reductions as the most frequently utilized approach to respond to budget shortfalls (Starrett, Casey, & Dunlap, 2014). With reductions, some school districts chose to combine duties of staff members and create new positions (Abshier, et al., 2011). The cost sharing with personnel and student programs had the biggest impact on district finances.

#### **3.5.1 Personnel**

The survey and interview data illustrates cross-district collaboration with personnel in key positions such as Superintendent, Business Manager, Director of Special Education, and teachers and support staff. There were two districts that shared Superintendent B, and in one of the districts,

Superintendent B was also the Business Manager. Additionally, the Director of Special Education was shared between the districts.

Staff cost sharing had the most impact on finances in districts that shared staff.

Superintendent B shared the impact of cost savings:

*So if you look at a school that's going to hire the superintendent that's \$150,000 good, multiply that by one and a half. So you'd end up at about, you know, what, \$225,000? Yeah, cost. Yeah. Now, they, they, it's half of that, what they pay me, their total out of the door compensation is guaranteed to be about half of that.*

### **3.5.2 Professional Development**

There was evidence of cost sharing with speakers and material for professional development across districts or through regional learning consortiums and Intermediate Units. There was either savings accrued through sharing costs or efficiencies achieved through long-term savings.

Partnerships can also help districts afford professional development workshops that they could not on their own. Superintendent C discussed these opportunities:

*...collaboration of the six different districts to share the cost of bringing these high powered people in to work with our staff that you can't necessarily afford in, in your own, ... small district professional development budget.*

The learning culture that evolved and directly impacted student needs and learning was more significant to superintendents than cost savings.

### 3.5.3 Student Programs

Student programs data from the superintendent interviews reveals shared academic, athletics, and extracurricular activities across districts. The cancellation of a Pre-K program in one district resulted in an expansion of a grant-funded Pre-K Counts program in the other to accommodate students who were displaced. One of the districts is the smallest in the county, nestled between two larger districts, and frequently talk of a merger comes up, according to Superintendent F. The low enrollment adversely affects participation in extracurricular activities, and, consequently, offerings of student programs:

*We came to a cooperative agreement for athletics. And I was able to work in the arts as far as the school play... if any of our kids want to participate in the school play, they're able to go next door to ..., try out, get a part and go. We also did reach an agreement with them for special education services.*

*It either gave our kids the opportunity that they normally would not have or gave them extended opportunities where they want to have that normally here for them offer it. And so now they can experience it.*

Grants also funded a shared STEAM student program. The cost sharing with the co-op agreement in Superintendent F's school district provided opportunities for students who would not have experienced the musical program otherwise. Programs most vulnerable for cuts are correlated with increased student achievement and student outcomes in schools - small class sizes, early childhood education programs, after-school activities and mentoring, teacher training and professional development, and arts programming (Berliner, 2013).

### 3.5.4 Transportation

Cost sharing with contiguous districts was evident with the operational area of school transportation.

*“We share about five or six buses with a neighboring school district to cut costs”*

*Superintendent C*

The interviews also highlighted that cost sharing can occur with transportation for a few shared events such as with student participation in music concerts or festivals. But significant savings can accrue throughout the year when students from contiguous districts attend an outside placement for specialized education services and the transportation is shared between districts.

## 3.6 Efficiency and Savings

Survey and interview data revealed savings in the long run from collaborations with the intermediate units on supplies, professional development, or with consortiums for healthcare, fuel, diesel, electric etc. Contracted technology services with a third-party provider was also mentioned as long-term savings. Some of the superintendents emphasized that sharing best practices or ideas with their colleagues or other functional areas or positions brought about efficiency with the system. Similarly, there were programs that expanded student opportunities in districts that were not feasible otherwise:

*...more frequently a district office administrator, who notices either something that is significantly impeding the work of the district or notices an opportunity for maybe costs savings if we did it a different way” Superintendent D*

*People don't realize the cost saving effects that are going on... And the potential future cost saving, ... they would just embrace the idea... And allow us to actually expand on it what's your potential savings...long term. Superintendent G*

### **3.6.1 Personnel**

Some superintendents contracted technology services with an outside vendor or shared a psychologist position between their school districts. It saved the districts with paying benefits costs for retirement or healthcare.

*“an outside contractor provides psychological testing” Superintendent B*

*“We were looking at possibly a social worker, it may be looking at either outsourcing that we're sharing with somebody for social work in the district government now.*

*Superintendent G*

Personnel or staffing costs constitute approximately 70 percent of school district expenditure as districts have to budget for additional mandated costs related to pensions. In Pennsylvania, for every \$1 in salary the school district has to pay mandated retirement costs of an additional \$0.349, with total benefits approaching \$0.50 for every \$1 spent on wages. By contracting personnel districts can avoid these mandated pension costs. This translates to efficiencies with savings in the long run.

### **3.6.2 Intermediate Units**

Efficiencies are also gained with Intermediate Units (IU). From both the survey and interviews, the IU provide valuable resources such as professional development, regional

meetings, technology support, joint purchasing for supplies, innovation with student programs, and best practices. The IUs were instrumental in collaborating with school districts and the health department during the pandemic. Vaccinations for all school district staff were facilitated on site at the IU in this region.

### 3.6.3 Consortiums

Healthcare consortiums such as the Allegheny County School Health Insurance Consortium (ACSHIC) provide participating school districts cost effective healthcare coverage for employees. They bring about efficiency by standardizing processes for districts with open enrollment, Affordable Care Act (ACA) reporting, etc. If the school district purchased insurance plans on its own, costs for the district and employees would be prohibitive.

With all seven superintendents interviewed, the one-on-one interviews provided data about obstacles faced with collaborations or shared services. (See **Table 8**).

**Table 8. Emerging Themes From Interview Data on Barriers With Sharing Resources and Collaborations and Number of Participant Responses**

| Barriers to Collaborations | Number of responses | Definition | Sample quote   |
|----------------------------|---------------------|------------|--|
| Culture                    | 5                   | Community  | “We've coexisted in these ways anyway, it's not a big deal. And usually the adults are the ones who are causing the problems...the kids are usually the ones that are able to adapt, and they're the ones that are fine. So I had to remind people that we, you may have a problem with it, but you don't go to school here anymore in a subtle way, I tried to say, well, this doesn't really concern you. It concerns these kids, if the kids are on board, and it's giving them a guaranteed opportunity.” Superintendent F |
|                            | 3                   | Boards     | “I constantly fight with different school board members. ... they want to be in control of the   |



**Table 8** continued

|   |          |  |
|---|----------|--|
| 2 | Teachers | school district, they want to manage this, they want to manage that they want people in there that will do their bidding.” Superintendent B<br>“I have a staff that's very complacent, and doesn't think that they need to do what other, they feel like, if they're better than the neighboring district, then they don't, they're good, you know, that we don't have to be great, we're good. They're like, happy with being good.” Superintendent C |
| 2 | Union    | “Another barrier could be those teacher unions. One, my local union is very strong. And it might not be in another district, or it might be even stronger than other districts. So those teacher unions are very different in every district.” Superintendent A  |

*Note: N=7 Interview Participants*

The themes above identify the role politics and the community play with sharing resources. Building relationships with all stakeholders emerged as a theme from the interview data. The themes identified from the interview data are consistent with research. Research by Behn (1981) showed that board members emphasize negotiation, bargaining and compromise in resolving conflicts between competing constituents (Behn, 1981).

### **3.6.4 Additional Findings**

The survey and interview data from school superintendents revealed successes and obstacles to collaborations in school districts. However, I also learned about two factors essential to initiating and fostering collaborations from all seven superintendents. Once I analyzed data from the survey and interviews, the following themes about leadership driving collaborations emerged from all seven superintendent interviews (**see Table 9**).

**Table 9. Additional Themes Emerging From Interviews About Fostering Collaborations**

| Fostering Collaborations | Number of responses | Definition   | Sample quote   |
|--------------------------|---------------------|--------------|--|
| Leadership               | 7                   | Leadership   | “If you're collaborating, though, you can lead. So I think that trying to sell on as you're leading, and you're making a difference in your community in your county, and you're trying to bring people with you. I think that's attractive, if you can frame it as a leadership idea.” Superintendent G |
|                          |                     | Right People | “It's been very beneficial. It's a matter of having the right people, you know, sometimes you have people but they're not the right people.” Superintendent B  |
| Building Relationships   | 7                   | Stakeholders | “The benefit when we partner across school districts... it benefits all students in our region in all districts in our region and our entire regional community.” Superintendent A   |

While there are significant challenges for small rural school districts with building relationships, the schools provide benefits to communities they serve because of the strong connection they cultivate with the community. There is a sense of identity and connection with the communities they serve, and they provide education and social advantages to these students (Jimerson, 2006; Sullivan, 2000). Strong leadership helps build relationships, as evidenced in the themes above (see **Table 9**).

## 4.0 Learning & Actions Discussion

### 4.1 Discussion

My study provides evidence, in this southwestern Pennsylvania region, of working models of collaborations or shared services across districts, their impact on finances and opportunities for students in districts, and obstacles or barriers faced with sharing resources. At the same time, in smaller rural districts, low reserves in the general operating fund affect fiscal policy and budgeting decisions (Abshier, et al., 2011; Arnold, 2004; Tekniepe, 2015). These financial issues can cause significant stress for the rural school superintendent (Tekniepe, 2015).

The theme of finances and ensuing cost savings highlighted by school leaders aligns with the research on savings with shared costs and expenditures with collaborations. It addresses the Problem of Practice of increasing costs in School District #1. Collaborations or sharing resources was considered as an avenue to address this problem of increasing costs and efficiencies. From both the survey and interview data, Superintendent A framed collaborations in the following way:

*It makes us more efficient. It makes us more accountable to one another, which leads to financial prudence, I think when everyone has a voice, and they can use that voice in a productive way, that we then find inefficiencies in the system. And we all want to make that better.*

The system in a public school district is heavily mandated, which contributes to financial pressures. At the local level, School District #1 experiences fiscal pressures, contributing to increasing costs. Locally, the district also faces declining enrollments and a lack of time with administration in a small district, among other causes identified in the Fishbone Diagram

(Appendix E). To foster or initiate collaborations, both leadership and building relationships are important, as expressed by all seven leaders from the superintendent interviews in this region.

The surveys to school superintendents went out as planned, and I was surprised with the quick turnaround time in scheduling interviews. The lesson learned from the surveys and interviews is that there are working models of collaborations that have an impact not just on costs but also on efficiency in this region.

As a business leader I will continue to pursue collaborations with other political subdivisions (school districts, municipalities, the county, etc.) and with consortiums or cooperatives. From the interviews with superintendents, as well as my own experiences with collaborations on sharing programs with a neighboring district, I learned the following:

1. *Building relationships take time.*

Engaging in a collaboration with a neighboring district was easier because the superintendent in School District #1 was part of the introductory conversation that gave me free rein to formalize a mutually beneficial shared athletic program between the two districts. Afterward, the two special education supervisors collaborated. And while the specialized student program was formally approved, it did not work out for the other district. Changes in leadership and the pandemic have both districts in a holding pattern, but they hope to renew relationships and refine efforts with collaborations in the next school year. Research by Deming (2018) emphasizes a long-term commitment to engaging in new learning and commitments. Building relationships over the years makes it easier to open conversations:

*Because you've already had this ongoing relationship with them. And you're able to tell people, hey, our kids have coexisted with athletics, arts and academics a merger has been*

*a discussion here for 40 some odd years, ... we reached out to a neighboring school district, and we did a cooperative agreement. Superintendent F*

2. *Find allies who will pursue your cause.*

The finance committee of the school board has been very supportive of both collaborative initiatives proposed to alleviate costs in School District #1. The special education supervisor, high school principal, and technology supervisor, along with the superintendent, are key allies who will continue to assist in these efforts. Allies help to support and advocate for the cause:

*When a superintendent or district office staff or a principal or a teacher leader, or a business manager, actively models, those types of things in the school's culture, it makes it much easier for all members of that school community to see that as a viable way of doing business Superintendent A*

3. *You have to persist to maintain momentum.*

School District #1 has started and put a stake in the ground by engaging in collaborations with a neighboring district. One of them was successful and continues, while the other was not, but data from one of the interviews with superintendents shows that persistence with collaborations takes time and pays dividends in the long run:

*The collaboration took some twists and turns. And so I worked for about two years as part of the leadership team to reshape some of the things that we were engaged in and lend my voice so that it would still be beneficial to my district. Superintendent D*

- *Economies of scale and savings can only be achieved when cooperation between entities is negotiated with parties "willing to learn"*

One program shared between School District #1 and a neighboring district, the special education collaboration, did not work because it did not meet School District #2's expectations.

However, mandated costs associated with special education are a challenge in both districts. Bryk et al. (2017) indicate that for initiatives to achieve results reliably at scale, they begin with an analysis of the institutional context to change. So, I will continue to collaborate with my own administrative team and focus on other areas of special education since both special education supervisors have established a relationship and could be “willing to learn.”

One of the district superintendents interviewed shared this willingness to engage in collaborative learning.

*It helps our professional development down the line, because we can still have our check in points. So my high school English teachers know what the other high school English teachers are doing. And they can check in a couple times a year to learn from each other.*

*Superintendent C*

- *Reflects building trust and cooperation in an iterative process.*

Research about collaborating with networked improved communities (NICs) shows that when participants start trusting each other they are more likely to engage in the process (Bryk et al., 2017).

*With our school board here, I'm very fortunate ...And then we kind of do our homework, I'm able to report back to them and give them my recommendation. Superintendent F*

- *Ensures all stakeholders are brought to the table.*

*I like collaboration. I think better ideas come from a team of people and a diverse team of people than they do from me alone. Superintendent A*

- *Reflects cost efficiency/operational efficiency/“pockets of efficiency” that foster educational excellence*

Englebart (2018) highlighted the engagement of activities for improvement in the capability infrastructure that brings about higher productivity with the primary activities of the organization. Collaborations are nestled in the domain of capability infrastructure that may not have a financial impact but brings about effectiveness in the system.

*Another cool thing that comes out is so I'm a small high school. So I have one physics teacher, ... has a couple because there are a larger, high school, but my physics teacher now has partners in ...content area that he can collaborate with that .. did not have before. And so that's another side effect that doesn't cost money necessarily in the end, but it's a benefit that is gained through these type of collaborations across districts. Superintendent C*

*- Is based on trust and mutual understanding is essential*

According to Bryk et al. (2013), starting small helps with faster learning and sustains larger scale improvements for efficiencies. Strategic goals in districts could be different, but finding common ground helps with shared initiatives as illustrated below:

*Finding a dance partner, that was a barrier. And then once I found one, oh, it worked. Working with a dance partner could be a problem. Because you kind of had to be doing similar things. So your staff doesn't turn on you. Superintendent G*

The last question in the interview focused on finding a partner with whom to collaborate. The question posed to superintendents was about plans with future collaborations. Some chose to stay at status quo as there is still uncertainty with the COVID-19 variants. Collaborations that were in existence prior to the pandemic, including those with consortiums, would continue. Others planned to continue to share staff or professional development. However, one district was looking to collaborate on transportation and cyber offerings, which is also something I would like to see

for my district. I have reached out to the district and am awaiting further engagement with this opportunity.

In the meanwhile, all districts were recently awarded sizable amounts of federal funding—something that was not known when I began this project. After reviewing data from surveys and interviews with district superintendents and the purchasing power of cooperatives, I pivoted from a collaboration directly with a school district to collaborating with a school district via consortiums. This was timely to take advantage of efficiencies with purchasing large ticket items like technology, capital equipment such as air purifying systems and PPE, supplies related to athletics, and custodial and food service, with increased federal funding from the Elementary and Secondary School Emergency Relief (ESSER) Fund.

From the survey and interview data, a few superintendents referenced collaborating with consortiums as a successful working model that resulted in efficiencies with purchasing and cost savings. Cooperatives, when expanded to a collaborative, encourage resource sharing or resource pooling that makes it cheaper to purchase (PASBO). In the business sector, economies of scale are achieved when costs are spread over the increasing volume of units produced. For a school district, sharing purchasing with another district through a cooperative could yield savings, with discounts offered based on the increase in volume of purchases with a reduction in cost per unit. This would benefit the quality of resources available for student programs offered.

So, I was able to successfully engage with cooperative purchasing as a key lever to meet my aim of one collaboration. While I could not directly engage in a collaboration with the neighboring school district, this collaboration, which pools multiple public agencies including school districts to leverage buying power, helps my district comply with new federal funding.



These funds come with stringent restrictions on what they can be used for, but also on the process for seeking the lowest price.

The cooperative and consortium agreements will help me achieve my aim of establishing a collaboration. The change idea of cooperative and consortium agreements will impact the secondary driver of federal and state grant purchasing and the primary lever (federal funding) and accomplish my goal (aim) of a collaboration. Achieving the aim helps me address the Problem of Practice of increasing costs with School District #1.

What I learned with the data from the survey and interviews is that successful collaborations to share costs or accrue savings in the long term do not necessarily have to be between neighboring districts. I also learned that joint purchasing can be engaged in with Intermediate Units outside the region. I reached out to Intermediate Units outside this southwestern Pennsylvania region to participate in competitive bidding for supplies. The Intermediate Unit in this region has joint purchasing only for paper. I contacted other consortiums at the state and national level and presented multiple consortiums and cooperative agreements (see Appendix M) to the school board for their approval.

After the formal approval by the school board, the business office can procure items to meet the needs of the school district from:

1. Three additional Intermediate Unit cooperatives in the state for joint purchasing of supplies.
2. Six new cooperatives or joint purchasing programs that meet all state purchasing mandates and some federal mandates.
3. Five cooperatives or joint purchasing agencies that meet all federal and some state procurement mandates.

I was also able to meet my theory of improvement by engaging in the above partnerships:

**If** School District #1 engages in cooperative purchasing with other political subdivisions, **and** administrators from School District #1 **collaborate** for purchase of supplies, equipment, or services, **and** accept shared responsibility and cost accountability for student programming, **and** leverage relationships with other political subdivisions by building *trust* with contracts/agreements at the local level, **then** savings accrued through joint agreements improve the quality of available student programs.

School District #1 achieved its aim of establishing a collaboration through cooperative purchasing to accrue savings through joint agreements with political subdivisions. There was a cost savings with cooperative purchasing that helped the district address the PoP of increasing costs and divert the savings towards student programs in order to efficiently allocate resources.

## 4.2 Next Steps and Implications

School districts cannot engage in collaborations alone. In a heavily mandated environment, additional support with collaborations is required from the Pennsylvania legislature. The policy implications with school board approval tightened the external accountability of finances at School District #1 by emphasizing accountability within the district with cooperative purchasing (Erickson & Christman, 1996). Policy at the local and state levels encourages cooperatives as a mechanism for resource sharing or resource pooling that makes it cheaper to purchase. The action by the school board is a mechanism to translate the policy goal into action. In the business sector, economies of scale are achieved when costs are spread over the increasing volume of units produced.

For a school district, by sharing purchasing with another district there could be savings, with discounts offered based on the increase in volume of purchases with a reduction in cost per unit. This would benefit the quality of resources available for student programs offered. Students from wealthy and economically disadvantaged neighborhoods have access to the same supplies, equipment, and services at the same price (see Appendix M). Initiatives supporting education policy involve a process of making good decisions for the public good (Torjman, 2005).

States can encourage collaborations in school districts by:

- Providing incentives to districts that engage in cooperative efforts.
- Removing barriers or disincentives such as strict and prohibitively expensive bidding process with purchasing (advertise in newspapers, seek bids, select lowest bidder and then submit to school board for approval).
- Waiving the long, mandated process when need for supplies, equipment or services is immediate, for instance with a pandemic.

States set policy to direct funding for schools (Chignos & Blagg, 2017). McLaughlin (1987) found that policy cannot always mandate what matters to outcomes at the local level. McDonnell and Elmore (1999) found that a policy instrument such as an inducement in the form of grants or subsidy will have an effect on production of value. Encouraging districts to participate in cooperatives with subsidies or grants will help galvanize the policy to action.

At the local level, to foster successful collaborations school boards can help:

- Focus on internal accountability measures that sustain quality student programming to meet external accountability measures.
- Review policies regularly and revise to meet accountability and needs of the district.

- Move beyond purchasing to collaborating with resource sharing to reap true economies of scale – expanding enrollments and reducing costs and funding quality student programs.
- Approve new policy instruments for cooperative initiatives with neighboring school districts.
- Move beyond political ideologies.

Abelmann et al. (1999) found that to comply with the external accountability system there have to be internal accountability measures. Dill (2006) researched public accountability, while Cohen (1995) showed the need for better policy formulation with capacity building. Woolcock and Narayanan (2000) found that norms and networks enable people to act collectively in the context of economic development.

Administration's role with successful collaborations include:

- Support initiatives, proactively engage with central office teams to review student needs
- Seek cooperative purchasing with supplies, equipment, and services
- Build trust with and seek collaboration across districts

Weatherly and Lipsky (1977) found that when the workday for staff is stretched, they may not attend to all aspects of their functions with fidelity. In small school districts, administrators serve in multiple roles with different responsibilities. Beaver and Weinbaum (2012) offered a framework for analyzing capacity in schools with four research-based components –human capital, social capital, program coherence, and resources – to address school improvement efforts. Strengths, weaknesses, opportunities, and challenges with each of the components help determine high-, medium-, or low-capacity schools. High capacity indicates a committed staff, highly integrated systems with ample resources as opposed to low capacity that has poorly coordinated instructional systems and norms and low levels of engagement from staff. Knowledge of strengths

and weaknesses with administrative and staff capacity will help School District #1 make improvement efforts with collaborations.

#### **4.2.1 Implications for School District #1**

From the surveys and interviews with superintendents, I learned that there are working models of successful collaborations in this region. The financial impact is felt most with cost-sharing staff between two districts. However, with the pandemic there is a need for additional staff on-site to ensure social distancing, so the impact of sharing staff with cost savings was aspirational at the time of this study. Decision making was also localized in each district in keeping schools fully open, in a virtual or in a hybrid format. To share personnel or programs in this environment is not possible at this time.

A smaller, immediate financial impact was with joint purchasing. It brought about efficiencies in the system that result in cumulative long-term cost savings. The joint purchasing cooperative meets all the procurement mandates from the state and federal level. There is no fee to join a cooperative. It will refine the process and save costs with the state and federal mandate to advertise in newspapers, seek bids, select the lowest bidder, and then submit to the individual district school board for approval. With the pandemic, there is an immediate need for supplies, so this will refine the delivery status of orders placed by reaching out to multiple cooperatives for available supplies.

Reviewing the data from my study, I was able to employ a quick improvement effort to meet my aim of engaging in a collaboration with several consortiums and intermediate units. However, I was unable to engage in a collaboration with a school district. In an effort to build relationships, I await two connections with other districts that were made since my study, but I am

mindful of geopolitical factors such as culture and fit within different communities that the interview data revealed, and that can influence joint efforts moving forward.

Given the constraints with time for this study, I was only able to compare expenditure reports for two months (March and April) to ascertain the financial impact from the collaboration with cooperatives and intermediate units. Additionally, School District #1 had a freeze on expenditures in mid-April. In school districts, the bulk of procurement happens at the start of the fiscal year in July. The purchases for supplies made through one of the cooperatives in March and April had a cost savings of approximately 18 percent (see Appendix P). The largest discount received was 67 percent on technology supplies. Most of the items purchased qualified for free shipping.

Significant savings are anticipated during the following school year with procurement through the cooperatives with:

- discounts on purchases
- free shipping and handling
- comparing prices among cooperatives to get the lowest guaranteed price
- saved costs of advertising as items are already awarded to the lowest bidder through the cooperative
- saved time with board approvals (first seeking requests for proposals and then accepting the bid of the lowest bidder for supplies or equipment)
- saved solicitor fees for reviewing request with proposals or awarding a bid
- no membership fee to join
- multiple choice and options when there is a disruption in the supply chain with one cooperative

- the cooperative managing the vendor and contract awarded
- assisting with effective resolution of vendor or procurement issues
- streamlining the procurement process
- compliance with state and/or federal requirements

Meanwhile, the influx of new federal funding after I started my study assists each public agency during the pandemic through the next school year. With this substantial money in each school district, decision-making is decentralized with both program offerings and strategic decision making. I did attempt to engage in summer camps or an after-school collaboration with a neighboring district. However, staff participation is a constraint. The pandemic-related pivots with education this past year have fatigued both staff and administration.

Since summer 2020, I considered three other interventions with this study that were affected by pandemic-related pivots in School District #1. There were two interventions considered with special education programs that could have resulted in significant savings. However, decision making with keeping schools open during the pandemic is complex, localized, and varied between school districts (Roberts, 2000). No leader has been here before, and a return to “normalcy” is an illusion (Heifetz, 2020). Improvement efforts in this environment, to be effective and within my span of control, will be localized to the business office. My prediction is that there will continue to be some immediate cost savings but that larger efficiencies will be in the long run.

### **4.3 Limitations**

The timing of this study found school leaders navigating uncharted waters that remain nebulous, on re-opening schools and operations during a pandemic. I was mindful of their time and the context of their focus. This perspective may have biased the study.

The small size of the study limits its findings. Further research is needed from a larger sample size to reliably replicate the results from this study.



## 5.0 Reflection

Leadership as a process requires innovation and input from all stakeholders (Randall & Coakley, 2006). For a school district's business manager seeking to address budget problems, the process happens on a road less travelled. There is no linear path already carved out, so I have to engage with the district stakeholders to confront financial improvements and work collaboratively with them.

This dissertation-in-practice revealed working models of collaborations across districts in this southwestern Pennsylvania region. Data from both surveys and interviews depict successful models that have a financial impact with sharing of costs between districts with staff, professional development, and transportation, among others, or efficiencies with cost savings in the long run through consortiums, intermediate units, and/or contracting services. However, collaborations or sharing services in school districts face obstacles, ranging from logistical challenges (like disparate geographical locations) to cultural ones (such as disagreement among district stakeholders). An unintended finding of the study was that leadership, with the right people and building relationships with stakeholders, was key to initiating and fostering collaborations. School leaders are instrumental in encouraging collaborative and cooperative efforts in school districts (Uxer, 1982).

The culminating collaboration for School District #1 after the study was with consortiums around the country and intermediate units in the state for pooling procurement needs, resulting in immediate cost savings and potential longer-term efficiencies. Time constraints with the study prevented me from examining collaborations with other districts. Further research is needed to substantiate data from the study findings.

Adapting to the concept of the improvement process was familiar to me as a former business school student. Deming's model from the 1950s of continuous process improvement with quality was a concept enforced in the private sector to meet client needs. A four-step iterative process with a Plan-Do-Check-Act helped solve customer problems and improve organizational processes. This aligns with the improvement science approach of Plan-Do-Study-Act. Three years ago, in my own school district, I engaged in process improvements by transitioning from paper-based systems in the business office to online web-based systems. I observed the labor-intensive work in my office and over-reliance on paper generated operations. However, the district was resistant to the suggestion of changing the system.

I changed tactics in my approach with decision making and included key staff involved with the day-to-day operations. They watched demonstrations of the new systems and engaged in the decision-making process. It took almost a year for the final approval and roll-out. It was also the year I joined the Ed.D. program. I learned the importance of persistence in refining a process to bring about efficiencies in my new work-place. Training and working alongside my office staff on the system and gaining their trust were keys to a smooth transition.

Unconsciously, my office was engaged in the PDSA cycle of rapid learning to roll out a new software system with an aim of improving operational efficiency. As the research shows, there was initial resistance to the change (Gawande, 2009). But we regrouped with all stakeholders at the table and watched demonstrations of the software packages. Staff still had questions, so the next step was a call to ask the vendors questions about the back-end process that related directly to their jobs. The staff trained on the new software remotely as well as with a trainer on-site who guided them with their unique functional needs. I ensured that the staff was involved in decision making. Once there was trust and buy-in from all staff members, the rollout was seamless.

Employees now have access via a web-based portal to access their paychecks, request time off, sign up for open enrollment or request classroom purchases online. The improvement process was localized to the business office but it would impact other strategic functions in the district.

This is a simple example of a back-end process improvement in a school district. Every instance of resistance required a small iteration of change in the improvement process. The web-based system allowed remote work throughout the pandemic and with quarantines during the last school year. If the district was still using a paper-based system, the unease of face-to-face interaction or safety concerns with lack of social distancing with COVID-19 would have been amplified. It could have affected productivity of staff and consequently, the efficiency of the district.

According to Heifetz, Grashow and Linsky (2009), adaptive leadership is the practice of mobilizing stakeholders to tackle tough challenges and thrive. The adaptive challenges can only be addressed through changes in people's priorities, beliefs, habits, and loyalties. To foster collaborations, both leadership and building relationships play a crucial role. Rather than a quick-fix solution, both a systems-level and self-level of diagnosis and action are required to assess the challenge of the adaptive leadership process.

My staff embraces this initiative by brainstorming issues or refining workflows at weekly staff meetings (Senge, 1999). I am more deliberate in my approach now and observe them “from the balcony” as a scholarly practitioner (Heifetz et al., 2009). As I observe, I think about whether this is a persistent problem that is embedded in the work of the business office staff and how we can address it so there is an improved outcome.

Embedded in that observation and thought process is the emergence of a PoP. The issue or problem is urgent and specific to the business office; it ties to the larger strategic goal of fiscal

prudence with finances, it is actionable as it falls under my span of control or sphere of influence, and it can be scaled and applied to other contexts in the business office functions.

In a larger context, I review the root causes that affects the PoP similarly to when reviewing the Fishbone diagram (Appendix E) with my study.

What I have learned is to better frame problems by asking the questions below to frame a theory of improvement for better outcomes:

1. What is it that we are trying to accomplish? (The Aim)
2. How will we know that a change is an improvement? (Driver)
3. What change can we make that will result in improvement? (Intervention)

Berger and Johnston (2015) allude to complexity as an emergence that is more than the sum of its parts. Once the change idea is implemented, I will review if the change brought about an improvement and whether it did what it was supposed to accomplish. If it did not, then the iteration will be repeated until the aim is accomplished. If progress is not made, then the scope may be too large and unrealistic and one might need to narrow the scope.

My work in the business office is neither simple nor predictable because of the various constituencies and mandates that govern public schools. What I have learned as a leader is that I cannot undertake this complex work alone and will have to reach out to allies in my organization. Bryk et al. (2015) referenced work in schools being traditional silos. I have learned to initiate collaborations in functional areas that I do not oversee to improve my initiatives outside of the business office functions. Improvement measures work when they are user-centered (Bryk et al., 2015).

While stereotypes about my abilities and priorities as a business manager may be some part of me, they do not “complete me” (Adichie, 2009). A previous study by my superintendent

revealed that “lack of trust” is an issue with district administrators in School District #1 (Graczyk, 2019). At the micro-level, in my own district, I must co-exist as a leader. So, I must foster that same theme of building relationships with district leaders to encourage improvement efforts continuously and reliably (Bryk et al., 2015).

These lessons about strategic leadership have been particularly true during the COVID-19 pandemic, which resides in the domains of volatility, uncertainty, complexity, and ambiguity (Snowden & Boone, 2007). In a crisis situation, Bennett and Lemoine (2014) suggested how businesses can respond to situations (Appendix P). The leadership action that their research advocates when faced with uncertainty, is to collect, interpret, and share information.

The collective research from this study highlights building relationships and leadership as key to engage in collaborations or sharing resources across district boundaries. Such collaboration in districts can reap efficiencies with cost savings in the long run.

**Appendix A Student Enrollment in Pennsylvania**

| <b>Year</b>    | <b>Enrollment</b> | <b>Year</b>    | <b>Enrollment</b> |
|----------------|-------------------|----------------|-------------------|
| <b>2008-09</b> | <b>1,787,351</b>  | <b>2013-14</b> | <b>1,750,059</b>  |
| <b>2009-10</b> | <b>1,780,069</b>  | <b>2014-15</b> | <b>1,739,559</b>  |
| <b>2010-11</b> | <b>1,781,206</b>  | <b>2015-16</b> | <b>1,731,588</b>  |
| <b>2011-12</b> | <b>1,765,327</b>  | <b>2016-17</b> | <b>1,722,619</b>  |
| <b>2012-13</b> | <b>1,765,327</b>  | <b>2017-18</b> | <b>1,719,336</b>  |

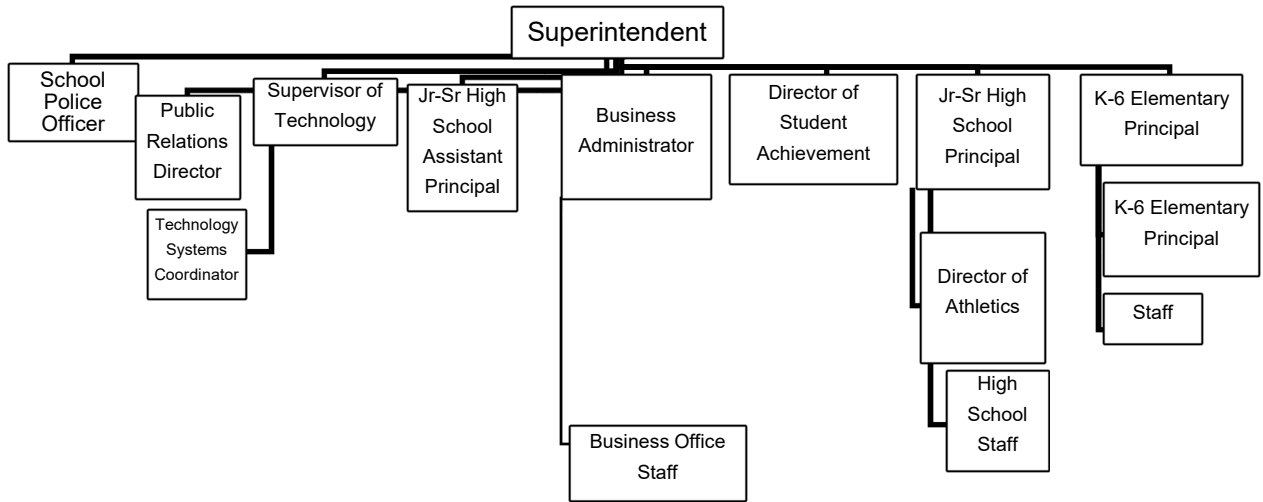
## Appendix B Demographic Data as of 2019

|  | School District #1 |
|--|--------------------|
| American Indian/Alaska Native          | -                  |
| Asian                                  | -                  |
| Black or African American              | 1.4%               |
| Hispanic                               | 1.3%               |
| Multiracial                            | 2.6%               |
| Native Hawaiian/Other Pacific Islander | -                  |
| White                                  | 95.4%              |

Source: PDE

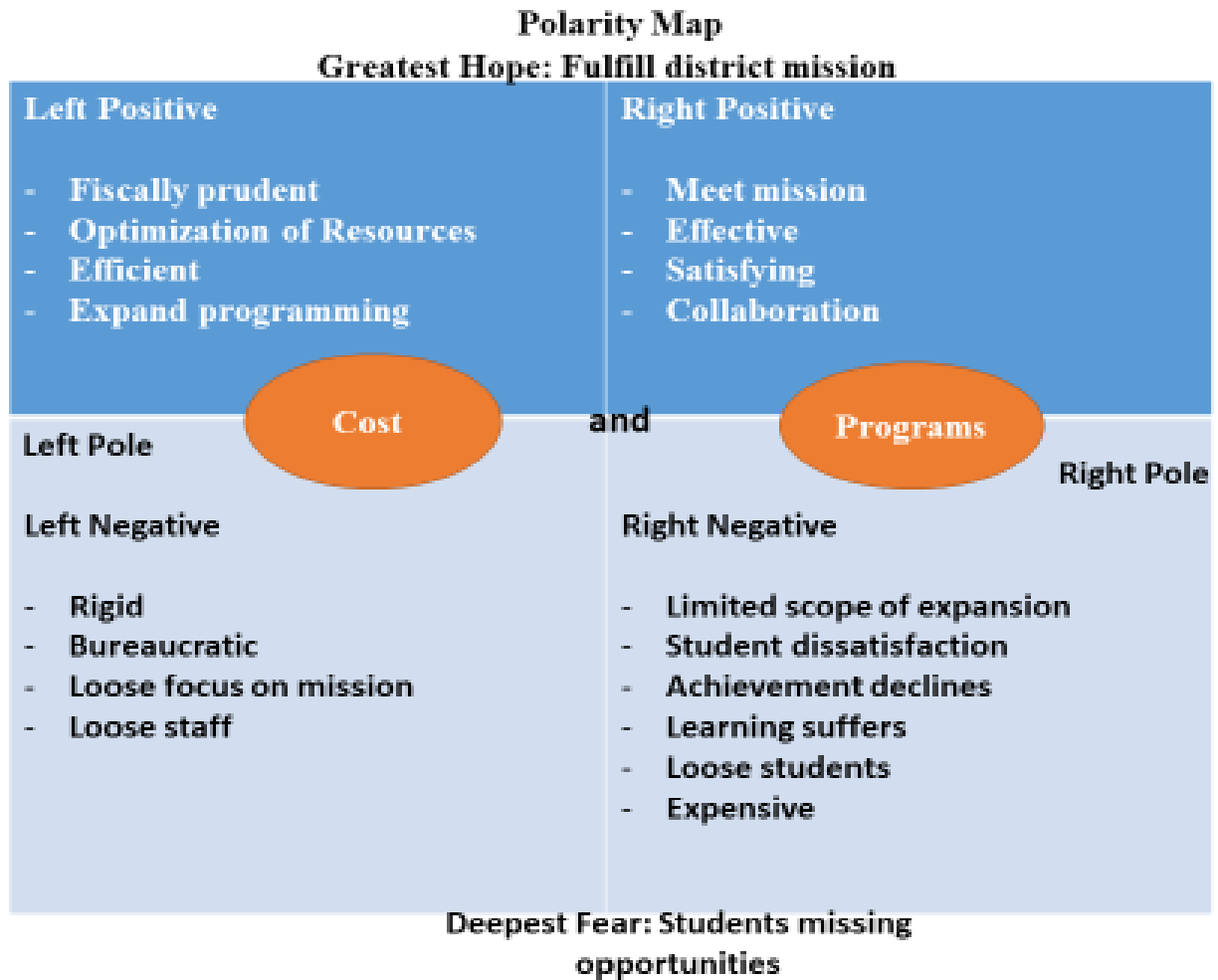
“The mission of School District #1, a group of small traditional communities, is to educate all students to achieve their maximum potential. A dedicated staff, in partnership with school, home, and community, will empower students to become responsible and contributing citizens able to meet challenges in an international society.”

# Appendix C Organization Chart

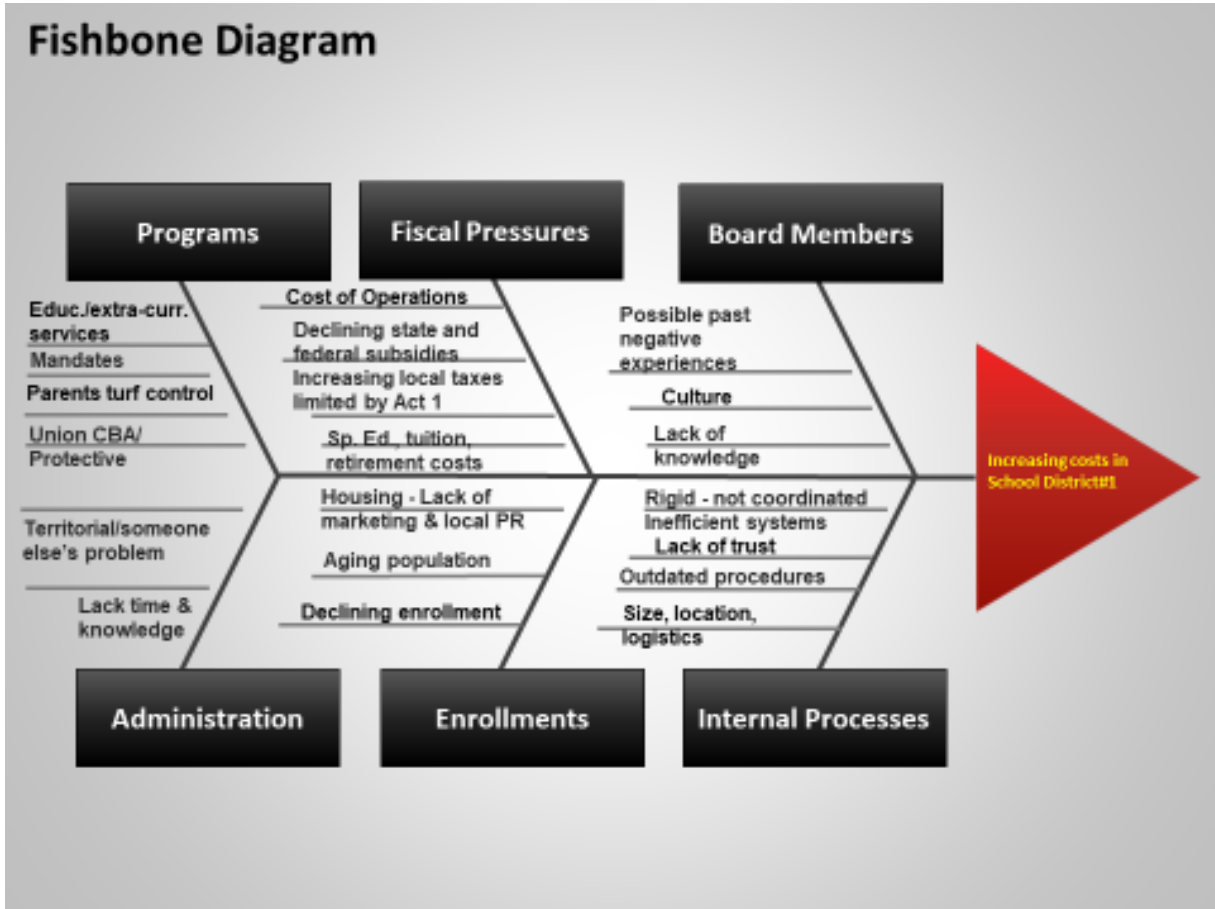




## Appendix D Polarity Map



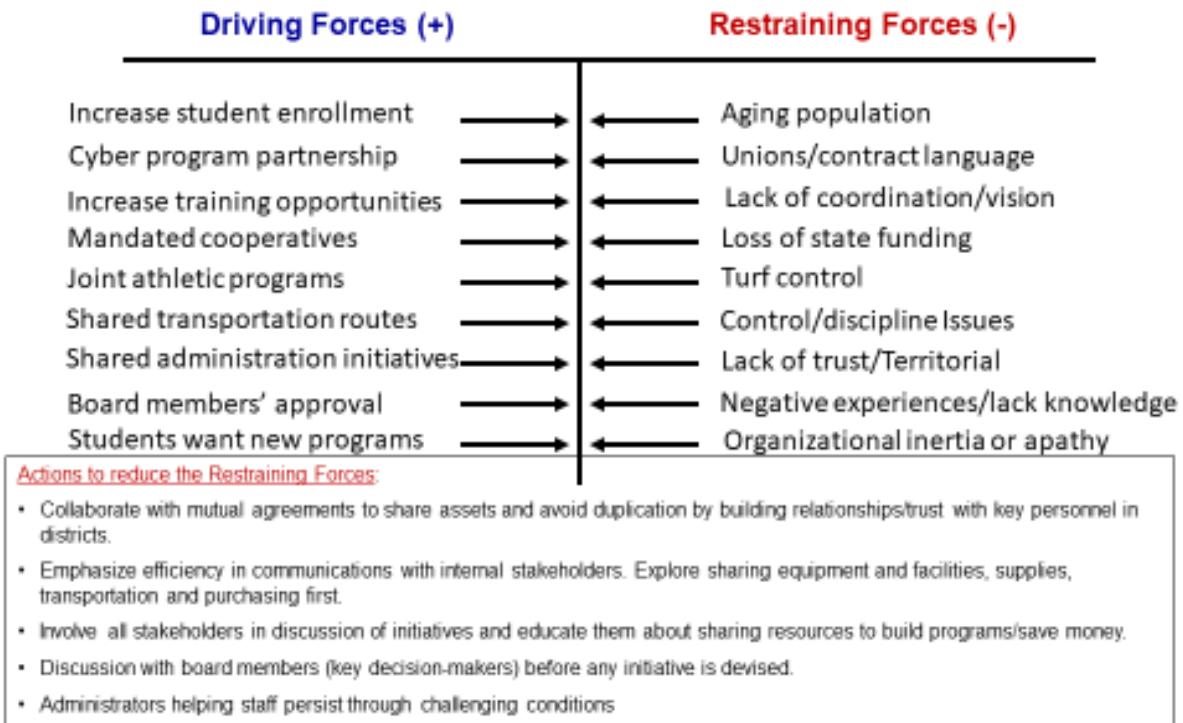
## Appendix E Fishbone Diagram



## Appendix F Force Field Analysis

### Force Field Analysis

**Issue or Project:** Despite declining enrollments and increasing costs school district#1 does not share resources with other districts.



## Appendix G Stakeholder Chart

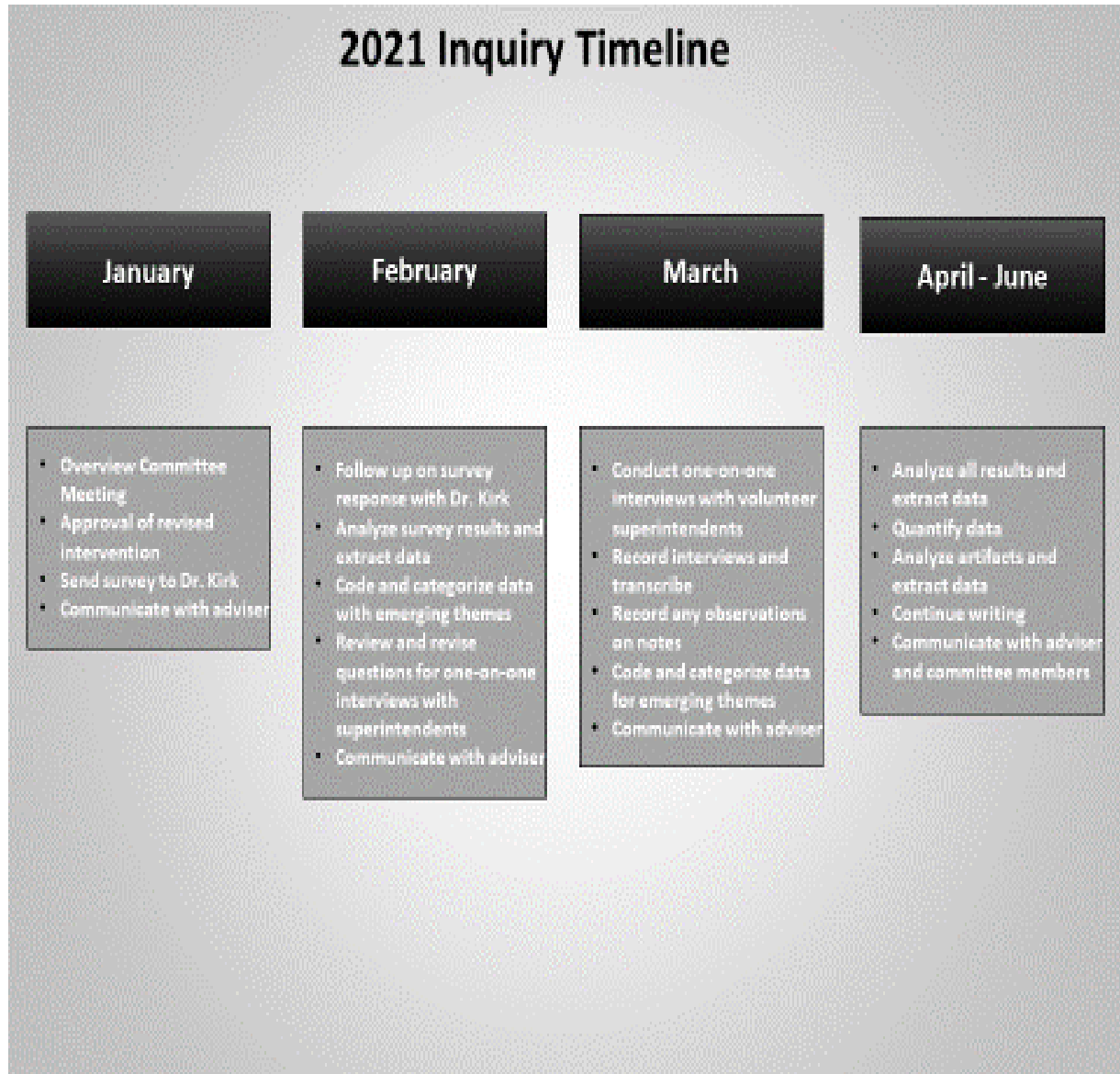
**Stakeholder Chart: Issue is despite declining enrollments and increasing costs, School**

**District #1 does not share resources with other districts**

| Stakeholder (individual or group) | Relationship to the issue                                       | Preferred outcome? | Noblest values?  | Loyalties?  | Potential Losses?             |
|-----------------------------------|---|--------------------|--|---|-------------------------------|
| Board members                     | Votes and approves - final decision maker                       |                    | Conservatism / Small Government/ Loyal to unions   | Ultra Conservative/ Cut all costs, run district with whatever funding is received/ Fairness to all constituents | Power/ Righteousness/ Control |
| Principals                        | Building could be affected                                      |                    | Student Programs/Staff morale  | Own building  | Control                       |
| High School Vice Principal        | Job could be affected as least senior administrator in district |                    | Self-serving save job  | Own family  | Job                           |
| Central Office Administrators     | Programs and staffing could be affected                         |                    | Service to district/ Allegiance to teachers as some were former teachers in the district | Stretched thin between parents, teachers, Superintendent and board  |                               |
| Union Presidents                  | In charge of union  |                    | Alliance with some board members   | Membership  | Leadership position           |
| Teachers                          | Job could be affected   |                    | Service to district  | To their own membership   | Jobs                          |
| Support Staff                     | Jobs could be affected  |                    | Self-serving save jobs   | To their own membership   | Jobs                          |

|                  |   |  |  |   |                           |
|------------------|---|--|--|---|---------------------------|
| Parents          | Student programs could be affected                            |  | To teachers whom they see every day or their child's favorite teacher          | To their children in school                   | Time                      |
| Community        | Tax paying members could be affected                          |  | Keep traditions<br>Do not raise taxes/<br>Cut expenditures/<br>Property values | Tied to traditional, ethnic roots             |                           |
| Students         | Directly affected as could gain or lose programs and teachers |  | Learning   |   | Quality of education      |
| Superintendent   | Proposes sharing resources                                    |  | District mission   | Stakeholders - the school board in particular | Strategic Plan            |
| Business Manager | Proposes sharing resources                                    |  | Fiscal Prudence  | All stakeholders, taxpayers in particular     | Financial Decision making |

## Appendix H Timeline



**Appendix I Note Taking for Interviews**

**Note taking for Interviews**

| Observations | Quotes | Interpretive notes |
|--------------|--------|--------------------|
|              |        |                    |
|              |        |                    |
|              |        |                    |
|              |        |                    |
|              |        |                    |
|              |        |                    |
|              |        |                    |
|              |        |                    |

## Appendix J IRB Exemption

**From:** Ivanusic, Carolyn <[REDACTED]@pitt.edu>  
**Sent:** Monday, November 2, 2020 12:57 PM  
**To:** Rajgopal, Hamsini <[REDACTED]@pitt.edu>  
**Subject:** Re: Review

Hamsini,

Thank you. Based on this information, I agree with your assessment that this is not 'human subjects' research. In other words, you are not studying the respondents as a topic (subject) of study. Instead, you are seeking information about the programs and their success, etc. For this reason, IRB review is not applicable. You can keep this email as documentation of this consultation and can proceed with your project without submitting an IRB protocol for review.

Carolyn

\*\*\*\*\*

*Carolyn Ivanusic, MSW CIP*  
Research Review Coordinator  
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**Appendix K Email from Tri-State Executive Director, Dr. Diane L. Kirk**

Kirk, Diane L <[REDACTED]@pitt.edu>  
Thu 2/18/2021 9:38 AM  
To: Kirk, Diane L <[REDACTED]@pitt.edu>  
Cc: Rajgopal, Hamsini <[REDACTED]@pitt.edu>

Greetings,

I hope you are staying safe and warm. Hamsini Rajgopal, an EdD student at the University of Pittsburgh and the Business Manager at [REDACTED] School District, is conducting research on how shared resources and collaborations might benefit school districts through cost savings or improved processes.

I invite you to take part of this brief survey. Your response would be invaluable to the work she is doing in her degree. You can access the survey [here](#) or by copying the following link into your browser: [https://pitt.col.qualtrics.com/jfe/form/SV\\_eE9zFrU2vLdHj9z](https://pitt.col.qualtrics.com/jfe/form/SV_eE9zFrU2vLdHj9z). I want to thank you in advance for your participation in this survey.

Thank you,

Diane L. Kirk, PhD  
University of Pittsburgh School of Education  
Department of Administrative and Policy Studies  
230 S. Bouquet Street Pittsburgh, PA 15260  
Email: [REDACTED]@pitt.edu  
Cell: [REDACTED]

# Appendix L Survey

## Tri-State Area School Study Council Member Survey

▼ The purpose of this research study is to assess working models of collaborations



My name is Hamsini Rajgopal, and I am the Business Manager at the [REDACTED] School District. I am also currently a student in the Doctoral Program (Ed. D, Education Leadership) at the University of Pittsburgh. I am contacting you to request your help with my research.

As some background, I have served in various central office administrative positions in three different school districts, including as Acting Superintendent. The broad purpose of my research is to study how shared resources and collaborations might benefit school districts through cost savings or improved processes. I believe that this work is timely in light of the financial crisis being faced by public school districts today with COVID-19.

All responses will be confidential, and your participation is completely voluntary. I am also happy to share my final results or findings with you. If you have questions, I can be reached at [REDACTED]@pitt.edu or [REDACTED].



### DEMOGRAPHIC INFORMATION



Name of School District



Q2 Current student enrollment:



---

## PERSONAL INFORMATION



Q3 Name



Q4 Title



Q5 Years of experience in current district



Q6 Years of experience as an educator



| Q7 **QUESTIONS**



| Q8 Have you engaged in collaborations or sharing resources with other districts? If so, please give a brief description of these collaborations.



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| Q9 Were any of the collaborations successful?



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| 0 What financial impact did the collaboration have on your school district?

0



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| 1 What were barriers or inhibitors to sharing resources with other districts?

1



---

12

Are you available for a follow up phone interview/virtual meeting?

- Yes  
 No



Condition: Yes Is Selected. Skip To: Please enter contact information (tel...



Condition: No Is Selected. Skip To: Thank you for your time with this study.

13

Please enter contact information (telephone and/or email):



14

Thank you for your time with this study



## Appendix M Meeting Agenda

### Agenda Item Details

|                    |   |
|--------------------|---|
| Meeting            | Apr 20, 2021 - Voting Meeting   |
| Category           | 7. OPERATIONS/FINANCE - [REDACTED]  |
| Subject            | 7.4 Cooperative Purchasing Programs   |
| Access             | Public  |
| Type               | Action  |
| Recommended Action | Recommend the Board approve the [REDACTED] District's participation in coordinated Cooperative Purchasing programs for the 2021 calendar year as presented. |

### Public Content

1. Department of General Services of the Commonwealth of Pennsylvania
2. Keystone Purchasing Network
3. [REDACTED] Intermediate Unit Purchasing Program
4. Pennsylvania Educational Purchasing Program
5. U.S. Communities an Omnia Partner
6. Sourcewell
7. [REDACTED] Intermediate Unit [REDACTED]
8. General Services Administration Advantage Online Shopping (GSA Advantage)
9. National Cooperative Purchasing Alliance
10. National Joint Powers Alliance
11. The Cooperative Purchasing Network
12. [REDACTED] Intermediate Unit Joint Purchasing Consortium
13. [REDACTED] Intermediate Unit [REDACTED] Joint Purchasing Program
14. Pittsburgh Regional Food Service Directors - Commodities Bid
15. BuyBoard Cooperative Purchasing
16. The Interlocal Purchasing System

# Appendix N Policy Poster

## Enhancing Cooperative Purchasing in [Redacted] School District

Hamsini Rajgopal  
Ed Leadership

### Framing the Problem Space

- Faced with declining enrollments and increasing costs, [Redacted] School District has not pursued resource sharing initiatives with neighboring districts, affecting the quality of student programming
- Cooperative purchasing is a best practice when balancing budget dollars with needs. The cooperative purchasing policy was passed in 2010 by the school board to address district finances
- To improve cost and operational efficiency in [Redacted] school district, it is important to review programs offered and costs incurred
- [Redacted] school district has not pursued this policy to its full capacity and has lost cooperative opportunities with neighboring school districts

### Rationale for Focal Policy: Cooperative Purchasing

- Policy directly addresses problem space – cooperatives, when expanded to a collaborative, encourage resource sharing or resource pooling that makes purchasing more efficient
- In the business sector, economies of scale are achieved when costs are spread over more units being produced
- By sharing purchasing with another district, the discounts from the increased volume of purchases leads to savings



### Equity with Cooperatives

- Equity of access for all students in the district
- Increases the choice of resources available for student programs offered to students from both wealthy and economically disadvantaged neighborhoods have access to the same supplies, equipment and services
- Students from both wealthy and economically disadvantaged districts have access to the same academic programs
- Staff have access to same resources (e.g. curriculum planning) and services (e.g. professional development)
- Equity for tax payers
- Long-term benefits provides opportunity for all students and diffuses benefits to society



### Policy Analysis

- Cooperative purchasing policy is a capacity building policy but when utilized to its full extent, can be systems building (McDonnell & Elmore, 1987)
- Enables potential long-term savings, with expenditures that can be diverted towards other resource allocations
- Can only be executed by authority of the local school boards
- Implementation of this policy serves stakeholders (administrators, teachers, staff members, students, parents, community members, school board members or legislators) in the [Redacted] school district
- Policy establishes internal accountability with long-term economic benefits and pockets of efficiencies (Dill, 2000)
- Will reach effects of operational efficiency and educational excellence in [Redacted] school district that will enhance resource allocations in school districts

### Policy Issues

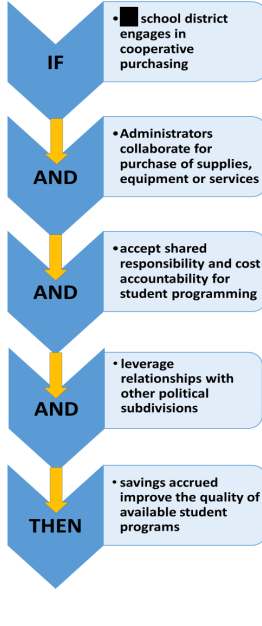
- The district achieved its goal of cooperative purchasing to accrue savings through joint agreements with political subdivisions, local Intermediate Unit (IU) and [Redacted] County School Health Insurance Consortium (ACSHC); this helped the district invest in additional student programs
- However, there were unintended consequences with cooperative purchasing
  - Unsustainable program and diseconomies of scale: the IU stopped cooperative purchasing of all supplies for school districts because it experienced increased costs; therefore, [Redacted] district seeks proposals for purchasing on its own which is expensive
  - The municipalities sometimes need police coverage for their own emergencies; public works do not have extra salt supplies or equipment to lend as they need it for their own use
  - Lack of will of administrators and lack of skill with support staff turnover affects internal accountability measures (Erickson & Christman, 1996)
  - Cooperative purchasing is confined to the business office, which does not have a person dedicated to purchasing (McLaughlin, 1987)
  - The policy is ambiguous and there is a misunderstanding of this policy; school district has not pursued this policy to its full capacity and loses opportunities for pursuing cooperative purchasing by possibly partnering with other school districts
- Need new policy instruments to expand scope of cooperative purchasing to collaborative initiatives among neighboring school districts



### Assumptions

- Parties collaborating in cooperative purchasing include appropriate stakeholders: [Redacted] district central office administrators, principals, and supervisors
- Teams have shared vision of benefits of such cooperation
- Teams select mutually beneficial programs
- Teams accept shared responsibility and cost accountability for student programs

### Assumed Theory of Action



### Consequences, Challenges and Capacity (Beaver & Weinbaum, 2012)



### Conclusions

- Cooperative purchasing has been utilized by the district successfully with health insurance for employees, professional development for teachers with higher education through cooperative STEAM grants, districtwide services from municipalities, etc.
- The savings accrued through cooperative purchasing and other measures have helped the district address equity of access as students enter kindergarten. [Redacted] district will be the only district in the state to fully fund its own Pre-K program next year without state subsidies or fees from enrolled students.
- However, there is a need to provide best student outcomes from the limited resources that are available to the district. Education policy sets accountability at the micro (classroom) level, yet the altering variables are at the macro level (Abelman et al., 1999). Appropriate resource allocation to ensure equity and equal opportunity in the classroom is important. More resources can be diverted to student programs from the savings attained with cooperative purchasing.

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### Contact

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Business Manager  
[Redacted] School District  
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## Appendix O Business Response in VUCA



Note: From Harvard Business Review



## Appendix P Expenditure Report Using Cooperative Purchasing Network

| VENDOR            | INV#       | IN DATE   | DESCRIPTION                 | LIST PRICE  | BUYBOARD PRICE | SHIPPING COSTS | AMOUNT SAVED | DISCOUNT |
|-------------------|------------|-----------|-----------------------------|-------------|----------------|----------------|--------------|----------|
| ALUMINUM ATHLETIC | 107737     | 3/30/2021 | CLIPS FOR SOCCER NET        | \$ 67.95    | \$ 61.16       | \$ -           | \$ 6.79      | 10%      |
| B & H VIDEO       | 186784369  | 3/25/2021 | AV LIGHTING ACCESSORIES FOR | \$ 41.33    | \$ 37.52       | \$ -           | \$ 3.81      | 9%       |
| BSN SPORTS        | 911572151  | 3/9/2021  | TRACK SUPPLIES              | \$ 2,368.65 | \$ 1,782.97    | \$ 63.00       | \$ 522.68    | 22%      |
| BSN SPORTS        | 911980739  | 3/15/2021 | CHAIR CART 1399629          | \$ 709.99   | \$ 462.00      | \$ 36.96       | \$ 211.03    | 30%      |
| BSN SPORTS        | 912123904  | 3/26/2021 | TENNIS SCOREBOOK 1303254    | \$ 28.99    | \$ 17.00       | \$ 1.44        | \$ 10.55     | 36%      |
| NASCO             | 16962      | 2/22/2021 | ART SUPPLIES                | \$ 126.43   | \$ 105.36      | \$ -           | \$ 21.07     | 17%      |
| NASCO             | 25305      | 3/8/2021  | ART SUPPLIES                | \$ 914.60   | \$ 790.98      | \$ -           | \$ 123.62    | 14%      |
| SCHOOL HEALTH COR | 3877434-01 | 3/10/2021 | AED SUPPLIES                | \$ 1,378.00 | \$ 1,198.94    | \$ -           | \$ 179.06    | 13%      |
| SCHOOL HEALTH COR | 3897655-00 | 3/29/2021 | MEDICAL SUPPLIES GENERAL    | \$ 2,941.81 | \$ 2,650.28    | \$ -           | \$ 291.53    | 10%      |
| STAPLES           | 3471561451 | 3/6/2021  | OFFICE SUPPLIES             | \$ 107.22   | \$ 89.54       | \$ -           | \$ 17.68     | 16%      |
| STAPLES           | 3471561453 | 3/6/2021  | CHILD SIZE MASKS 24459915   | \$ 199.90   | \$ 136.70      | \$ -           | \$ 63.20     | 32%      |
| STAPLES           | 3470038732 | 2/20/2021 | OFFICE SUPPLIES             | \$ 938.81   | \$ 676.58      | \$ -           | \$ 262.23    | 28%      |
| STAPLES           | 3470038734 | 2/20/2021 | OFFICE SUPPLIES             | \$ 301.80   | \$ 171.97      | \$ -           | \$ 129.83    | 43%      |
| STAPLES           | 3471561454 | 3/6/2021  | SHELVING UNIT LLR70063      | \$ 235.20   | \$ 196.00      | \$ -           | \$ 39.20     | 17%      |
| STAPLES           | 3470038728 | 2/20/2021 | PRINTER STAND 24148282      | \$ 48.49    | \$ 39.99       | \$ -           | \$ 8.50      | 18%      |
| STAPLES           | 3471561455 | 3/6/2021  | JUMP DRIVES IM1QZA6268      | \$ 33.49    | \$ 11.20       | \$ -           | \$ 22.29     | 67%      |
| STAPLES           | 3471561456 | 3/6/2021  | PLANNERS 24468008           | \$ 209.93   | \$ 189.00      | \$ -           | \$ 20.93     | 10%      |
| STAPLES           | 3469615249 | 2/13/2021 | OFFICE SUPPLIES             | \$ 178.64   | \$ 130.01      | \$ -           | \$ 48.63     | 27%      |
| STAPLES           | 3471561447 | 3/6/2021  | TABLES 1560607              | \$ 275.00   | \$ 248.82      | \$ -           | \$ 26.18     | 10%      |
| STAPLES           | 3471561452 | 3/6/2021  | PLANERS 24461627            | \$ 124.95   | \$ 84.90       | \$ -           | \$ 40.05     | 32%      |
| STAPLES           | 3467612268 | 1/23/2021 | 24359830 TWIZZLER SNACKS    | \$ 15.79    | \$ 9.97        | \$ -           | \$ 5.82      | 37%      |
| STAPLES           | 3472016185 | 3/13/2021 | 487129 PENCILS              | \$ 125.58   | \$ 78.12       | \$ -           | \$ 47.46     | 38%      |
| STAPLES           | 3472991760 | 3/27/2021 | 601593 PENCILS              | \$ 38.97    | \$ 32.31       | \$ -           | \$ 6.66      | 17%      |
| STAPLES           | 3473772555 | 4/3/2021  | OFFICE SUPPLIES             | \$ 60.35    | \$ 50.89       | \$ -           | \$ 9.46      | 16%      |
| STAPLES           | 3472991759 | 3/27/2021 | SNACKS FOR STUDENTS         | \$ 107.96   | \$ 72.11       | \$ -           | \$ 35.85     | 33%      |
| STAPLES           | 3473772556 | 4/3/2021  | OFFICE SUPPLIES             | \$ 188.92   | \$ 132.62      | \$ -           | \$ 56.30     | 30%      |
| WEST MUSIC        | SI1985689  | 3/15/2021 | MUSICAL SUPPLIES            | \$ 119.85   | \$ 102.65      | \$ -           | \$ 17.20     | 14%      |

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