ICPEL
Education Leadership Review
of
Doctoral Research

Fall 2022
Volume 10
ISSN 2832-4250

International Council

ICPEL

of Professors of Educational Leadership

The **Education Leadership Review of Doctoral Research (ELRDR)** is an ICPEL publication of doctoral research in education leadership and a companion peer reviewed journal to the Education Leadership Review (ELR). Lead authors are recent doctoral graduates with chair or committee member serving as coauthor/s. Research is limited to dissertations, capstones, and action research projects. The purpose of the ELRDR is to disseminate the results of doctoral research in education leadership and school administration.

All manuscripts have been peer-reviewed, accepted, and endorsed by the International Council of Professors of Educational Leadership (ICPEL) as a significant contribution to the scholarship and practice of school administration and K-12 education

International Council

ICPEL

of Professors of Educational Leadership

Education Leadership Review of Doctoral Research

Fall 2022

Contents

From the Editors

This issue of *Education Leadership Review of Doctoral Research* (ELRDR) is published in recognition of the extensive work that recent doctoral graduates, chairs, and/or committee members complete to augment the field of education leadership and administration. The ongoing quest to focus on research-based findings to create a bridge between theory and practice in K-12 education and school leadership remains essential, especially as educators continue to grapple with supporting students and staff amidst a recovery from the pandemic. We are excited to support the work of recent doctoral graduates, and it is promising to see that their endeavors continue to show that effective educational leadership transcends all contexts. We encourage you to further promote our aims to your colleagues and recent graduate students so that we may continue to support new authors and contribute to recent, innovative, and meaningful work to the field. Additionally, we remain deeply grateful to our authors, editorial advisors, and peer reviewers for continuing such scholarly work to the benefit of our practice and the field.

In this edition, the work by Alexis Mabe, Kelly Brown, Edward Frick, and Frederico Padovan in "Using technology to enhance project-based learning in high school: A phenomenological study," centers on how project-based learning can be enhanced for the 21st century. This works allows us to explore the use of technology to improve learning outcomes and understand what features and capabilities are missing in current technology from educators' perspectives. With ever-changing technological demands in education, this work is timely and necessary.

Jessica Pomerenke's study, "First- through third-year secondary mathematics teachers' mentoring experiences: A phenomenological study" highlights a critical need in our educational settings. This is particularly essential as the nation experiences massive teacher shortages. Her study noted that beginning mathematics teachers' experience various types of collegial support through formal and informal means, with regular observations and constructive feedback found to be highly valued.

Pertaining to needs in the rural areas, the research by Jessica J. Vogel, Erin Lehmann, Susan Curtin, and Carly Retterath in "Rural leaders' experiences with implementing FAPE for students with intellectual disabilities," reminds us that it is of paramount importance to ensure school leaders are prepared to serve as highly effective in their roles. In this study, it was found that eight principals of remote rural areas were not professionally prepared to provide FAPE for students with intellectual disabilities and lacked confidence to do so, thus heavily relying on teachers' capacities.

Another area that continues to need exploration is centered on ways to best mitigate reading and math learning loss during summer months, which was explored by Adam Reynolds and Olcay Yavuz. Their study, "A mechanism to increase literacy and math skills to reduce summer learning loss," focused on fifth- and sixth-grade students who participated in a summer academy. They found that participants grew in reading but regressed in math, as compared to those who did not

participate in the program. Their work highlighted the leader as being integral to the success of programming that is designed to better serve students from economically disadvantaged backgrounds.

In the study, "Relationships between dual enrollment parameters and community college success in Tennessee," Victoria Mellons, Jill Channing, Kwangman Ko, James Lampley, and Amy Moreland compared the academic success of students entering community college over four years based on dual enrollment participation and additional student characteristics measures. Importantly, dual enrollment students were more likely to graduate and do so in fewer semesters. Their work highlights valuable trends related to dual enrollment and the opportunities this brings to students.

Expanding into the field of higher education, Erin Messmer and Jill Channing explored the perceptions among first-generation women in attaining support. In, "First-generation women students' perceptions of support while enrolled in higher education institutions: A phenomenological study," the participants brought light to themes such as the role of mentorship, need for financial assistance, family, and additional intersectional factors, particularly during the COVID-19 pandemic. This establishes an opportunity to integrate effective ways in ensuring some of our most vulnerable populations are supported through various means.

Shifting to the K-12 setting, the topic of school uniforms has persisted, particularly when centered on ways to support the student population. As such, Andrew Yoxsimer and Jafeth E. Sanchez share insights in, "Uniforms in three middle schools: Student opinions" through an empirical lens with nearly 2,000 student responses. They found that, students in the 7th grade and Hispanic/Latino students, benefited from the uniforms as compared to their peers. These findings are aimed to help school leaders identify practices that promote positive responses to the factors measured by their Student School Uniform Survey.

In similar light to meeting student needs, Wanda L. Van Dyke, John C Pijanowski, Kara Lasater, and Christy Smith close out our issue with their study, "The perspectives of principals on the discipline disproportionally of Black students with disabilities." Their qualitative inquiry approach in the form of a case study was used to determine principals' perspectives about the factors that may impact discipline disproportionality. Their work helps to develop ideas about how to address the inequities in how students are disciplined.

The articles in this issue emphasize that leadership is holistic, that it bridges K-12 and Higher Education settings, and that we must continue to ensure our endeavors retain a scholar-practitioner lens in order to support continuous improvement efforts in the field of Educational Leadership. As always, please encourage your colleagues and their recent doctoral graduates to

take the next step beyond the dissertation by pursuing authorship of their work. Your support allows us to engage in and disseminate innovative and meaningful work in Educational Leadership.

Sincerely,
Jafeth E. Sanchez, PhD
Editor, *The Education Leadership Review of Doctoral Research*

Jennifer K. Clayton, PhD
Assistant Editor, *The Education Leadership Review of Doctoral Research*

Using Technology to Enhance Project-Based Learning in High School: A Phenomenological Study

Alexis Mabe
Lamar University

Kelly Brown
Lamar University

J. Edward Frick
Lamar University

Frederico Padovan
Lamar University

Educators are tasked with preparing students for college and beyond (Gómez-Pablos et al., 2017). Project-based learning can help achieve this goal (Gómez -Pablos et al., 2017). PBL engages students in real-world problem-solving activities that allow them to take ownership of their own learning and create real products (Zafirov, 2013). The problem this study aimed to solve is how technology can better support PBL so we can better prepare students for the 21st century. It has been argued that technology can directly increase the effectiveness of project-based learning in the classroom (Pitura & Monika, 2018). Effectively leveraging technology during PBL is one of the best ways to help students address real-world problems and prepare for life after college (Brown, Lawless, & Boyer, 2013; Korucu & Cakir, 2018; Pitura & Monika, 2018). The purpose of this phenomenological qualitative study is to understand how technology currently supports project-based learning for educators in secondary schools, and to determine what missing features would be beneficial. The information gained in this study has helped the researcher understand how technology enhances the project-based learning experience. The research also supports an understanding of what features and capabilities are missing in current technology from educators' perspective.

Keywords: project-based learning, technology, secondary schools, digital

Project-based learning (PBL) is a learning model that engages students in real-world problem-solving activities allowing them to take ownership of their learning to create real products (Anazifa & Djukri, 2017). This approach, in one form or another, has been around for over a century. With the increase in globalization and the rapid advancements in technology, PBL is now more relevant than ever. Project-Based Learning is one of the best ways to prepare students for the digital age because it teaches content and develops skills in communication, collaboration, critical thinking, and creativity (Gómez-Pablos, et al., 2017). Technology enhances PBL by providing opportunities for students to collaborate and communicate in ways inconceivable prior to the advent of various tools (Martinez & Schilling, 2010).

Over the past few decades, a shift has occurred from teacher-centered to student-centered pedagogy (Emaliana, 2017). Originally, PBL arose from a need to improve education in medical school by giving the students real-world experience as opposed to memorizing information from a book or lecture (Sunar & Shaari, 2017). However, since the 1960s, educators realized the benefits of PBL for students in K-12 schools (Dias & Brantley-Dias, 2017).

In a teacher-centered classroom, often called a traditional classroom, students are passive learners, and lecturing is often the mode of instruction (Emaliana, 2017). In a student-centered classroom, students are active learners and instruction can take many different forms. This increased engagement helps the student to retain information (Taheri, 2018). Additionally, students need to be prepared for both college and life beyond college. (Gómez-Pablos et al., 2017). The skills needed to succeed in both settings can be very different. In college, students need *hard skills* including how to take a test. However, for career-readiness, employers put more stock in certain "soft skills," such as creativity and collaboration (Korucu & Cakir, 2018). These soft skills are referred to as 21st century skills (Ghafar, 2020).

According to Gómez-Pablos et al. (2017), the theory behind PBL can meet the needs of preparing students for college and their future careers. In order to solve complex problems that stem from class concepts and objectives, students must collaborate in small groups and also think critically during independent work (Emaliana, 2017). Because PBL asks students to think of their audience as beyond their teacher or classmates, they must actually engage with a larger community (Aldabbus, 2018). All of this results in 21st century learning (Aldabbus, 2018).

Project-based learning activities can be very complex. For example, the students need a forum to share their project beyond the classroom. Additionally, they must practice creative and critical thinking skills and collaborate in person as well as asynchronously outside the classroom (Shin, 2018). The teacher's role is to guide and assess the process and products (Korucu & Cakir, 2018). The goal of educational technology is to offer solutions to meet the needs of educators and students in the classroom. Educational technology has already supported many components of PBL (Spector et al., 2016) and has the potential to support every phase of PBL.

However, technology in the classroom does not guarantee a teacher will make the transition from a teacher-centered classroom to a student-centered classroom (Parrish & Sadera, 2020). In many teacher-centered classrooms, technology is used by the teacher, but in a student-centered classroom, the technology is mostly used by the students (Ünal & Çakir, 2017). Due to the shift in who uses technology seen in student-centered classroom, Pitura and Monika (2018) argue that technology can directly increase the effectiveness of PBL.

Utilizing technology during PBL is one of the best ways to help students address real-world problems and prepare for life after college (Brown et al., 2013; Korucu & Cakir, 2018; Pitura &

Monika, 2018). This research seeks to understand how technology can better support PBL so students are better prepared for the 21st century.

Theoretical Framework

Constructivism as a Learning Theory has been around for a very long time and originated in philosophy but applied to other fields such as sociology, psychology and education (Handrianto & Rahman, 2019). According to constructivism, education should be student-centered because knowledge is transferred best when students are "active learners" (Qiu, 2019). Matthews (2002) calls constructivism "education's version of the 'grand unified theory,' plus a bit more" (p. 121). Constructivism as a learning theory seeks to understand how learners obtain knowledge (Qiu, 2019). Additionally, constructivists believe that a learner gives meaning to knowledge based on his/her own experiences, not the other way around (Handrianto & Rahman, 2019). This means that everyone sees information through his or her own personal filter (Feyzi Behnagh & Yasrebi, 2020). The goal of the educator then is not to allow students to receive information passively, but to find ways to achieve a connection between the learner and the information, including ways for the learner to relate to what is being taught (Qiu, 2019). Furthermore, using the constructivist learning theory is the best way to prepare students with the skills employers are looking for (Ünal & Çakir, 2017). PBL directly stems from the constructivist theory in education (Handrianto & Rahman, 2019). The goal of PBL is to create an atmosphere in which learning is meaningful because the students have a personal stake in the outcome of the project (Handrianto & Rahman, 2019).

Review of the Literature

Just because students are high achievers in high school does not guarantee their success in college and beyond (Silipo, & Caldon-Ruggles, 2021). Our world has changed significantly due to advances in technology (Kämpfen & Maurer, 2018). These rapid advances have led to globalization, in which information and resources are shared at a never-before-seen pace (Lewandowski et al., 2022). In the current century, as the world continues to rapidly change, the skills people need to be successful in life and in their careers are also changing (Korucu & Cakir, 2018). Students need to solve problems in a competitive and technology-driven world (Anagün, 2018). In order to compete in this new global marketplace, employers are looking to hire graduates who have developed called 21st century skills (Ghafar, 2020). These are skills that have been identified as essential to becoming good functioning and participating members of society (Ghafar, 2020).

The Role of Technology in Project-Based Learning

It is not so much that technology is used, but how technology is used. In a constructivist learning environment, technology is an important component because it gives students direct access to information sources and allows them to easily collaborate (Ünal & Çakir, 2017). As such, it has been argued that technology can directly increase the effectiveness of PBL in the classroom (Pitura & Monika, 2018).

Martinez and Schilling (2010) argue the best way to support students during a project-based learning activity is to leverage technology that meets their needs. A central part of the PBL framework is students' ability to discover information on their own, and utilizing technology in the classroom supports that aim (Shin, 2018). Additionally, making technology part of the learning experience allows for strong connections to the real world, another key component of PBL (Vasiliene-Vasiliauskiene, 2020). It is difficult for teachers to maintain sustained inquiry over long periods of time without the use of technology (Pitura & Monika, 2018). Pitura and Monika (2018) argue that technology tools used during PBL are "helpful in facilitating learners' knowledge construction, finding, analysis and sharing information online, collaboration, and developing multimedia products" (p. 40). Technology also allows for learning to extend beyond the four walls of the classroom (Pitura & Monika, 2018). Students are able to collaborate and communicate in ways never before imagined. Using technology, students can communicate synchronously and asynchronously (Lo, 2009). This is a tremendous help to the required groupwork aspect of PBL (Lo, 2009).

PBL and Web technology

Project-based learning itself has evolved over time, and much of this change has been driven by changes in technology (Sunar & Shaari, 2017). Significant technological advancements include the development of Web 2.0 technology and dynamic web technology (Sunar & Shaari, 2017; Ünal & Çakir, 2017). Web 2.0 tools give users the opportunity to collaborate and communicate while learning (Sahin-Topalcengiz, E., & Yildirim, B., 2020). Ünal and Çakir (2017) define dynamic technologies as "web-based applications that bring a new dimension to interaction" (p. 4). In both of these technologies, individuals are not passively consuming, they are actively sharing and creating, adding as much as they take (Ünal & Çakir, 2017).

Li (2018) points out research has shown that Web 2.0 technologies have a high capacity to facilitate collaboration. In PBL scaffolding can be very important to help students achieve the desired learning goals, and Web 2.0 technologies can also aid in enhancing other student skills such as writing and language development (Li, 2018). However, Sunar and Shaari (2017) argue that some collaborative technology has been understudied. For example, there have not been many studies on social media's effectiveness in the classroom.

In reference to dynamic Web technologies, Ünal and Çakir (2017) found that these technologies led to student success in the classroom. Additionally, in conjunction with PBL, dynamic Web technologies have the potential to help students develop the skills they need to be successful in the 21st century (Ünal & Çakir, 2017). Included in the educational benefits of dynamic Web technologies include "active learning, motivation, collaborative learning, communication and interaction, and improvement of thinking skills" (Ünal & Çakir, 2017, p. 2). Examples of dynamic Web technologies include social networking sites, podcasts, wikis, blogs, video sharing sites, virtual museums, and instant messaging programs (Korucu & Cakir, 2018).

Educational technology tools to support PBL

In the literature, many other tools that help support and enhance PBL exist. Most of the tools described are for assessment, creation or collaboration. Additionally, there are some technology

tools that help keep the students engaged in the PBL learning experience. Examples of technology tools that enhance collaboration are Google Docs and videoconferencing. Programs like Google Docs allows a group of students to simultaneously work on an assignment (Li, 2018). They can brainstorm together, make comments, and critique each other's work (Li, 2018). Video conferencing is a powerful tool that has many benefits in the classroom (Guillén et al., 2020). It allows for collaboration to extend far beyond the classroom and even include the whole world. Students are able to speak with and see people in other countries (Hopper, 2014). Hopper (2014) states that video conferencing has the ability to incorporate all of the 4Cs - critical thinking, collaboration, communication, and creativity and can achieve the goal of teaching global and cultural awareness. In addition to this kind of collaboration with other students, video conferencing can also be used to bring in experts to help mentor and guide the students through the PBL process and/or help to make the final product more authentic by having a panel of judges who would not be able to attend in person (Hopper, 2014). This type of interaction has been proven to increase student motivation and thereby help to sustain inquiry over long periods of time (Hopper, 2014).

The research has looked at many different types of tools for assessment (Brown, 2017). Most of the tools, which include blogs, websites, wikis, and ePortfolios encourage collaboration and communication between students and allow for self-reflection (Brown, 2017). Educators are then able to track students' contribution and progress (Brown, 2017). The wikis allow students to share artifacts and the threaded discussions enable students to give feedback to each other (Li, 2018). Spector et al. (2016) point out that ePortfolios support assessments in PBL because "they provide a holistic approach to recording achievements and providing formative assessments in line with professional standards" (p. 62). Despite the benefits of using ePortfolios for both formative and summative assessments, the human time investment they require make them unattractive to some (Spector et al., 2016). Self-reflection is one type of assessment, and, traditionally, students were only able to reflect via written text (Leinonen et al., 2016). However, with technology tools, students have the opportunity for video, audio, or other type of visual reflection (Leinonen et al., 2016).

A significant benefit of using technology to support PBL is the capacity for creation which allows students the opportunity to show and practice their creativity. With Apple's introduction of the iPad, they also began making their way into the education sector (Young, 2016). Young (2016) argues that since the iPad has become the dominant device in education, iPad is now synonymous with all tablets. Apple has made a point of offering applications that help students create. Keynote, iMovie, and Garageband are all examples (Levin & Schrum, 2013).

Purpose Statement and Research Questions

The purpose of this qualitative study was to understand how technology enhances project-based learning for educators in secondary schools and determine what missing features would be beneficial. The information gained in this study has helped the researcher understand how technology enhances the project-based learning experience. The research also supports an understanding of what features and capabilities are missing in current technology from educators' perspective. The use of technology to support PBL will generally be defined as a high school classroom that conducts PBL in a 1:1 student-to-device learning environment. The

research questions were:

1. How are teachers currently using technology to support project-based learning?
2. What features of current technology do teachers believe best support them in planning, implementing and conducting project-based learning?
3. What features do teachers believe are missing from the current technology?

Method

Research Design

Using a phenomenological narrative approach, this qualitative study looked at how educational technology can support project-based learning. Creswell (2013) states that this type of study is appropriate when the research aims to describe what all participants have in common. For this study, the commonality that all the participants shared was that they used educational technology to help them conduct PBLs in a high school with a 1:1 student-to-device learning environment. The researcher conducted interviews to determine the subjects' experiences.

The Participants and Setting

The Criterion method, which requires all the participants to meet the same criteria, was the sampling strategy used (Creswell, 2013). The participants of this study consisted of 10 high school teachers who had been identified by their administration as utilizing PBL in the classroom. For a phenomenological study, Creswell (2013) suggests between 5 and 25 participants. All of the teachers who participated in the study worked at the same urban private Catholic school in Miami, Florida during the 2018-2019 school year. Four of the teachers did not return to the same school the following year. One teacher left to work in a nonprofit and is no longer an educator, another left to work at a charter school, and two of the teachers left for another urban private Catholic school. The participants met the following criteria:

- Conducted true PBLs, not just long-term projects
- Conducted the PBLs in high school in the last 3 years
- Used technology to support PBL
- Were comfortable with technology
- Taught in a 1:1 student-to-device learning environment
- Were in good standing with their administration

Results

The demographic questions at the beginning of the interview addressed longevity, length of time using PBL, perceptions of classroom technology, subjects, grades and levels taught. Seven of the participants said they first started conducting PBLs because they wanted to give the students more real-world experiences. Two said they first tried PBL because they wanted the students to take more ownership of their learning. One said they were mandated by the school they taught at in the past; however, they liked it and continued even after moving on to another school. As far as experience with PBLs, three considered themselves an experienced PBL teacher, six called

themselves a developing PBL teacher and one said they were a beginning PBL teacher. Five of the participants had more than 10 years of teaching experience, four had between 5 and 10 years of teaching experience, and one had less than three years of teaching experience. When it came to the participants' views on using technology to support learning in general, six had a very favorable opinion, three had mixed feelings, and one had a negative opinion of technology in the classroom.

Current Use of Technology

The first research question addressed how teachers are currently using technology to support project-based learning. All of the participants cited multiple ways in which they use technology to support PBL. Two main themes emerged: Participants used technology to help include the 4Cs into their PBLs, and they used technology to support different phases of the PBL processes. All of the participants could point to at least two of the 4Cs and one of the phases of PBL that technology helps support.

Supporting the 4Cs

All of the participants recognized and commented on the fact that PBL is one of the best ways to instill 21st century skills, which are: communication, collaboration, creativity, and critical thinking. One participant said, "I think technology works really well with communication and allowing the students to collaborate outside of class. I mean, I would have to say that technology has helped my students so much with being creative in how they do things. So, with critical thinking, I think that goes back to some of the ways I use apps for research purposes and being able to have the kids analyze data and make connections and identify patterns."

Supporting the Phases of PBL

A PBL activity consists of many different components such as ideation, research, group collaboration, teacher mentorship, and presentation to a global audience. One participant mentioned the iPads helped them in general, explaining "whenever a kid needs to research stuff or if a kid doesn't understand something or needs a different explanation, they have the information at their fingertips." Another participant mentioned that "Just the amount of time the iPads saves is incredible. I have only ever taught with them, but as a student, I remember having to walk to the library to conduct research." Lastly, another participant said, "I just love how visual technology can make the brainstorming part of a PBL."

Features of Technology

The second research question stated, what features of current technology do educators feel best support them in planning, implementing and conducting project-based learning? All of the participants highlighted features that aide both the educator's and student's tasks during a PBL. In listening to the participants recount their experiences, two themes emerged: features of the current technology that best support educators and those that support students in PBL.

Educator Support

None of the educators mentioned technology that actually helped with the planning phase of PBLs. The PBLWorks website was mentioned twice as a place that contains documents available for download that aid in the planning process; however, none of the teachers were aware of any technology that has the goal of helping to plan a PBL. As far as managing groupwork and being able to supervise division of labor and equal effort, nine of teachers mentioned the project management application Trello. Trello was also mentioned as a means of providing students with information, collecting artifacts from students, and with being able to asynchronously communicate with students. One participant stated, "Trello has been the most effective because it is a project management app and it correlates directly with project-based learning and it makes capturing deliverables a lot easier and makes organizing classes just natural because that's what it's made for." Teachers valued and appreciated technology that made giving feedback easy and immediate, such as Showbie.

Student Support

Nine participants also mentioned Trello as the most beneficial tool for students because it helped them plan, organize, communicate, and collaborate. Trello was also described has being a great way for students to make real-world connections because it is industry level technology used by real companies. Another application that participants found useful for students was Showbie because it has a group function. Padlet was mentioned for its collaboration capacity and how it allows students to visualize the ideation phase. Padlet acts as a virtual corkboard where students can put stickies with ideas or comments and give each other feedback. One participant said, "We have our students on Trello, which worked really well, particularly for the students that aren't great at communicating their progress or who need help visualizing multistep processes. I have also used Padelt for idea exploration and sharing thoughts and you know, brainstorming things." Half of the participants pointed to native Apple apps such as GarageBand, iMovie, and Keynote as great ways for students to explore their creativity. Another participant shared, "My favorite thing that has happened in the last couple of years is Apple making the Everyone Can Create curriculum. It just gives the students so much freedom of expression and they are able to do things they never thought they could do." Other applications that allow students to create are things like Canva and Adobe Spark, which are also examples of industry level technology. Three educators pointed out that Google Suite apps like Google Docs and Google Sheets were great for students to collaborate because they could all work on the same document at the same time, seeing changes in real time.

Missing from Technology

Research question three stated, what features do educators feel are missing from the current technology? While the participants spoke during their interviews, two main themes emerged. One was how technology can evolve to better support the 4Cs. The other is how technology can evolve to better support specific phases of PBL.

How Technology Can Evolve to Better Support The 4Cs

While all of the participants reported that technology supports at least one of the 4Cs, some mentioned that they felt technology could improve in some areas. The C that participants believed was helped least by technology was critical thinking. One participant shared, "Honestly, and this is going to sound terrible, but I think the only one of the 4Cs technology doesn't support is critical thinking." Participants said it was up to the teacher to make sure that thinking was done at a higher order but that technology sometimes was counterproductive to this. Twice it was expressed that having access to technology made it too easy to find information and that students do not have to think as much anymore. One participant stated, "This day and age, kids don't have to necessarily be creative, they can just Google search everything. So, creativity is very limiting to kids." Another participant shared, "I think I had difficulty with the creativity part in terms of using technology to foster creativity and that may have been because I was hesitant regarding technology in the classroom in general." None of the participants mentioned that technology poorly supported collaboration or communication.

How Technology Can Evolve to Support the Different Phases of PBL

One very important phase of PBL is the collaboration component. Students within the classroom collaborating is definitely beneficial, however, allowing students to work with other schools in other places takes collaboration to another level. One participant said, "In the PBL process, there are some parts where I would love the students to see each other's work. And there are other parts where I would like to be able to modify that so the students are doing some individual brainstorming." Many participants said that connecting to other schools can be very difficult and that they wished there were technology tools to make it easier. One teacher shared, "I think if technology could support a vetting process that is easy to connect schools with other schools. Maybe something where you put in what you are looking for, like maybe you create a school profile and then if you match in some place, they match your school." One teacher said he/she used a tool called iEarn, which allows for collaboration on global projects, but that it was cumbersome to navigate and difficult to find the right fit. Three of the participants said they wished they had an app that helped them group the students in their classroom. While Trello helps educators manage group work, the participants were unaware of any technology that helped to group students. They mentioned wanting to be able to group students based on skills, strengths, and abilities. Another important phase of PBL is presenting to a global audience. Half of the participants said they wish there were technology tools that could help give educators a safe way to do this. One big concern in schools right now is student safety and part of that is student privacy. In addition, including members of the community as group mentors or as presentation judges is a way to provide an authentic real-world experience. Three of the participants said they wish there were technology tools that easily connected them with real-world professionals who could either visit the classroom or be available virtually.

Practical Application of Findings

The information gathered from the interviews provided a deeper understanding of how teachers perceive technology supports project-based learning and what functions and tools are missing that would aid the PBL process even more. The goal of this study was to gather information that would be beneficial in creating a technology that solves the needs of educators who practice PBL. The data gleaned from the participants describes the ways in which educators feel supported by technology and how classroom teachers realize they could be even more supported.

Instilling 21st century skills in students is vital to their success in college and beyond. Technology is changing our world so rapidly that if graduates are going to be competitive in the global marketplace, soft skills need to be taught just as overtly as the hard skills. All of the participants in the study commented on the benefit of PBL in helping to achieve 21st century learning in the classroom. Additionally, they all acknowledged that technology played a pivotal role in helping them achieve learning goals when conducting PBLs in the classroom. All felt supported in helping to impart the 4Cs, in some part of the PBL process, or both. Based on the findings, suggestions for teachers, administrators and educational technology companies:

Teachers

- Do not be afraid to experiment with technology.
- Be open to learning about new technology from students.
- Communicate the project's goals with the parents to get additional support.

Administrators

- For schools that have technology, administrators need to offer PBL training while focusing on integrating various technologies so that teachers understand the opportunities these technologies provide for the students and the difference that they will make in the design process and outcome.
- Offer professional development on technology and cognitive capacity. Target performance at levels three and four or higher on Bloom's taxonomy of cognitive development.

Educational Technology Companies

The goal of educational technology companies is to solve the problems of students and teachers in the classroom. Established by the findings of this study, educational technology companies should:

- Gather information from the people in the trenches in order to establish viable solutions to problems and issues
- Use data such as that gathered in this study to design an application that has everything needed for a project-based learning activity all in one place. The goal being everything both the teacher and the students need to do during a PBL is in one application.

Recommendations for Future Research

Many studies have looked at the benefits of using PBL is the classroom and how technology impacts learning. While technology is not a necessity for conducting PBL, it does easily enhance its effectiveness. This study looked at how technology achieves this. However, it could benefit schools and districts deciding whether or not to adopt a 1:1 student-to-device program if classrooms who do PBL with technology show greater success than ones conducting PBL without technology. Future studies should look at both teacher and student perceptions in addition to learning gains.

Implications for Practice

Based on the research from this study teachers believed that technology helps them instill at least one of 4Cs in the PBL. Communication and collaboration were cited the most and critical thinking and creativity were cited the least. Participants were also able to point to specific phases of PBL that technology aids such as project management and student research. However, participants pointed to significant areas technology is lacking. For one thing, none of the participants knew of a technology that would help them plan a PBL. They also felt that the feedback process, group creation, and progress monitoring could be improved.

Educational technology companies aim to solve problems in the classroom. Many of the applications and tools the participants mentioned were made specifically for education; however, others were not. For example, Trello is industry level technology used by real companies of various sizes. Most of the participants believed that utilizing technology in the classroom helps prepare them for the real world.

A common theme of the applications and tools participants mentioned was efficiency and ease of use. Currently, no technology exists that supports all the phases of PBL and helps incorporate all of the 4Cs. The information gathered in this study can be used to create such a resource for teachers and students who utilize PBL as a learning method.

Conclusion

In our world of rapidly changing technology, educational reform is needed for students to be competitive in a global marketplace. One way schools can help prepare them for career readiness is by being as explicit about teaching the soft skills as they are with hard skills. One particular learning model that has been proven to not only teach content but also 21st century skills is project-based learning. Since its introduction in 1918, PBL has evolved over time. Its current iteration is greatly aided by the use of technology. This study looked at how much technology enhances project-based learning and where there are still opportunities for growth.

References

Aldabbus, S. (2018). Project-based learning: Implementation & challenges. *International Journal of Education, Learning and Development*, *6*(3), 71-79. Retrieved March 2nd, 2019 from https://www.researchgate.net/profile/Shaban-Aldabbus/project/BTC-candidate-teachers-opinion-of-project-based-learning/attachment/5b8d7e7e3843b0067537935f/AS:666844868403200@1535999614238/download/Project-Based-Learning-Implementation-Challenges.pdf

Anagün, S. S. (2018). Teachers' perceptions about the relationship between 21st century skills and managing constructivist learning environments. *International Journal of Instruction*, *11*(4), 825-840. doi: 10.12973/iji.2018.11452a

Anazifa, R. D., & Djukri, D. (2017). Project-based learning and problem-based learning: Are they effective to improve student's thinking skills?. *Journal Pendidikan IPA Indonesia*, *6*(2), 346-355. doi: 10.15294/jpii.v6i2.11100

Brown, N. (2017). Updating assessment styles: Website development rather than report writing for project-based learning courses. *Advances in Engineering Education, 6*(2), n2.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Dias, M., & Brantley-Dias, L. (2017). Setting the Standard for Project Based Learning: a proven approach to rigorous classroom instruction. *Interdisciplinary Journal of Problem-Based Learning*, *11*(2). https://doi.org/10.7771/1541-5015.1721

Emaliana, I. (2017). Teacher-centered or student-centered learning approach to promote learning?. *Jurnal Sosial Humaniora (JSH)*, *10*(2), 59-70. doi: 10.12962/j24433527.v10i2.2161

Feyzi Behnagh, R., & Yasrebi, S. (2020). An examination of constructivist educational technologies: Key affordances and conditions. *British Journal of Educational Technology*, *51*(6), 1907-1919. https://doi.org/10.1111/bjet.13036

Ghafar, A. (2020). Convergence between 21st century skills and entrepreneurship education in higher education institutes. *International Journal of Higher Education*, *9*(1), 218-229.

Gómez-Pablos, V. B., del Pozo, M. M., & Muñoz-Repiso, A. G. V. (2017). Project-based learning (PBL) through the incorporation of digital technologies: An evaluation based on the experience of serving teachers. *Computers in Human Behavior, 68*, 501-512. https://doi.org/10.1016/j.chb.2016.11.056

Guillén, G., Sawin, T., & Avineri, N. (2020). Zooming out of the crisis: Language and human collaboration. *Foreign Language Annals*, *53*(2), 320-328. https://doi.org/10.1111/flan.12459

Handrianto, C., & Rahman, M. A. (2019). Project based learning: a review of literature on its outcomes and implementation issues. *LET: Linguistics, Literature and English Teaching Journal*, *8*(2), 110-129. http://dx.doi.org/10.18592/let.v8i2.2394

Harrell, S., & Bynum, Y. (2018). Factors affecting technology integration in the classroom. *Alabama Journal of Educational Leadership, 5*, 12-18.

Hopper, S. B. (2014). Bringing the world to the classroom through videoconferencing and project-based learning. *TechTrends, 58*(3), 78-89. https://doi.org/10.1007/s11528-014-0755-4

Kämpfen, F., & Maurer, J. (2018). Does education help “old dogs” learn “new tricks”? The lasting impact of early-life education on technology use among older adults. *Research policy*, *47*(6), 1125-1132. https://doi.org/10.1016/j.respol.2018.03.017

Korucu, A. T., & Cakir, H. (2018). The effect of dynamic web technologies on student academic achievement in problem-based collaborative learning environment. *Malaysian Online Journal of Educational Technology, 6*(1), 92-108. Retrieved from: https://files.eric.ed.gov/fulltext/EJ11654 85.pdf

Leinonen, T., Keune, A., Veermans, M., & Toikkanen, T. (2016). Mobile apps for reflection in learning: A design research in K-12 education. *British Journal of Educational Technology, 47*(1), 184-202. doi: 10.1111/bjet.12224.

Levin, B. B., & Schrum, L. (2013). Technology-rich schools up close. *Educational Leadership, 70*(6), 51-55. Retrieved from http://eric.ed.gov/?id=EJ1015335

Lewandowski, P., Park, A., Hardy, W., Du, Y., & Wu, S. (2022). Technology, skills, and globalization: Explaining international differences in routine and nonroutine work using survey data. *The World Bank Economic Review*, *36*(3), 687-708. https://doi.org/10.1093/wber/lhac005

Li, M. (2018). Computer-mediated collaborative writing in L2 contexts: An analysis of empirical research. *Computer Assisted Language Learning*, *31*(8), 882-904. https://doi.org/10.1080/09588221.2018.1465981

Lo, H. C. (2009). Utilizing computer-mediated communication tools for problem-based learning. *Educational Technology & Society, 12*(1), 205-213.

Martinez, M., & Schilling, S. (2010). Using technology to engage and educate youth. *New Directions for Youth Development, 2010*(127), 51-61. https://doi.org/10.1002/yd.362

Matthews, M. R. (2002). Constructivism and science education: A further appraisal. *Journal of Science Education and Technology, 11*(2), 121-134. https://doi.org/10.1023/A:1014661312550

Parrish, A. H., & Sadera, W. A. (2020). Teaching competencies for student-centered, one-to-one learning environments: A delphi study. *Journal of Educational Computing Research*, *57*(8), 1910-1934. https://doi.org/10.1177/0735633118816651

Pitura, J., & Monika, B. K. (2018). Learning English while exploring the national cultural heritage: Technology-assisted project-based language learning in an upper-secondary school. *Teaching English With Technology, 18*(1), 37-52.

Qiu, J. (2019). A preliminary study of English mobile learning model based on constructivism. *Theory and Practice in Language Studies*, *9*(9), 1167-1172. doi: http://dx.doi.org/10.17507/tpls.0909.13

Sahin-Topalcengiz, E., & Yildirim, B. (2020). Teachers' opinions about distance web 2.0 tools training and teachers' in-class web 2.0 practices. *Journal of Turkish Science Education*, *17*(4), 561-577. doi: 10.36681/tused.2020.45

Shin, M. H. (2018). Effects of Project-Based Learning on Students' Motivation and Self-Efficacy. *English Teaching*, *73*(1), 95-114. Retrieved from https://eric.ed.gov/?id=EJ1312282

Silipo, J., & Caldon-Ruggles, K. (2021). Meaning Ascribed to Career Development Activities by Recent High School Graduates: A Phenomenological Study. *Journal of School Counseling*, *19*(50), n50. Retrieved from https://files.eric.ed.gov/fulltext/EJ1328900.pdf

Spector, J. M., Ifenthaler, D., Samspon, D., Yang, L., Mukama, E., Warusavitarana, A.,… (2016). Technology enhanced formative assessment for 21st century learning. *Educational Technology & Society, 19*(3), 58–71. Retrieved from http://www.ifets.info/journals/19_3/7.pdf

Sunar, M. S. M., & Shaari, A. J. (2017). The effectiveness of the chemistry problem-based learning (PBL) via FB among pre-university students. *Journal of Education and e-Learning Research, 4*(4), 129-138. doi: 10.20448/journal.509.2017.44.129.138

Taheri, P. (2018). Project-Based Approach in a First-Year Engineering Course to Promote Project Management and Sustainability. *International Journal of Engineering Pedagogy, 8*(3), 104-119. https://doi.org/10.3991/ijep.v8i3.8573

Ünal, E., & Çakir, H. (2017). Students' views about the problem based collaborative learning environment supported by dynamic web technologies. *Malaysian Online Journal of Educational Technology, 5*(2), 1-19.

Vasiliene-Vasiliauskiene, V., Vasiliauskas-Vasilis, A., Meidute-Kavaliauskiene, I. & Sabaityte, J. (2020). Peculiarities of educational challenges implementing project-based learning. *World Journal on Educational Technology: Current Issues*. *12*(2), 136-149. https://doi.org/10.18844/wjet.v12i2.4816

Young, K. (2016). Teachers' attitudes to using iPads or tablet computers: Implications for developing new skills, pedagogies and school-provided support. *TechTrends, 60*(2), 183-189. https://doi.org/10.1007/s11528-016-0024-9

First Through Third Year Secondary Mathematics Teachers' Mentoring Experiences: A Phenomenological Qualitative Study

Jessica L. Pomerenke
University of South Dakota

Kristine Reed
University of South Dakota

David DeJong
University of South Dakota

Lisa Newland
University of South Dakota

James Nold
Sioux Falls School District

This study examined the lived experiences of seven beginning secondary mathematics teachers in an upper Midwestern state who had experienced mentoring and remained in teaching. The study sought to identify the mentoring experiences beginning secondary mathematics teachers perceive as most beneficial to their professional growth. Data were collected through individual interviews and focus groups and were analyzed by coding significant words and statements. Findings suggest beginning secondary mathematics teachers experience various types of support from assigned mentors and informal supports from colleagues within the same building. Regular observations with constructive feedback were found to be highly valued by beginning teachers.

Keywords: mentoring, mathematics teachers, informal mentors

Teacher attrition rates continue to hold a place in education. Beginning teachers are leaving the profession for a variety of reasons, but lack of support is amongst the top of the list (Borman & Dowling, 2008; Darling-Hammond, 2003; Ingersoll & Strong, 2011; Rajendran et al., 2020). Throughout the literature reviewed, mathematics teachers have been found to have higher turnover rates than other content areas in secondary education; thus, the focus of this study is on secondary mathematics teachers. Induction programs, with an emphasis on mentoring, have been implemented in districts across states to provide the support that beginning teachers indicate they need. At the time of the study, the current literature lacked research studies that identified effective techniques and strategies for mentoring beginning teachers. The findings from this study provide a window into the mentoring experiences of seven beginning mathematics teachers in an upper Midwestern state. *Varied types of support*, *informal supports from colleagues, observations and meaningful feedback*, and *unclear expectations* during mentoring were four themes that emerged during data analysis from participant interviews and focus groups. These findings led to a discussion with implications for practice for beginning teacher mentoring programs in school districts.

Purpose Statement and Research Questions

The purpose of this phenomenological qualitative study was to examine the lived experiences of first through third year secondary mathematics teachers in southeastern school districts of an upper Midwestern state who were mentored and remain in teaching. The following research questions were explored in the study:

1. How do beginning mathematics teachers describe their lived experiences of being mentored?
2. What meaning do beginning secondary mathematics teachers ascribe to their mentoring experiences?
3. What mentoring experiences do beginning secondary mathematics teachers perceive to be the most beneficial to their professional growth?

Literature Review

Roughly one-fourth to one-third of beginning teachers leave the teaching profession within the first five years (Carver-Thomas & Darling-Hammond, 2019; Hong & Matsko, 2019). Specifically, when comparing mathematics and science teacher attrition rates to other non-mathematics/science teachers, rates were almost always higher for mathematics and science teachers even when considering multiple school and student demographics (Carver-Thomas & Darling-Hammond, 2019; Ingersoll & May, 2012). Teachers leave the profession for a variety of reasons; however, research shows that lack of support, lack of preparation from preservice training, insufficient salaries, heavy demands in working conditions, and in-service school policies are among the most common reasons that beginning teachers leave the profession (Rajendran et al., 2020; Trevethan, 2018). While teachers have identified the above reasons for leaving, lack of support once they begin teaching has been one of the most common reasons that a teacher will leave the profession (Ingersoll & Strong, 2011; Rajendran et al., 2020).

One common established practice that states and school districts have done to improve

this lack of support noted by beginning teachers is to implement induction programs (Ingersoll & Strong, 2011; Martin et al., 2016). Induction programs vary from state to state, but common components to induction programs include professional development, seminars, collaboration with colleagues, administrative support, classroom assistance, teacher observations, and formal mentoring (Ingersoll & Strong, 2011; Kang & Berliner, 2012; Martin et al., 2016). Induction programs provide support for beginning teachers once they enter their own classroom (Ingersoll & Strong, 2011; Reitman & Karge, 2019). While induction programs vary in quality, depth, and accessibility, one of the most common components that an induction program has is the pairing of a beginning teacher with a formal mentor in the school district (Carr et al., 2017; Sowell, 2017). In turn, induction programs, with a strong emphasis on a mentoring relationship, have taken place in multiple states and districts to provide support to beginning teachers (Heikkinen et al., 2018; Hudson & Hudson, 2016; Ingersoll & Strong, 2011; Smith & Ingersoll, 2004).

Educational mentoring is the pairing of a veteran teacher with a beginning teacher established by the school or the district (Heikkinen et al., 2018; Hong & Matsko, 2019; Ingersoll & Strong, 2011; Wang & Odell, 2002). Mentoring experiences for beginning mathematics teachers lack a consistency not only from state to state, but also within a district from school to school (Clark & Byrnes, 2012; Heikkinen et al., 2018; Hong & Matsko, 2019; Kardos & Johnson, 2010; Polikoff et al., 2015; Smith & Ingersoll, 2004). A mentoring experience can look different in its depth, quality, frequency, and requirements for a variety of reasons (Heikkinen et al., 2018; Hong & Matsko, 2019; Smith & Ingersoll, 2004). Kolb (1984) suggests in his Experiential Learning Theory that experiences will differ based on the individual, thus evidenced by the inconsistencies in the research. Regardless of inconsistencies, beginning teachers report that they are assigned a formal mentor for support (Gray et al., 2015). Most common components of mentoring programs are professional collaboration between the beginning teacher and the mentor, classroom observations, assistance in the classroom, and feedback from the mentor (Dağ & Sari, 2017; Kardos & Johnson, 2010; Martin et al., 2016; Sowell, 2017). While not always possible due to accessibility and personnel, studies suggest that content matching of mentors and mentees is an effective component of mentoring relationships (Polikoff et al., 2015; Sowell, 2017). Both Hallman-Thrasher et al. (2017) and Polikoff et al. (2015) found that content matching expert mentors with beginning teachers is beneficial. Research has shown that beginning teachers also appreciate mentors within their school building for accessibility when dealing with concerns and needing answers to questions (Bradley-Levin et al., 2016; Dawson & Shand, 2019; Polikoff et al., 2015). However, content-matching and in-building mentors are not always available in all mentoring programs (Hong & Matsko, 2019; Polikoff et al., 2015).

The mentoring experience for beginning teachers has been met with success; however, research is limited as to what beginning teachers experience during the mentoring process and what mentoring strategies, techniques, and tools are effective for beginning math teachers (Bradley-Levine et al., 2016; Sparks et al., 2017; Trevethan, 2018).

Methodology

A phenomenological qualitative research design was chosen for this study based on the desire to explore participants' experiences using an in-depth method of data collection to understand the meaning and essence of the mentoring experience that participants encountered (Merriam &

Tisdell, 2016) and find the common meaning that individuals attached to the same phenomenon (Creswell & Poth, 2018; Peoples, 2021). Vagle (2018) emphasizes that phenomenology desires to gain a profounder perspective of the "everyday phenomena" (p. 11). The common phenomenon in this study was first through third year secondary mathematics teachers' mentoring experience in their public-school classrooms with district assigned mentors. The approach sought to uncover commonalities among mentoring for beginning secondary mathematics teachers. Specifically, hermeneutical phenomenology was a narrower methodology chosen for the study that allowed for a continuity of tying patterns in data together to the entire description of the beginning secondary mathematics teachers' experiences with their mentor and the mentoring program established by the district.

The participants in this study included seven first through third year secondary mathematics teachers from one state with teaching experience of three years or less. Utilizing criterion sampling, principals were contacted via public state-issued email accounts at schools in public school districts and were asked for suggestions of beginning mathematics teachers who had an assigned mentor at their high school. Consenting principals provided names of new teachers who fit the criteria. Potential participants were contacted by email to request their participation in the research. Participants were located in five different high schools. Participants were interviewed individually and participated in a focus group. The online service *Temi* was used to transcribe all interviews. Each transcript was reviewed to ensure that all recordings were transcribed accurately. Two follow-up interviews were conducted to receive clarity on information shared during initial interviews. Participants were given their personal transcript to verify statements and make changes.

Data analysis included identifying common words and phrases that were categorized and organized into themes. Following the analysis of data from individual interviews and follow-up interviews, focus groups were conducted. Five of the seven beginning teacher participants participated. The recorded focus group discussions were transcribed and again, common words and phrases were identified. The words and phrases from the focus group transcripts confirmed the accuracy of the themes. Analyzing data using the hermeneutic circle requires a researcher to use these significant statements and continually consider those statements with the entire transcript (Peoples, 2021). No new themes were drawn from the focus groups; however, more detailed–information was generated that connected to the themes. Throughout the process, I took field notes and utilized memoing while bracketing out any personal biases. According to Peoples (2021), reflection on any personal biases is necessary to make sure those are not entering into the analysis.

Delimitations and Limitations

While reflecting on personal biases is critical, it is also necessary to recognize the delimitations and limitations of the study. A phenomenological study utilizes researcher interpretation and analysis. All previous biases, experiences of the phenomenon, and assumptions related to this study were acknowledged and reduced. Secondly, due to the methodology chosen and limiting the study to teachers in their first three years, results may not be generalized beyond the population chosen. Considering that the participants involved in this study were limited to school districts in southeastern South Dakota, the results may only be representative of this specific

population. Not only were there delimitations to the study but there were also limitations. I had no control over participant responses; thus, answers from participants were understood under the assumption that they were honest and truthful in their descriptions. Participants also had control over their own schedule; therefore, the timeline of interviews and focus groups was determined by their willingness and accessibility. Lastly, there is no control over the degree of implementation of mentoring programs within a school, thus descriptions of experiences varied.

Findings

The following four themes emerged from the analysis: (a) *varied types of support, (b) informal supports from colleagues, (c) observations and meaningful feedback*, and (d) *unclear expectations* during the experiences with mentors within the mentoring programs. Participants described *varied types of support* during the mentoring experience. Personal, instructional, collegial, and classroom management support were described by the participants in their relationships with mentors. Another finding was that participants frequently sought out *informal supports* from *colleagues* in their school building because of their availability. Colleagues were often more available for immediate assistance than an assigned mentor. Participants also experienced *observations* and meaningful *feedback* in their mentoring experience. Having an extra set of eyes in the classroom and accountability for their teaching during observations were described as valuable to the participants. Participants also found value in receiving constructive feedback following the observations. Lastly, participants experienced *unclear expectations* during mentoring. Participants shared that they did not feel the mentoring expectations were clear and voiced concerns over not being made aware of the program requirements in a timely manner. Participants were unaware of certain requirements and were unsure of the value of certain components in the mentoring program which created frustration and confusion within their mentoring relationship.

Discussion

The primary goal of this phenomenological study was to uncover the lived experiences of first through third year secondary mathematics teachers who participated in a mentoring program and remain in teaching. Participants described receiving different types of support during the program from their mentor. Personal support was experienced and appreciated by all participants from their interactions with their mentors, but this type of personal support was not one they placed as a high priority from their mentor because they could find it in other relationships in their life. Rather, personal support was perceived as an encouragement during their beginning years of teaching. One participant said, “teaching can have very high highs and very low lows so having someone in your corner who is rooting for you and really wants to see you success and help you try new things is supportive.” With the challenges that are often experienced in teaching and in life, personal support may help encourage teachers to stay in the profession knowing they have support from colleagues. Beginning teachers indicated having someone available to lean on was appreciated throughout the ups and downs of teaching. A participant mentioned feelings of “drowning” and feeling “overwhelmed” often and that by reaching out to her mentor, she felt positively supported and encouraged in those conversations

as a beginning teacher. Established relationships with trusted mentors is critical to ensuring positive experiences for beginning teachers (Hudson & Hudson, 2016; Polikoff et al., 2015; Sowell, 2017; Sparks et al., 2017). Participants spoke on the established relationships with their mentor and how they were thankful for the positive, trusting relationships. One participant stated, "a positive relationship where I just feel like she is someone I can learn from and lean on." For a beginning teacher new to the profession, a well-established relationship with a mentor provides personal support through the unknowns of teaching. Mentoring programs and relationships within the program are unique in the fact that they are specifically assigned individuals, put in the position to directly support beginning teachers during their initial years. With a goal to retain quality teachers and lower the beginning teacher attrition rate, a mentor holds a unique opportunity to provide extra personal support in times of struggle and when questions arise.

Instructional Support

Participants described the support received about instruction as a valuable part of their experiences with their mentor in the mentoring program. Two participants both shared their mentor's specific support in their mathematics curriculum issues and technology concerns. One participant stated, "my mentor found out how overwhelmed I was and has been supportive in discussing my questions on the curriculum whenever I reach out." Another participant shared that her mentor was supportive to "bounce ideas off of for Algebra II" and that she received answers to her specific mathematical language and vocabulary questions. However, participants also discussed the subject or content knowledge held by their mentor revealing that they did not reach out to their assigned mentor for instructional support if the mentor lacked subject specific teaching experience. One participant stated that "I would not reach out to my mentor for any content specific support because she has not taught it before." Pairing mentors with beginning secondary math teachers becomes complicated as math education contains multiple subjects to teach. Depending on the level of preparedness in a certain subject, a beginning teacher may lack the confidence from one mathematical subject to another. As an example, a secondary mathematics teacher may be more equipped to teach algebra while another may be better equipped to teach geometry. These two subjects in mathematics could have very different instructional approaches which for beginning teachers, may cause increased challenges. Participants in the study indicated their instructional coach provided some mathematics instructional support but having a mentor teaching the same subject to help with specific content and instruction would make for a positive experience. One participant stated that "I would receive some instructional support from my mentor, but there were subjects I was teaching that she had never taught before, so I did not feel comfortable asking her for support and asked others in my building instead." Another participant shared, "if I have questions that impact my teaching, there are many other colleagues who I am going to go with those questions before my actual mentor". This participant shared that this would occur because of the content knowledge and collaboration from the colleagues in the same building. With a goal to retain more effective teachers in their beginning years, pairing beginning teachers with mentors who teach the same subject areas provides more opportunities for instructional support.

Participants described feeling unsure of the mentor program expectations from their

assigned mentor because they were also their instructional coach. It is curious to know if the beginning teachers felt they had to distinguish between the support received from their mentors as a mentor or as an instructional coach. Perhaps as a beginning teacher not having experienced working with an instructional coach could find the different roles confusing and therefore, having clarification between the role of an instructional coach and that of a mentor may be helpful. Since instructional coaches have access to all teachers in the district, this distinction may help beginning teachers gain more understanding that will help them feel more connected to the district.

Collegial Support

A surprising finding was that many participants felt their mentor offered support with colleagues in their building. One participant shared that "my mentor bounced ideas around with me to be vocal in my math collaboration as a first-year teacher and how to navigate being young in the profession with my colleagues." Participants indicated trusted collegial support could be one benefit of not having a mentor permanently located in the same building. Specifically, one participant shared that this benefit was helpful because "I can talk through some hiccups and pains, and she doesn't already have an opinion about those things. My mentor is someone I can talk to and know that nobody I work with will know my concerns". The collegial support from their mentor was provided from an outside perspective which allowed the beginning teacher to feel comfortable in discussing encounters with other school building personnel. This finding may suggest beginning teachers struggle with collaborative interactions or when advocating ideas in their initial years. Hudson and Hudson (2016) found that beginning teachers value the preparation for challenging conversations. Participants spoke about the trust they developed with their mentor and the importance of that trust before sharing in critical conversations. One participant described that this established trust with her mentor allowed for her to "ask for help and receive advice on how to move forward" with challenging conversations in her mathematics department. It is also important to note that beginning teachers may struggle to feel connected or develop relationships with other school personnel. Since isolation has been found to be a reason beginning teachers leave the profession, mentor relationships hold an opportunity to support beginning teachers helping them develop connections while becoming acquainted with others in the school and throughout the district.

Classroom Management Support

Research points to classroom management as the highest concern for beginning teachers (Bradley-Levine et al., 2016; Hudson & Hudson 2016; Sowell, 2017). Student demographics and challenging behaviors have been reasons that beginning teachers leave the profession (Gallant & Riley, 2014; Rajendran et al., 2020; Schaefer et al., 2012). Participants desired and appreciated classroom management support from their mentor as many stated they were unable to know what to expect as a beginning teacher. Participants indicated that they felt supported in their classroom management when their mentors provided assurance their classrooms were normal when compared to other beginning teachers' experiences. Specifically, a participant shared that her mentor supported her in feeling that "things that are happening in my room as a first-year

teacher are normal compared to other first-year teachers." Most participants spoke in length about the classroom management support and were most interested in learning different methods and strategies for effective classroom management. Two participants mentioned their mentor provided support with classroom management by implementing "Kagan strategies in the lesson" and "wait time in the classroom". One participant shared that her mentor supported her to "try things that are out of my comfort zone", while another participant noted that his mentor kept him aware of "why I am doing what I am doing a certain way and helps to combat any kind of mindless teaching." The classroom management anxiety and the challenging behaviors experienced by the participants emphasized the importance of strong classroom management support for beginning teachers. Mentors are in a good position to offer this type of support which may lead to retaining more effective beginning teachers.

Lack of Availability for Support

Mentor availability issues were shared by all participants. Interestingly, no mentors were in the same building in this study. For participants, email was for the most part an appreciated, consistent form of communication while it was less valued for mentoring conversations. One participant said he did not always reach out to his mentor because he could "zip across the hallway . . . a more efficient means for me to gather information." Others voiced concerns about not being able to receive a quick response from their mentor but were grateful for colleagues within the building who provided support. Participants wondered about having the mentors located in the same building. One added, "I would appreciate the convenience of them being in my building because if I see them, it could maybe spark something I wanted to ask." Participants emphasized the lack of mentor availability limited the degree to which their needs were met. Other participants mentioned that not having their mentor in the same building was a barrier which made it challenging to reach out with questions knowing that a response may not come as quickly as needed. The lack of mentor availability for beginning teachers may be an area for those directing mentoring programs to revisit. Considering the high beginning teacher attrition rate, state mentoring programs and local school districts should continue to review beginning teacher concerns and consider the ideal location of the mentor throughout the school day. Research on school mentoring found the location of a mentor in the same building as beneficial (Carr et al., 2017; Ingersoll & Strong, 2011; Polikoff et al., 2015; Smith & Ingersoll, 2004). In this study, participants also suggested that the positioning of a mentor in their school building could provide optimal support. When asked how it would look differently if a mentor was positioned in their same building, one participant shared that "having a set time where you meet every week would be nice instead of just trying to find a time that fits in my mentor's schedule since she has others in the district to mentor". Kolb (1984) acknowledges that learning occurs, in part, from observation and the reshaping of ideas in a continual process. With this in consideration, a mentor located in the school building provides the opportunity for questioning and conversation as new ideas emerge and challenges threaten to overwhelm. Face to face, consistent conversations with available mentors may lead to increased new teacher satisfaction while decreasing the attrition rate.

Informal Supports from Colleagues

Colleagues acting as informal mentors were frequently mentioned by the participants. Upon describing why she reaches out more to colleagues than her mentor, one participant shared, "I am usually planning things last minute as a first-year teacher, so I just walk down the hall to whoever is here immediately." According to the participants, mentors often traveled between buildings within the district or were unaware of building specific information, along with not having taught the same subjects. A participant said that "if I have a question about something, it is nice to not have to send an email and then wait for a response, so unfortunately, it falls more on my colleagues around me than my mentor." Several studies identify the value in pairing mentors in the building who teach or have taught at least one similar subject (Bradley-Levine et al., 2016; Hallman-Thrasher et al., 2017; Ingersoll & Strong, 2011; Kang, 2011; Polikoff et al., 2015; Smith & Ingersoll, 2004). No participant in the study experienced a mentor who was a teacher who taught the same subject. Participants gave these as reasons why they would reach out to building colleagues instead of their mentors. One participant shared that "if they (mentors) were in the building, they could walk alongside of you instead of just being there to support you occasionally, but not really being present with you." Colleagues acting as informal mentors provided opportunities for participants to observe teacher behavior and actively learn from consistent mathematical conversations and observations. They also valued the information received from colleagues who were also teaching mathematics. The consistent fluctuation between observing and acting on observations and sharing in discussions on mathematics led to increased understanding and action. Participants agreed that proximity of their colleagues and the connection to the same content was beneficial. The connection to mathematical content support from a colleague provides a vast bank of knowledge for a beginning teacher. This made the participants gravitate towards other colleagues, whom some referred to as informal mentors, instead of reaching out to their assigned mentor for assistance. Colleagues down the hallway provide beginning teachers the opportunity to receive continuous advice throughout the school day.

Beginning teachers enter the profession with an idea of what teaching will look like. Having a colleague that is in close proximity to have conversations about expectations and experiences provides an opportunity for the beginning teacher to reflect. While research has shown that beginning teachers have questions regarding ways to teach content (Bradley-Levine et al., 2016; Hallman-Thrasher et al., 2017; Hudson & Hudson, 2016; Martin et al., 2016), participants found most content-specific advice from their building colleagues instead of their mentors. Support from fellow colleagues was valuable to participants when they taught a new mathematics course for the first time and had questions regarding best practices. Participants found themselves learning from a mentor and their interactions with colleagues, which all add to the experiences of a beginning teacher. For beginning secondary mathematics teachers to grow in instructional strategies and effective practices, their first-year experiences may be improved by having a mentor who teaches the same subject. Isolation and lack of collaboration are just two of the reasons that beginning teachers leave the profession (Gallant & Riley, 2014; Rajendran et al., 2020). To lower the beginning teacher attrition rate and improve the mentoring experience for beginning secondary mathematics teachers, pairing veteran math teachers with beginning math teachers may promote collaboration and eliminate feelings of isolation.

Observations and Feedback from Mentors

All seven participants referred to mentor observations which have become a common practice in induction programs (Hairon et al., 2020; Martin et al., 2016; Polikoff et al., 2015; Reitman & Karge, 2019; Sowell, 2017). Participants identified observations as some of the most helpful experiences of the program along with the constructive feedback that often followed an observation. One participant emphasized that observations were helpful because "I appreciate having extra eyes in the classroom". Although the number of observations varied depending on the participant's descriptions, those who had consistent observations valued the frequent presence of their mentor. One participant described the experience saying, "everything's been positive and gets me thinking about what is going on in my classroom, so having lots of observations is positive." Another also had a consistent mentoring observation experience with her mentor coming to observe every week and then having a follow-up conference after each observation. A third participant mentioned that he "appreciated the accountability, someone to whom I know I'm going to speak to about my teaching."

Consistent observation schedules with beginning teachers not only lead to increased accountability but also provide more opportunities for the learning process through experience. Consistent observation schedules encourage and ensure that suggestions for instruction and management are being attempted by the beginning teachers. Two participants said they did not experience consistent observations and desired more planned observations with feedback. Most participants identified areas they needed to improve and welcomed feedback from mentors. One participant shared that she desires to be observed more for the opportunity "to receive constructive criticism and feedback." Another participant also valued feedback because "if I teach the same class later on in the day after being observed, I can adjust whatever I need based on the feedback I receive." It is evident that observations and constructive feedback are beneficial in the mentoring experience with regularly scheduled observations desired by beginning teachers.

The feedback following observations was also discussed with participants expressing appreciation for suggestions about effective teaching strategies. Participants also appreciated being stretched out of their comfort zones by being encouraged to try different teaching strategies. One participant mentioned that "sometimes it is uncomfortable. They do point out places where you can grow but obviously, we all need that." Another participant also shared that her mentor encouraged her to try new things such as changing the layout of her classroom to allow for group work. She was also stretched out of her comfort zone and with support, felt at ease trying new strategies. Feedback from mentors holds the key in helping to develop beginning teachers' skills and confidence. Participants acknowledged they have a lot to learn and appreciated the feedback that allowed them to reflect on their work. Reflection, according to Kolb (1984), is critical to the learning process. Mentors observing beginning teachers and providing constructive feedback that includes trying new strategies is beneficial to beginning teachers and may lead to higher retention rates.

Unclear Expectations

The results indicate that the participants were unclear about the state's mentoring program expectations and desired efficient methods of communication with a justification for the requirements. One participant described some program expectations in his experience as "more like checking a box than it does equipping us for success." Another participant shared, "I know it is like drinking from a fire hose of information your first year, but I am unclear on the requirements." A third participant suggested that she never received any "overview of the expectations" and "finds out information when it is happening or only a few days before." Research has shown that mentoring programs commonly have requirements such as seminars and professional development for their beginning teachers (Kang & Berliner, 2012; Killeavy, 2006; Reitman & Karge, 2019). However, beginning teachers do not always find the same level of significance for requirements thought to be beneficial (Kang & Berliner, 2012; Martin et al., 2016; Smith & Ingersoll 2004). Case in point, most participants did not find some requirements of their mentoring experience valuable to their teaching. Other participants found challenges understanding the important of some requirements. Regarding a seminar that was required to be attended, one participant described it as "not super helpful. It felt like it was more geared towards elementary education." During a focus group discussion, three participants described that they had just been made aware of a book that they were required to read for the program, and they shared their negative and unmeaningful experiences with the book now that they knew they were required to read one. Findings suggest that beginning teachers often do not understand the reasons for mentoring requirements which may be resolved by linking mentor program requirements to their daily teaching responsibilities.

While mentoring experiences look different for each beginning teacher, this study substantiates much of what previous research revealed about school mentoring experiences. With the hope of reducing beginning secondary mathematics teacher attrition rate, providing support is a critical component in mentoring relationships. Mentor availability to meet beginning teachers' needs is critical. Therefore, pairing beginning teachers with mentors located in the same building is closer to assuring beginning teachers receive the support needed in a timely fashion. Additionally, a mentor located in the same building may also promote more consistent observations and timely feedback which participants highly valued.

Implications for Practice

Based on the findings from the study, there are recommendations for practice and mentoring programs. This qualitative study has a small sample size; therefore, the given recommendations for policies in a mentoring program are consistent suggestions from the participants in this study and not necessarily generalizable. One such implication is that school leaders assigning mentors should assign personnel who are in the same building and who teach or have taught at least one of the same subjects as the beginning teacher. This suggestion provides more accessibility for beginning teacher needs and opportunity for collaboration. Specifically related to mentoring programs, a recommendation from participants is that mentoring programs should be designed to protect time for weekly discussions on student discipline and challenging behaviors, lesson plan development, grading in the classroom, structured group work strategies, having a voice in

collaboration, and curriculum standards. Mentoring programs also should ensure that mentors make routine the practice of observing and providing constructive feedback often. This timely, constructive, and continuous communication and feedback throughout the mentoring relationship is beneficial to beginning teachers. Mentoring programs should have these components established and clearly communicated to mentors and mentees.

Recommendations for Future Research

The following recommendations for future research are based on the findings from the study:

- A case study that includes beginning secondary mathematics teachers in their first three years to see how mentoring needs change over the course of a school year.
- A quantitative design with a survey to be completed by all beginning high school teachers in multiple states to identify effective mentoring strategies.
- A phenomenological study to examine the experiences of mentor teachers in different size school districts who are housed in the same building as their mentees.
- Compare beginning teachers with mentors to beginning teachers not assigned mentors to identify differences in teachers' willingness to remain in the profession.
- Survey to gather data from beginning teachers who are assigned mentors in different states to compare state mentoring programs based on the state's mentoring requirements.

Conclusions

Varied types of support were experienced for the first through third year secondary mathematics teachers in the study in the form of personal, instructional, collegial, and classroom management support. All participants experienced personal support although it was not the most sought out form of support. Participants found instructional support to be of utmost value. Instructional support was especially effective when the mentor had experience teaching the same subject. Over half of the beginning teachers mentioned that collegial support was important to assist them in finding their voice with colleagues and other teaching professionals. Almost all participants mentioned that support with classroom management provided new ideas for effective structure and routine in their classroom.

Another conclusion from the findings suggests that lack of mentor accessibility throughout the day may limit the effectiveness of the mentoring process. Participants described contacting mentors via email and receiving responses later that day or a few days after which failed to offer support for issues needing more of an immediate response. This led to participants reaching out to colleagues located in their building more than their mentors. In fact, all participants mentioned relying on their colleagues as informal mentors. These informal mentoring meetings were a frequent part of the participants' first years often because they were in same building and teaching the same subject. Based on shared participants experiences, informal mentors serve as efficient supporters who can provide immediate feedback when assigned mentors are not in the building.

A third conclusion based on the findings suggests that having frequent and consistently scheduled observations followed with constructive feedback is highly valued. While it is

encouraging to have an extra set of eyes in the classroom, participants found the conversations that included constructive feedback led to feeling more instructionally effective. Most participants received feedback through email a few times but preferred it delivered in person as that presented opportunities for discussion with their mentor.

Participants indicated that they were not clear about the requirements and expectations of the mentoring program. In the state where participants were teaching, individual school districts design their mentoring programs based on the state requirements. While participants described being unsure about the requirements from their mentors, they did not see the value of extra webinars and meetings that were a part of the mentoring experience. Another requirement involved the participant in a book discussion with the mentor. Participants involved in the book discussion did not find the activity significant to their level of experience. Others described not seeing the purpose or the relevance of the activities to what they needed as beginning teachers. Participants believed communications explaining the relevance of the requirements and detailing the expectations could improve the mentoring experience. Designing mentoring programs that emphasize clear communication and provide beginning teachers reasons for the mentoring assignments may strengthen the mentoring process and lead to increased teacher satisfaction.

References

Bradley-Levine, J., Lee, J. S., & Mosier, G. (2016). Teacher mentoring as a community effort. *School Science and Mathematics, 116*(2), 71-82. https://doi.org/10.1111/ssm.12158

Carr, M. L., Holmes, W., & Flynn, K. (2017). Using mentoring, coaching, and self-mentoring to support public school educators. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 90*(4), 116-124. https://doi.org/10.1080/00098655.2017.1316624

Carver-Thomas, D., & Darling-Hammond, L. (2019). The trouble with teacher turnover: How teacher attrition affects students and schools. *Education Policy Analysis Archives,* 27, 36. https://doi.org/10.14507/epaa.27.3699\

Clark, S. K., & Byrnes, D. (2012). Through the eyes of the novice teacher: Perceptions of mentoring support. *Teacher Development, 16*(1), 43-54. https://doi.org/10.1080/13664530.2012.666935

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design (4th ed.). Thousand Oaks, CA: Sage Publishing.

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Association for Supervision and Curriculum Development, 60*(8), 6-13.

Dağ, N & Sari, M. (2017). Areas of mentoring need of novice and preservice teachers. *International Electronic Journal of Elementary Education, 10*(1), 115-129. https://doi.org/10.26822/iejee.2017131892

Dawson, V., & Shand, J. (2019). Impact of support for preservice teachers placed in disadvantaged schools. *Issues in Educational Research*, *29*(1), 19–37.

Gallant, A., & Riley, P. (2014). Early career teacher attrition: New thoughts on an intractable problem. *Teacher Development*, *18*(4), 562–580. https://doi.org/10.1080/13664530.2014.945129

Gray, L., Taie, S., & O'Rear, I. (2015). (rep.). *Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007-08 beginning teacher longitudinal study*. Retrieved from https://nces.ed.gov/pubs2015/2015337.pdf

Hallman-Thrasher, A., Connor, J., & Sturgill, D. (2017). Strong discipline knowledge cuts both ways for novice mathematics and science teachers. *International Journal of Science and Mathematics Education*, *17*(2), 253–272. https://doi.org/10.1007/s10763-017-9871-x

Hairon, S., Loh, S. H., Lim, S. P., Govindani, S. N., Tan, J. K. T., & Tay, E. C. J. (2020). Structured mentoring: Principles for effective mentoring. *Educational Research for Policy and Practice*, *19*(2), 105–123. https://doi.org/10.1007/s10671-019-09251-8

Heikkinen, H. L., Wilkinson, J., Aspfors, J., & Bristol, L. (2018). Understanding mentoring of new teachers: Communicative and strategic practices in Australia and Finland. *Teaching and Teacher Education*, *71*, 1–11. https://doi.org/10.1016/j.tate.2017.11.025

Hong, Y., & Matsko, K. K. (2019). Looking inside and outside of mentoring: Effects on new teachers' organizational commitment. *American Educational Research Journal*, *56*(6), 2368–2407. https://doi.org/10.3102/0002831219843657

Hudson, P., & Hudson, S. (2016). Mentoring beginning teachers and goal setting. *Australian Journal of Teacher Education*, *41*(10), 48–62. https://doi.org/10.14221/ajte.2016v41n10.4

Ingersoll, R. M., & May, H. (2012). The magnitude, destinations, and determinants of mathematics and science teacher turnover. *Educational Evaluation and Policy Analysis*, *34*(4), 435–464. https://doi.org/10.3102/0162373712454326

Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers. *Review of Educational Research*, *81*(2), 201–233. https://doi.org/10.3102/0034654311403323

Kang, S. (2011). Understanding the impacts of mentoring on beginning teacher turnover. *National Teacher Education Journal*, *4*(4), 87–97.

Kang, S., & Berliner, D. C. (2012). Characteristics of teacher induction programs and turnover rates of beginning teachers. *The Teacher Educator*, *47*(4), 268–282. https://doi.org/10.1080/08878730.2012.707758

Kardos, S. M., & Johnson, S. M. (2010). New teachers' experiences of mentoring: The good, the bad, and the inequity. *Journal of Educational Change*, *11*(1), 23–44. https://doi.org/10.1007/s10833-008-9096-4

Killeavy, M. (2006). Induction: A collective endeavor of learning, teaching, and leading. *Theory Into Practice*, *45*(2), 168–176. https://doi.org/10.1207/s15430421tip4502_9

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Martin, K. L., Buelow, S. M., & Hoffman, J. T. (2016). New teacher induction: Support that impacts beginning middle-level educators. *Middle School Journal*, *47*(1), 4–12. https://doi.org/10.1080/00940771.2016.1059725

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Peoples, K. (2021). *How to write a phenomenological dissertation: A step-by-step guide* (Vol. 56). SAGE Publications, Inc.

Polikoff, M. S., Desimone, L. M., Porter, A. C., & Hochberg, E. D. (2015). Mentor policy and the quality of mentoring. *The Elementary School Journal*, *116*(1), 76–102. https://doi.org/10.1086/683134

Rajendran, N., Watt, H. M. G., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, *47*(3), 477–500. https://doi.org/10.1007/s13384-019-00371-x

Reitman, G. C., & Karge, B. D. (2019). Investing in teacher support leads to teacher retention: Six supports administrators should consider for new teachers. *School Administration, Multicultural Education, & Inclusion*.

Schaefer, L., Long, J. S., & Clandinin, D. J. (2012). Questioning the research on early career teacher attrition and retention. *Alberta Journal of Educational Research*, *58*(1), 106–121.

Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *Educational Evaluation and Policy Analysis*, *26*(3), 681–714. https://doi.org/10.3102/01623737026003681

Sowell, M. (2017). Effective practices for mentoring beginning middle school teachers: Mentor's perspectives. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *90*(4), 129–134. https://doi.org/10.1080/00098655.2017.1321905

Sparks, J., Tsemenhu, R., Green, R., Truby, W., Brockmeier, L. L., & Noble, K. D. (2017).

Investigating new teacher mentoring practices. *National Teacher Education Journal*, *10*(1), 59–65.

Trevethan, H. (2018). Challenging the discourse of beginning teaching: Only one crying phone call. *New Zealand Association for Research in Education*, *53*, 49–63.

Wang, J., & Odell, S. J. (2002). Mentored learning to teach according to standards-based reform: A critical review. *Review of Educational Research*, *72*(3), 481–546. https://doi.org/10.3102/00346543072003481

Rural Leaders' Experiences Implementing FAPE for Students with Intellectual Disabilities

Jessica Vogel
Northern State University

Erin Lehmann
University of South Dakota

Susan Curtin
University of South Dakota

Carly Retterath
University of South Dakota

To provide effective rural leadership and ensure students with intellectual disabilities are receiving an appropriate education, principals must understand the substantial needs of these students. Eight principals of remote rural school districts, with at least one year of leadership experience participated in this phenomenological study. Based on the findings, principals are not professionally prepared to provide FAPE for students with intellectual disabilities, nor are they confident in their ability to do so and rely heavily on their special education teachers to comprehend and comply with educational mandates.

Keywords: rural school leadership, FAPE, intellectual disabilities

Students who are eligible to receive special education and related services are entitled to a free and appropriate public education (FAPE). FAPE entitles all students ages 3 to 21 with a disability that impedes their learning to an individualized education program (IEP), that is designed to meet their individual needs to receive meaningful educational benefit. The concept of FAPE was first introduced into federal legislation through the Education for All Handicapped Children Act of 1975. Since then, the law has transformed to establish and refine the rights and responsibilities associated through FAPE and is now known as the Individuals with Disabilities Education Act (IDEA) (McKenna & Brigham, 2021).

Often, building principals are tasked with the instructional leadership responsibilities of ensuring students who qualify for special education receive an individualized program in the least restrictive environment (LRE). IDEA requires students who qualify for an IEP to participate with their peers in the general education setting to the maximum extent that is appropriate (IDEA, 2004). LRE ensures students are only removed from the general education classroom when the child's disability is so severe that classroom supplementary aids and services cannot provide the child with an appropriate education, and a special class or school is required to meet the student's individual needs (IDEA, 2004). Critics have argued that principal preparation programs inadequately prepare principals to be instructional leaders for special education (Crow & Whiteman, 2016; Lynch, 2012; Young et al., 2009).

Remote school principals face additional challenges as they are expected to undertake a multitude of instruction, managerial, and supervisory responsibilities that may differ from their urban school district peers (Klocko & Justis, 2019). In addition, many remote rural school principals have additional work assignments that may include serving as the principal to more than one school, teaching part of the day, or serving as the superintendent or special education director (Cortez-Jimmenez, 2012; Masumoto & Browne-Welty, 2009; Renihan & Noonan, 2012).

Insufficient leadership preparation can have significant ramifications for remote school districts, in which, special education teacher retention rates are low, and special education program numbers are high (Collins et al., 2005; Courtade et al., 2010). Special education teachers in remote rural areas are most likely to leave their teaching position for a job in a more populated area in which they have significantly more resources, collegial support, and higher pay (Downing & Peckham-Hardin, 2007).

Purpose of Study

The purpose of this phenomenological study was to gather rural school principals' experiences implementing FAPE for students with intellectual disabilities in remote school districts in a midwest state. A remote rural school district is defined as a rural territory that is more than 25 miles from an urbanized areas and is more than 10 miles from an urban cluster (National Center for Educational Statistics, 2019). Of the state's 151 school districts, 96 of them are considered remote (U.S. Department of Education, 2013). This study was qualitative in nature to provide participating principals the opportunity to explain their lived experiences in implementing FAPE for students with intellectual disabilities.

Little is known about what remote rural school principals experience in implementing FAPE for students with intellectual disabilities. This is a significant gap in educational research because the experiences principals face in implementing FAPE impacts students' daily education

services. Gathering the common experiences remote rural principals encounter was important to develop a thick description of the phenomenon (Creswell & Poth, 2018), and to help inform educational practices. If principals' experience in supporting special education teachers in the implementation of FAPE for students with intellectual disabilities is studied, then teacher education preparation programs may be able to grasp the specific challenges for which they need to prepare and support school leaders.

While principals in all geographic areas may be challenged as leaders of special education, leading in a remote rural school district presents unique challenges (Rude & Miller, 2018). The opportunity lies in capturing the experiences remote rural school principals have in supervising the implementation of FAPE for students with intellectual disabilities to understand the specific support that they need in leading special educators in a rural setting. The support provided by principals may impact teacher retention, and strengthen outcomes for students with intellectual disabilities.

Boyd et.al (2011) indicated that principal leadership was a predictive factor to teachers' intentions to remain in their current position or search for another work opportunity. Teachers who are supported by their principal and are provided with professional development opportunities and necessary resources are likely to remain in their current position (Boyd et. al., 2011). Providing these opportunities to teachers is one of the many tasks for which principals are responsible, and if principals are appropriately trained in the supervision of FAPE for students with intellectual disabilities, they are likely to provide related and relevant professional development opportunities, resources, and educational guidance for teachers, potentially strengthening their teacher retention.

Research Question

This study was guided by the following research question: What are remote rural school principals' experiences with implementing FAPE for students with an intellectual disability?

Theoretical Framework

This research was framed through the lens of inclusive principal leadership theory. Inclusive principal leadership theory evolved from the Council of Chief State School Officers (CCSSO) after the adoption of the Professional Standards for Educational Leaders (PSEL) in 2015. The CCSSO is a nationwide organization that is designed to assist students attending public schools in the United States to graduate ready to be successful in life (CCSSO, 2017).

CCSSO recognized the need to include inclusive leadership training into CCSSO standards, so in 2017, the National Collaborative on Inclusive Principal Leadership (NCIPL) was assembled. The NCIPL is a manifold of national organizations and researchers that prepare principals for their supervision role (Collaboration for Effective Educator Development, Accountability, and Reform Center, 2020). The newly assembled NCIPL partnered with the U.S. Department of Education's Collaboration for Effective Educator Development, Accountability, and Reform Center (CEEDAR) to design a resource for states to prepare principals to be inclusive leaders. The resource outlines strategies the state department of education can use to advance inclusive leadership through principal preparation programs and schools (CEEDAR, 2020) and most states have narrowed in

on these three main strategies for inclusive improvement: (a) the use of high-leverage practices (HLPs), (b) multi-tiered system of support (MTSS), (c) and positive behavior intervention and supports (PBIS) (CEEDAR, 2020).

Review of Literature

The Education of Students with Intellectual Disabilities

An intellectual disability is defined in the IDEA (2004) as students with *"significantly sub average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance"* (Sec. 300.8 (c) (6)). An intellectual disability indicates that the student has an intellectual quotient (IQ) below 70 and limitations in the ability to care for themselves and utilize social skills, referred to as adaptive behavior skills. Student's adaptive behavior skills are measured through observation and comparison to other children their age. According to The Institute on Disability, in 2018, approximately 6.3% of the special education population in the United States was comprised of students with intellectual disabilities (2019).

Deficits in language, coping skills, social skills, and other adaptive behavior skills make it difficult for students with intellectual disabilities to express their wants and needs can evoke unexpected behavior in the classroom, negatively impacting a student's academic performance or that of others. Students with intellectual disabilities are also likely to process instructions slower than their peers, especially if the task involves multiple steps (Friend, 2018). Academics and routine daily skills may take a considerable amount of time for students with an intellectual disability to retain.

Educational reforms in the 2000s expanded academic expectations for students in special education (Aron & Loprest, 2012; Greenway et al., 2013). Considerable emphasis was placed on ensuring that all students with intellectual disabilities have access to the general education curriculum to the maximum extent appropriate, and to have the same educational opportunities as their peers without disabilities (Dymond et al., 2007). Ensuring students with intellectual disabilities receive appropriate education and participate in general education to the appropriate extent often presents hurdles for school teams. Teachers must balance student's time within the general education curriculum with their peers, without denying attention to other important educational needs, such as self-support skills (Dymond et al., 2007).

Unique Educational Challenges to Rural Leaders

Although rural schools tend to be favored by families for their small settings, individualized student attention, and safe communities, the ability to provide a free and appropriate public education to all students in a sparsely populated setting has challenges (Rude & Miller, 2018).

Lack of Resources and Qualified Educators

Rural principals are challenged with fiscal limitations and restricted access to educational and technical resources, yet they are expected to meet the same accountability requirements as their

urban and suburban peers (Preston et al., 2013). Rural school districts receive less money from the federal government and property tax monies due to the likelihood of low-income students (U.S. Department of Education, 2010). Of the 9.6 million public school students in the United States, approximately one out of every five rural school students live in poverty (Strange et al., 2012).

The shortage of qualified teachers in the United States is well documented, as is the shortage of teachers in special education and in rural settings (Showalter et al., 2017; Sindelar et al., 2018; Sutcher et al., 2016; Viadero, 2018). The greatest shortage of special education teachers is those who serve students with low incidences (LI) disabilities such as autism, intellectual disabilities, and sensory impairments (Jameson et al., 2019).

Sutcher et al. (2016) found the number of educators who have shown interest in working in rural schools has significantly declined in the last decade, which presents a unique set of challenges for school administrators seeking to recruit qualified teachers. Sawchuck (2018) found a remote location, heavy caseloads, and high poverty rates to be among some of the reasons rural school districts struggle to find and keep highly qualified special education teachers.

Partelow (2019), estimated that teacher preparation program enrollment has declined by more than one-third since 2010 in America. In addition to the national decline in teacher preparation enrollment and the rural teacher shortage, the entire nation continues to face a critical shortage of special education teachers (Cuero, 2016). The critical shortage of qualified special education teachers is one of the largest challenges to fulfilling FAPE for students with disabilities (Billingsley, 2002).

General Special Education Knowledge Requirements for School Leaders

The frequently changing leadership responsibilities with legislative action have pressured principals to be accountable for educational disciplines that they are not adequately trained to supervise, including special education (Boscardin et al., 2011). Principals must have a strong understanding of special education issues, policies, instructional practices, and curriculum to meet the needs of students with disabilities. Principals' planning and instructional practices include choosing curriculum materials, guiding instructional strategies, and modification strategies that complement one another, follow IEPs, and lead to student success (Sanzo et al., 2011). Effective principals focus their curricular efforts on establishing high expectations for all students in their school (Hitt & Tucker, 2016).

Principal Preparation Programs

As a principal, one must have a solid understanding of IDEA to help lead and monitor special education programs (Loiacono & Valenti, 2010; Lynch, 2012; McHatton et al., 2010; Roberts & Guerra, 2017). Principals must understand the requirements of special education because the number of students receiving special education services has significantly increased in the last 40 years. Pazey and Cole (2013) reported that 3.6 million students were receiving special education services during the 1976–1977 school year. The most recent national standards statistic reported 7.1 million students were receiving special education services during the 2018-2019 school year (National Center for Educational Statistics, 2019).

Understanding and having the ability to implement the laws and legislative requirements of IDEA is essential to a successful special education program (Loiacono & Valenti, 2010; Lynch, 2012; McHatton et al., 2010; Pazey & Cole, 2013). Those who oversee the school district's certified staff and those with direct contact with the children should have training in special education requirements. Additionally, they must have the necessary pre-service training to prepare them effectively to meet the needs of all students, but it is most critical when those students have disabilities (Lynch, 2012; McHatton et al., 2010; Pazey & Cole, 2013). Principals with a strong special education preparation are more likely to be involved in special education improvement efforts and understand student needs (Frost & Kersten, 2011). Ball and Green (2014) suggest few principals are prepared to be instructional leaders in special education.

Since the implementation of IDEA, administrators have been required to increase the educational opportunities for students with disabilities. Despite the increase in responsibility and accountability on the part of the school principal, research dating back almost 40 years by Hallinger et al., (1983) and O'Reilly and Squires (1985) concluded that most principals studied had minimal to no formal training in special education or required coursework. Principal preparation programs contained little information on special education or its implementation.

As part of determining the level of administrative preparation for school leaders in special education, the researchers reviewed federal, state, and local special education laws and regulations. The state department of education is the state agency responsible for setting the certification requirements for all educators in the state, including administrators (Gümüş & Boylan, 2015). Each state's administrative certification code sets the basic educational requirements, course content, and curriculum for administrators to obtain certification through colleges and universities (Gümüş & Boylan, 2015).

The rural Midwest state's K-12 principal preparation programs must meet the National Educational Leadership Preparation (NELP) program recognition standards (S.D. Administrative Rule 24:53:08:02). The preparation programs "must require candidates to demonstrate the applicable content, pedagogical, and professional knowledge and skills identified in the 2018 NELP standards to demonstrate competency on the applicable multiple assessment measures." School district and campus leaders use these standards to develop curricula and policies that communicate the educational institution's fundamental beliefs and academic outcomes.

Methodology

Qualitative research "begins with assumptions and the use of theoretical frameworks that inform the study of research problems addressing the meaning of individuals or groups ascribed to a social or human problem" (Creswell, 2013, p. 44). A qualitative transcendental phenomenology design was selected for this study because minimal research exists giving a voice to principals of remote rural schools about the implementation of FAPE for students with intellectual disabilities and how to best approach methods in leadership preparation programs (Creswell & Poth, 2018).

This research is a description of the participants' experiences rather than an interpretation from the researchers (Creswell & Poth, 2018). Because no known studies capture the perceptions of principals in remote rural states who implement FAPE for students with intellectual disabilities, the qualitative transcendental phenomenological design allowed the researcher to investigate the phenomenon without preconceived barriers set by previous

research.

Selection of Participants

Participants in this study were selected using criterion sampling identifying principals of schools considered remote rural (National Center for Educational Statistics, 2019). The criteria for selection were principals of remote school districts who had experience supervising a special education teacher(s) who taught at least one student with a primary diagnosis of an intellectual disability. Students with intellectual disabilities often have intense and complex instructional needs and require specialized, intense academic instruction, and often require multiple related services.

Participants who met the following criteria were invited to participate:

a) The participant must be a principal of a remote school as defined by the National Center for Educational Statistics.
b) The principal must have at least one full academic years' experience in providing FAPE as an administrator for one or more students with a primary disability of intellectual disability. An academic year is from August to May.

Principals from elementary, middle school, and high school levels were invited to participate in this study because remote rural school principals often oversee multiple grade level spans within a single building. To identify the school districts in the rural midwest state that were considered remote rural, the researchers used a map of the state provided by the United States Census Bureau. The map defined the areas of the state that are urbanized areas with a population of 50,000 or more as well as urban clusters with a population of 10,000 to 49,999. The researchers used Polkinghorne's recommendation to sample between 5 and 25 or until saturation was reached who have all gone through the same lived experience (Polkinghorne, 1989). This study used a sample of 8 participants.

Limitations

A limitation of this qualitative phenomenological study is the sample. The study only focused on remote rural principals in one midwest state who provide FAPE to students with a primary diagnosis of an intellectual disability. This may be a limitation because the results of this study of rural principals' perceptions may not be applicable to other states. Shenton (2004) noted that "since the findings of qualitative project[s] are specific to a small number of particular environments and individuals, it is impossible to demonstrate that the findings and conclusions are applicable to other situations and populations" (p. 69).

Data Collection

The researchers gathered data by conducting semi-structured interviews with eight participants. These semi-structured interviews required the researchers and the participant to engage in a formal interview. Structured interview questions were used, and the researchers followed the guide, but were able to follow the participant's topical route in the conversations that may have stridden from the guide if deemed appropriate (Cohen & Crabtree, 2008). By listening to

participants explain their experiences with implementing FAPE for students with intellectual disabilities, the researchers uncovered their perceptions and the meaning that they ascribed to those experiences. Participant interviews were conducted via Zoom, and were recorded using Zoom and Otter.ai to allow the researchers an opportunity to transcribe and review the discussion to ensure accurate notes and data after the interview.

Data Analysis

The data analysis process was structured using Miles and Huberman (1994) systematic approach to analysis as well as Creswell and Poth's (2018) Data Analysis Spiral. The two approaches to analysis complemented each other well, as Creswell and Poth's (2018) method provided a visual outline, and Miles and Huberman (1994) provided further detailed steps in the process for qualitative research (Creswell & Poth, 2018). The data analysis also included reading and memoing emergent ideas, describing and classifying codes into themes, developing and assessing interpretations, and representing and visualizing the collected data (Creswell & Poth, 2018). The data were clustered into small categories of information and assigned a label by each researcher. The researchers identified 48 statements during the memo and analysis process. Each theme was supported by participants' personal quotes to strengthen trustworthiness.

Trustworthiness

Shenton (2004) summarized trustworthiness in qualitative research as assessing the accuracy of the findings as best described in the study. He suggested that the following four criteria be addressed to assist the researchers in establishing trustworthiness in qualitative studies: credibility, transferability, dependability, and conformability and measures have been put into place to ensure the trustworthiness of this study based on the four criteria.

Credibility

Immediately after each interview, the interviewer documented a reflective commentary of initial impressions of the session to monitor developing constructions and progressive objectivity to ensure credibility (Shenton, 2004). Further, each participant was also given the opportunity to refuse to participate in the study, which ensured that the interviews only involved those who were willing to participate and willing to offer data freely (Shenton, 2004). Also, after the interview transcripts were complete, the participants were asked to review their interview dialogue. This process, known as member checks, provided the participant with the opportunity to consider "if their words match what they actually intended" (Shenton, 2004, p. 68).

Transferability

These research findings are specific to a rural Midwestern state, and it is impossible to predict whether these findings and conclusions are applicable to all principals or rural principals in other states (Miles & Huberman, 1994). However, to strengthen transferability, thick descriptions are provided of the population and sample, location, as well as the methods used.

Dependability

Dependability was enhanced by using high-quality recording through Zoom and Otter.ai. The use of both recording devices eliminates the chance of technological error. The interview files were digitally transcribed through Otter.ai and reviewed thoroughly by the researchers to ensure accuracy. Silverman (2013) suggested the use of high-quality recording and transcription to provide the researchers with comprehensive field notes and enhance dependability.

Confirmability

Confirmability relates to the research outcomes truly being the result of the research rather than the subjectivity of the researchers. The researchers' reflective commentary post-interviews were used in the creation of thick descriptions of what principals experienced in their implementation of FAPE for students with intellectual disabilities, as well as the context in which they experienced it (Shenton, 2004). The researcher's field notes and transcripts are available for review by other researchers (Lincoln & Guba, 2000). As noted in credibility, member checks were utilized to strengthen confirmability. An in-depth description of the study limitations and methods have been formally introduced to reinforce confirmability.

Inclusive Principal Leadership Findings

Transcendental phenomenology requires the researchers to analyze the data by reducing the information statements or quotes and combining the statements into themes (Creswell & Poth, 2018). These themes were then combined to identify Moustakas's (1994) process of identifying "what" each principal experienced in supervising FAPE for students with intellectual disabilities, and "how" they experienced the phenomenon. Three themes emerged using significant participant statements. The themes that emerged from the codes were (a) principals' reliance on their special education teachers to understand and implement mandated law and instructional practices, (b) instructional leadership, and (c) supporting general education teachers.

Principals' Reliance on Special Education Teachers

The results from this study indicate that some remote, rural Midwest principals are not fully prepared to serve students with intellectual disabilities. Some participants indicated that they lack self-efficacy in responding to the needs of students with intellectual disabilities and they lean on their special education teachers to support them. One participant said, "I go to them...quite often and I seek out their guidance" when asked what their experiences have been with being the instructional leader for those who instruct students with intellectual disabilities. Another participant stated, "I go to my special education teachers for help because I don't know. They support me." This indicates many of the participants are distributing leadership solely to the special education teacher and not to themselves or other staff that serves students with intellectual disabilities as suggested by inclusive principal leadership.

Instructional Leadership

Inversely, one participant had an endorsement in early childhood special education, and another participant had a K-12 special education teaching degree. The participants with a background in special education appeared to have significantly higher self-efficacy in the implementation of FAPE for students with intellectual disabilities than their peers. They seemed to follow the practices of inclusive principal leadership closely. Unlike their peers, their discussions tended to focus on the strengths of their instructional leadership and how they support their special education teachers who teach students with intellectual disabilities. One participant with a special education background advocates for special education teacher preparation time and allows leeway in their schedules to complete necessary paperwork. The other prepares the special education data from their school for entry to the state department of education. This participant uses their knowledge from the entry data to thoroughly review special education teachers' caseloads before the start of the year to ensure one teacher is not "too heavy with the cognitive [students]". Complex caseloads and those that are filled with students with severe disabilities have been linked to emotional burnout in special education teachers and play a significant role in the high attrition rates of those teachers (Billingsley & Bettini, 2017; Coleman, 2000).

Supporting General Education Teachers

Some participants expressed that general education teachers lack the knowledge of FAPE and instructional methods to teach students with intellectual disabilities. One participant stated, "general education teachers are reluctant or don't feel like they are prepared to teach those [students with intellectual disabilities] students in the classroom. They don't understand student needs, they are focused on fairness. The big challenge is finding ways to train them." Their lack of understanding of special education services and providing modifications for student needs, as required by federal law, impedes the rights of students with intellectual disabilities. As required by IDEA, students with intellectual disabilities should be participating in the general education classroom as much as is appropriate for their ability level.

The general education teacher's lack of understanding of these federal requirements has them relying heavily on the special education teacher for legal compliance and instructional practices. One participant commented that "general education teachers don't always understand students' needs, and they think if I assign 10 pages of reading, everyone must do it", feeling frustrated that some teachers have the mentality that fairness means all students must perform the exact task provided.

Recommendations for Practice and Professional Development

Ongoing Professional Development

Most participants in this study suggested there should be more instruction on the requirements of FAPE and how to serve as the instructional leader for students with intellectual disabilities in educational leadership preparation programs. However, participants also indicated that knowing

the core components of FAPE specifically related to students with intellectual disabilities was not urgent need-to-know information at the start of their instructional leader career.

A gap in research exists about how to prepare principals once they are on the job and supervising teachers who provide services to students with intellectual disabilities. Therefore, the researchers recommend that state departments of education require and provide new principals with specific training on the six core principles of IDEA for students with intellectual disabilities. The core concepts of IDEA, which includes FAPE, ensure students with intellectual disabilities receive appropriate education and participate in the general education curriculum to the appropriate extent. District personnel must comply with these principles to ensure continued federal and state funding for their special education programs.

This training will benefit school leaders through explicit instruction on their instructional leadership responsibilities and state and national legal requirements using the framework of inclusive leadership. Inclusive leaders ensure all students are supported and valued and they do so by responding effectively to the needs of each student (CCSSO, 2017). In collaboration with the required training, the state may consider including professional development for principals for how to encourage and nurture intellectual disabilities in the general education classroom using best practices for tier one instruction (Rogers & Johnson, 2018).

Shared Professional Development with Special Educators

Study participants indicated they heavily rely on their special education teachers for support and guidance in providing services for students with disabilities and ensuring the requirements of FAPE are met. A possible outcome of this reliance is that teachers are already stretched by providing daily services to a diverse group of students, collecting IEP data, conducting and writing educational reports, and other general responsibilities around the school. Special education teachers are strained from trying to fulfill these multiple roles and may be related to the high attrition rate of special education teachers in rural school districts.

The researchers recommend addressing the strain of special education teachers through the following supports. First, the state departments of education could provide required, annual joint training for principals and special education teachers, so they share an understanding of the rules, regulations, and their personal and shared responsibilities under the IDEA. This would also provide the opportunity to establish a clear model of collaboration. Having the training be mandated by the state department of education gives emphasis to the importance of collaboration between principals and special education teachers that may not otherwise be implemented by school district personnel. Second, many remote, rural midwest school districts do not have the financial means to hire a certified special education director, so the building principal fulfills the role. The provided training could serve a dual purpose of the role of the principal, as well as the role of the principal as the special education director.

Mentoring for Remote Rural Practices

Additionally, the researchers suggest state departments of education provide a structured educator-mentoring program to include specific practices for remote rural school districts. Mentorship programs in the field of special education have been suggested to prevent teacher

attrition, increase teacher job satisfaction, and improve teacher quality (Griffin et al., 2003). This mentoring program should be designed with the unique challenges remote rural school district face. The remote location and heavy caseloads are among some of the reasons why remote rural school districts struggle to find and keep qualified special education teachers. Due to the small school size, special education teachers are likely to serve a diverse group of learner needs across multiple grade levels (Brownell et al., 2018). For these reasons, new special education teachers may need more than one mentor, one for content-specific support and the other for basic orientation support.

We recommend the state's education department pair experienced teachers of low incidence disabilities, like intellectual disabilities, with new special education teachers of low incidence disabilities throughout the state to address their content-specific needs. This mentorship may also address the lack of experienced personnel resources in rural school districts as reported by the participating principals. This compares to the work of Johnson et al. (2017) and the rural online mentoring program initiated in another predominantly rural state to provide support to novice teachers, as well as address the special education teacher shortage with experienced special education teacher mentors available around the state. A second mentor may be located within the school district to provide the new teacher with orientation support, as they can answer on-demand specific questions about procedures and logistics of the building/district.

Increase Financial Support for Special Education

Most participants discussed the limited staff they have available in their school district to support all student needs. Participants reported they struggle to find people to fill their support positions, or they do not have the funds to hire more people, leaving their current staff filling multiple roles. Therefore, these students often need more direct instruction and supervision to work on their adaptive behavior skills. This requires consistent and adequate paraprofessional support for academics and behavior.

Support staff are an integral part of the school district and strongly contribute to the success of students (Reddy et al., 2021). Typically, district support staff work nine months out of the year and are paid slightly above minimum wage. One participant stated that "finding those supports [support staff] for students with intellectual disabilities is hard." With an increase of rural school district funding from the state, school districts could pay their support staff a higher wage in an attempt to recruit and retain them within rural school districts.

Additionally, applicants for support staff positions do not need to be certified teachers or have a background in education. They often receive limited training and supervision of students with disabilities once hired (Brock & Carter, 2017). Blatchford et al. (2009) and Farrell et al. (2010) found that support staff who were not adequately trained to provide supports to students with disabilities and a lack of supervision had a limited impact on the students they support. Educational assistants would benefit from being formally trained to work with students with intellectual disabilities and be informed of the legal aspects of IDEA and then effectively supervised to monitor fidelity. To take the financial burden off remote rural school districts, we suggest this training be universal and be provided through the state department of education (Council for Exceptional Children, 2005).

Adoption of HLPs

Teachers and instructional leaders play an important role in the academic and behavioral success of students with intellectual disabilities. Research by McLeskey and Brownell (2015) indicated that all teacher candidates, despite their academic discipline, benefit from a set of critical practices that are necessary to improve student learning and behavior, which should be learned in coursework, and explicitly practiced during field experiences, while receiving feedback from their supervisors. These critical practices are the high leverage practices designed by CEC and CEEDAR and can be essential tools for improving the outcomes for students with intellectual disabilities when recognized and implemented. The researchers suggest all Midwest higher education teacher and administration preparation programs adopt the High Leverage Practices (HLPs) as a guide to prepare teacher administration candidates with the essential knowledge and skills necessary to ensure fidelity to the supervision of instruction of teachers who support students with intellectual disabilities.

Recommendations for Future Research

Overall, the amount of research addressing students with intellectual disabilities and their right to FAPE is extremely limited. Further research is needed to better understand the connection between the heavy reliance on the special educator and the challenges in recruitment and retention of special educators. Additionally, it would be beneficial to study where new special education teachers (those within their first three years of teaching) seek support for students with intellectual disabilities and gain experience with low incidence disabilities and to what extent this support contributes to their decision to remain or leave the profession or district. Research around perceptions of leadership support gathered from special educators who left the field might also prove to be a rich resource for understanding what levels/types of support were more helpful than others or which supports were lacking.

Conclusion

The experiences of eight participants provided insight to the needs of remote rural school district leaders and teachers of students with intellectual disabilities. Rural school district leaders are tasked with the role of ensuring FAPE for students with intellectual disabilities, yet they reported they were not trained to do so in their administrative preparation program. Due to their lack of preparation, many district level leaders rely on the special education teachers who provide direct services to students with intellectual disabilities. Further, participants experienced general education teachers that are not adequately prepared to provide instruction to students with intellectual disabilities in the classroom, causing them to also rely heavily on the building special education teachers for support. Without ongoing professional development for school district leaders and teachers directed toward the requirements of FAPE for students with intellectual disabilities, special education teachers in remote rural areas will continue to support their leaders and co-teachers, continually adding to the low special education teacher attrition rates.

References

Aron, L., & Loprest, P. (2012). Disability and the education system. *The Future of Children, 22*(1), 97–122.

Billingsley, B. (2002). *Beginning special educators: Characteristics, qualifications, and experiences*. SPeNSE Factsheet.

Billingsley, B. & Bettini, E. (2017). Improving special education teacher quality and effectiveness. In J.M. Kauffman, & D.P. Hallahn (Eds.) *Handbook of special education* (2nd ed.). Routledge.

Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2009). *Deployment and impact of support staff project: Short summary of the main findings, conclusions and recommendations from the DISS project.* Research Report DCSF–RR154. Institute of Education, University of London.

Boscardin, M. L., Mainzer, R., & Kealy, M. V. (2011). Commentary: A Response to "Preparing Special Education Administrators for Inclusion in Diverse, Standards-Based Contexts," by Deborah L. Voltz and Loucrecia Collins (2010). *Teacher Education and Special Education*, *34*(1), 71–78.

Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2011). The influence of school administrators on teacher retention decisions. *American Educational Research Journal, 48*(2), 303–333.

Brock, M. E., & Carter, E. W. (2017). A meta-analysis of educator training to improve implementation of interventions for student with disabilities. *Remedial and Special Education, 38*(3), 1131–144.

Brownell, M. T., Bishop, A. M., & Sindelar, P. T. (2018). Republication of "NCLB and the demand for highly qualified teachers: challenges and solutions for rural schools." *Rural Special Education Quarterly*, *37*(1), 4–11.

Cohen, D. & Crabtree, B. (2008). *Qualitative Research Guidelines Project*. Robert Wood Johnson.

Coleman, M. R. (2000). *Bright futures for exceptional learners: Technical report. Conditions for special education teaching: CEC Commission Technical Report* (Technical Report No. EC 308 642).

Collins, B. C., Ludlow, B. L., & Menlove, R. (2005). Tips for becoming a rural special education advocate. *Rural Special Education Quarterly, 24*(4), 32–35.

Cortez-Jimenez, G. (2012). Leadership needs of California rural school administrators. [Unpublished doctoral dissertation]. California State University.

Council for Exceptional Children. (2004). *The CEC paraeducator standards workbook*. Arlington, VA.

Council of Chief State School Officers & The Collaboration for Effective Educator Development, Accountability, and Reform Center. (2020). *PSEL 2015 and promoting principal leadership for the success of students with disabilities.* https://ceedar.education.ufl.edu/

Council of Chief State School Officers & The Collaboration for Effective Educator Development, Accountability, and Reform Center. (2020). *High leverage practices for students with disabilities.* https://ceedar.education.ufl.edu/

Courtade, G. R., Browder, D. M., Spooner, F., & DeBiase, W. (2010). Training teachers to use an inquiry-based task analysis to teach science to students with moderate and severe

disabilities. *Education and Training in Autism and Developmental Disabilities*, *45*, 378–399.

Creswell, J.W., & Poth, C.N. (2018). *Qualitative inquiry & research design: Choosing among five approaches.*

Crow, G.M., & Whitemen, R.S. (2016). Effective preparation features: A literature review. *Journal of Research on Leadership Education, 11,* 120–148.

Cuero, H. (2016). *Understanding social justice in rural education.* Palgrave Macmillan.

Downing, J. E., & Peckham-Hardin, K. D. (2007). Inclusive education: what makes it a good education for students with moderate to severe disabilities? *Research and Practice for Persons with Severe Disabilities*, *32*(1), 16–30.

Dymond, S., Renzagila, A., Gilson, C., & Slagor, M. (2007). Defining access to the general curriculum for high school students with significant cognitive disabilities. *Research and Practice for Persons with Severe Disabilities, 32*(1), 1–15.

Farrell, P., Alborz, A., Howes, A., & Pearson, D. (2010). The impact of teaching assistants on improving pupils' academic achievement in mainstream schools: A review of the literature. *Educational Review*. 62. 435–448.

Frost L. A., & Kersten T. (2011). The role of the elementary principal in the instructional leadership of special education. *International Journal of Educational Leadership Preparation*, *6*(2), 1–21.

Greenway, R., McCollow, M., Hudson, R.F., Peck, C., & Davis, C.A. (2013). Autonomy and accountability: Teacher perspectives on evidence-based practice and decision-making for students with intellectual and developmental disabilities. *Education and Training in Autism and Developmental Disabilities, 48*(4), 456–468.

Griffin, C.C., Winn, J.A., Otis-Wilborn, A., and Kilgore, K.L. (2003). *New teacher induction in special education* (COPSSE RS-5E). Gainesville: University of Florida, Center for Personnel Studies in Special Education.

Gümüş, S. & Boylan, M. (2015) Learning to teach special education: A balancing act of assumptions, reality, and best practice, *Cogent Education, 2*(1).

Hallinger, P., Murphy, J., Well, M., Mesa, R. P., & Mitman, A. (1983). Identifying the Specific Practices, Behaviors for Principals. *NASSP Bulletin*, *67*(463), 83–91.

Hitt, D. H., & Tucker, P. D. (2016). Systematic review of key leader practices found to influence student achievement: A unified framework. *Review of Educational Research, 86*(2), 531–569.

Individuals with Disabilities Education Improvement Act, 20 U.S.C. §1400 (2004).

Jameson, J. M., Walker, R. M., Farrell, M., Ryan, J., Conradi, L. A., & McDonnell, J. (2019). The impact of federal personnel preparation grants on special education teacher candidate recruitment for rural and remote alternative teaching pathways. *Rural Special Education Quarterly*, *38*(4), 201–209.

Johnson, E.S., Humphrey, M.J., & Allred, K.W. (2017). Online learning and mentors: Addressing the shortage of rural special educators through technology and collaboration.
Rural Special Education Quarterly, 28(2), 17–21.

Klocko, B. & Justis, R.J. (2019). Leadership challenges of the rural school principal. *The Rural Educator, 40*(3), 23–34.

Lincoln, Y.S., & Guba, E.G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N.K. Denzin & Y.S. (Eds.), *Handbook of qualitative research* (2nd ed., pp. 163–188). Sage.

Loiacono, V. & Valenti, V. (2010). General education teachers need to be prepared to co-teach the increasing number of children with autism in inclusive settings. *International Journal of Special Education. 25*, 24–32.

Lynch, J.M. (2012). Responsibilities of today's principal: Implications for principal preparation programs and principal certification policies. *Rural Special Education Quarterly, 31*(2), 40–47.

Masumoto, M., & Brown-Welty, S. (2009). Case study of leadership practices and school community interrelationship in high performing, high-poverty, rural California high schools. *Journal of Research in Rural Education, 24*(1), 1–18.

McHatton, P. A. K., Boyer, N. R., Shaunessy, E., & Terry, P. M. (2010). Principals' perceptions of preparation and practice in gifted and special education content: Are we doing enough? *Journal of Research on Leadership Education, 5*(1), 1–22.

McKenna, J. W., & Brigham, F. J. (2021). More than de minimis: FAPE in the post endrew f. era. *Behavior Modification*, *45*(1), 3–12.

McLeskey, J., & Brownell, M. (2015). *High-leverage practices and teacher preparation in special education* (Document No. PR-1). Retrieved from University of Florida, Collaboration for Effective Educator, Development, Accountability, and Reform Center website: http://ceedar.education.ufl.edu/tools/best-practice-review/

Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis:* An expanded sourcebook. SAGE.

Moustakas, C. E. (1994). *Phenomenological research methods.* Sage Publications.

National Policy Board for Educational Administration (2015). *Professional Standards for Educational Leaders*. Reston, VA

O'Reilly, C., & Squires, S. (1985). *Special education in-service for metro area school administrators.* Nebraska University at Omaha Press.

Partelow, L. (2019). *What to make of declining enrollment in teacher preparation programs.* Center for American Progress. https://www.americanprogress.org/article/make-declining-enrollment-teacher-preparation-programs/

Pazey, B., & Cole, H. (2013). The Role of Special Education Training in the Development of Socially Just Leaders: Building an Equity Consciousness in Educational Leadership Programs. *Educational Administration Quarterly, 49*(2), 243–271.

Polkinghorne, D. E. (1989). *Phenomenological research methods*. In R. S. Valle & S. Halling (Eds.), *Existential-phenomenological perspectives in psychology*. (pp. 41–60). Plenum Press.

Preston, J. P., Jakubiec, B. A. E., & Kooymans, R. (2013). Common challenges faced by rural principals: A review of the literature. *The Rural Educator, 35*(1-12).

Reddy, L.A., Lekwa, A.J., & Glover, T.A. (2021). Supporting paraprofessionals in schools: Current research and practice*. Psychology in Schools, 58*(4), 643–647.

Renihan, P., & Noonan, B. (2012). Principals as assessment leaders in rural schools. *The Rural Educator, 33*(3), 1–8.

Roberts, M. B., & Guerra, Jr. (2017). Principals' perceptions of their knowledge in special

education. *Current Issues in Education, 20*(1-15).

Rogers, W., & Johnson, N. (2018). Strategies to include students with severe/multiple disabilities within the general education classroom. *Physical Disabilities: Education and Related Services*, *37*(2), 1–12. https://doi.org/10.14434/pders.v37i2.24881

Rude, H., & Miller, K. J. (2018). Policy challenges and opportunities for rural special education. *Rural Special Education Quarterly*, *37*(1), 21–29.

Sanzo, K., Clayton, J., & Sherman, W. (2011). Students with special needs, reading education, and principals: Bridging the divide through instructional leadership. *The International Journal of Educational Leadership Preparation, 6*(1), 1–20.

Sawchuk, S. (2018). Staffing school in no-stoplight towns. *Education Week, 37*(18), 2.

Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*, 63–75.

Showalter, D., Kline, R., Johnson, J., & Hartman, S.L. (2017). *Why rural matters 2015–2016: Understanding the changing landscape*. Rural School and Community Trust.

Silverman, D. (2013). *Doing qualitative research: A practical handbook*. Sage.

Sindelar, P., Pua, D., Fisher, T., Peyton, D., Brownell, M., & Mason-Williams, L. (2018). The demand for special education teachers in rural schools revisited: An update on progress. *Rural Special Education Quarterly. 37*. 12–20.

Strange, M., Johnson, J., Showalter, D., & Klein, R. (2012). *Why rural matters 2011–12: The condition of rural education in the 50 states.* Rural School and Community Trust.

Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Learning Policy Institute.

United States Department of Education. (2010–2020).

Viadero, D. (2018). Teacher recruitment and retention: It's complicated; teaching shortages: Many answers for a complex problem. *Education Week, 37*(18), 2.

Young, M.D., Crow, G.M., Murphy, J., & Ogawa, R.T. (2009). *Handbook of research on the education of school leaders.* Routledge.

A Mechanism to Increase Literacy and Math Skills to Reduce Summer Learning Loss

Adam Reynolds
West Rocks Middle School

Olcay Yavuz
Southern Connecticut State University

There is a lack of consensus among school districts on how best to mitigate reading and math learning loss during the summer months. The purpose of this quasi-experimental quantitative exploration study was to determine if there was a statistically and practically significant effect of an educational program on summer learning loss in reading and mathematics in grades five and six students. The findings of this non-randomized controlled trial indicated that the students who participated in Summer Academy grew in reading almost double compared to those students that did not participate in Summer Academy. The findings also suggested that the students who participated in Summer Academy regressed in math almost double compared to those students that did not participate in Summer Academy. The implications indicate that school leadership is integral to the success of summer programs especially with regard to the impact programs have on economically disadvantaged students.

Keywords: reading learning loss, math learning loss, summer academy, school leadership

The current American school calendar is approximately one hundred eighty days with three months off for the summer. This gap promotes learning loss in the summer months and accelerates the achievement gap (Cooper, 2003). Smith, (2012) and Hanover Research (2017) indicated that summer slide--the loss of learning over the summer break--is a huge contributor to the achievement gap between low-income students and their higher-income peers. In other words, summer learning loss during elementary school accounts for two-thirds of the achievement gap in reading between low-income children and their middle-income peers by ninth-grade High-income families supplement learning opportunities through programs while lower-income families struggle to maintain their education and experiences.

The research that investigated academic achievement over the summer months, observed a negative trend in achievement for various students. This trend has been termed "summer learning loss" (Cooper, 2003), "summer setback" (Allington et al., 2010), or "summer slide" (Slates, Alexander, Entwisle, & Olson, 2012). Even though there has been a focus on summer learning loss, there is still a lack of evidence based and research supported practices to improve summer learning opportunities for all students. This study uses the term "summer learning loss," which is defined as the decline in achievement over the summer months when formal school-based instruction is withdrawn for most children; the focus is specific to summer learning loss in reading and math achievement. "Meghan Kuhfeld draws on data from the 3.4 million students who took the NWEA MAP Growth assessments to find that summer slide is common, but not inevitable. According to the data, the students who experienced the greatest loss were those who made the greatest gains during the previous school year" (Kuhfeld 2019).

The focus provides emphasis on the influence of summer learning loss on distinct groups. Such insights might guide future interventions to reduce gaps in opportunity and achievement. These issues provide a solid foundation for current and future research to explore the current influence and potential of summer activities to reduce gaps in opportunity and achievement.

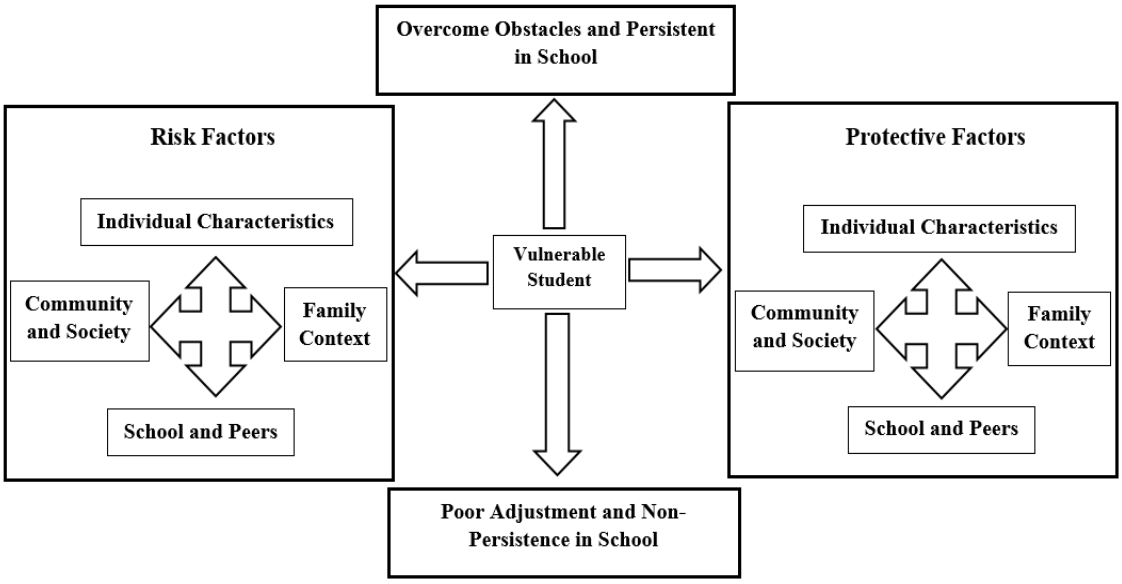
Theoretical Framework

This quantitative study sought to determine an effective mechanism for teaching literacy and math during the summer months. Identifying risk and protective factors related to academic success has been a major area of study, as understanding these factors should provide better rationale of student success. Better understanding of risk and protective factors allow educators to increase academic success of at-risk students and better meet their academic needs (Christiansen, Christiansen, & Howard, 1997). The risk and resilience framework is supported by research of various methodologies (Corcoran & Nichols Casebolt, 2004). Recently, researchers have applied the risk and resilience framework to intervention (Corcoran & Nichols-Casebolt, 2004). The main protective factor of student distress and school drop-out indicated by the students was a more sensitive and supportive relationship with both parents and teachers. On the contrary, parents and teachers indicated as possible causes of school distress and drop-out the intrinsic students' motivation or other external factors associated with the community (Pedditzi, Fadda, & Lucarelli, 2022)

To this point, however, the risk and resilience framework has not been utilized to better understand summer learning loss. More specifically, research has not yet clearly determined

factors that may increase or reduce the risk of summer learning loss in reading or math. This is a gap in the literature with regard to the framework.

Figure 1
Risk and resilience framework. Adapted from Murray (2003)



Particularly, middle school students who are struggling in literacy and math are affected by learning loss during the summer months. According to Fifer and Krueger (2006), several scholars attribute this pattern of summer learning loss to the faucet theory. During the school year, the faucet of learning is on for all students, while during the summer it remains only for more advantaged children who continue to participate in some form of educational activity. It is vital to understand the learning loss of struggling students during the summer months. Teachers are aware of the learning loss of students throughout the summer months because during the first months of school, teachers spend a great deal of time reviewing work from the year before (Fifer & Krueger, 2006). Disadvantaged students usually have greater summer loss than students with higher socioeconomic status. Fifer and Krueger reported, "One study found that literacy and math skills of middle-income students improved over the summer, while those of low-income students deteriorated, so that a three-month achievement gap emerged during the summer." More students with a low socioeconomic status have a greater summer learning loss; therefore, these students should have the opportunity to attend summer programs to decrease their summer learning loss. In addition, educators who teach students of low socioeconomic status should be given opportunities during the school year to attend summer learning loss workshops. The workshops should increase educators' knowledge on how to help struggling middle school students during the summer and throughout the regular school year.

Rutter (1987) conceptualized risk and resilience as opposite poles "of individual differences in people's response to stress and adversity." Risk encompasses the negative circumstances that an individual faces which are associated with poor outcomes. Resilience represents the positive counterpart of vulnerability and risk factors (Werner & Smith, 1982,

1992). Resilience is a complex construct that involves the interaction between adversity and an individual's internal and external protective factors – as well as developed competencies – that allow one to overcome adversity (Kaplan, 1999; Ungar, 2005).

Moreover, Rutter (2010) conceptualized resilience as relative resistance to environmental risk experiences and not just social competence or positive mental health. There is a universal finding of individual differences in people's responses to all kinds of environmental hazard and evidence of 'steeling' effects in which successful coping with adversities lead to improved functioning in individuals (Rutter, 2010).

The broaden-and-build theory by Fredrickson (2001) predicts that positive emotions are useful in coping. A recent study conducted by Tugade and Fredrickson (2004) further expanded this theory into the realm of coping, suggesting that positive emotions guide present coping behavior. By examining psychological resilience from subjective, cognitive, and physiological angles in the three studies conducted, Tugade and Fredrickson (2004) provide greater insight into the reasons why resilient individuals are able to effectively cope with stressful experiences, whereas others facing similar conditions do not fare as well. Thus, through exploration and experimentation, adolescents may be able to build an arsenal of effective coping resources that help buffer against negative emotional life experiences (Fredrickson, 2001).

In the Asian context, Chan (2000) conducted a study to examine the effect of resilience in reducing psychological distress through positive cognitive appraisals and adaptive coping on 245 Chinese secondary school students in Hong Kong. These students were between the ages of 13 – 18. Resilience, life events, coping strategies, and psychological distress were assessed. It was found that although students with high resiliency, compared to those with low resilience, did not consider positive events as having a greater impact. They perceived that negative events had a significantly lesser impact. In addition, low resilient students reported using passive and avoidant coping strategies significantly more frequently than high resilient students (Chan, 2000).

This quantitative study examines the impacts of the Summer Academy on students' math and language art achievement. Besides Summer Academy, other potential risk factors (e.g., free or reduced lunch status, English language learner status, special education eligibility) and protective factors (e.g., home literacy and math activities, enrichment programs) may be also related to summer learning loss. This is a gap in the literature with regard to the summer learning loss framework.

Educational Leadership and Management of Summer Programs

There are multiple studies that have documented summer learning loss among various populations (Alexander et al., 2007; Allington & McGill-Franzen, 2003) and school districts across the United States have implemented different types of programs to mitigate that loss with varying success (Keiler, 2011). More recent recommendations indicate a call to shift to robust programs that provide students with more than basic academic skill support through trips, experiences, hands-on projects, social-emotional support, and fun (Hanover Research, 2017; Mraz & Rasinski, 2007).

New research and recommendations regarding summer learning as a time for students to have experiences similar to middle-class students (Hanover Research, 2017; McCombs et al., 2011) are creating an impetus for district leaders to embrace new summer learning

opportunities. This grounded theory study explored the beliefs and actions of district-level administrators who develop and implement summer elementary experiential summer learning programs, as well as factors that influence the development, program expectations, and outcomes. Grounded theory designs allow researchers to generate a general explanation that explains a process, action, or interaction among people (Creswell, 2017). The framework for study was supported by educational and leadership theory research from Kotter (2012), and Schein (2010).

Making Summer Count: How Summer Programs Can Boost Children's Learning outlined additional components of quality summer learning programs (McCombs et al., 2011). These included smaller class sizes, differentiated instruction, high-quality instruction, aligned schoolyear and summer curricula, engaging and rigorous programming, maximized participation and attendance, sufficient duration, involved parents, and evaluations of effectiveness (McCombs et al., 2011). McEachin et al. (2016) identified a minimum of 70 hours of instruction as the appropriate duration and recommend that teachers hired should have recently taught the grade their summer students left or will be advancing to in the fall.

Augustine et al. (2013) provide detailed recommendations for developing and implanting summer learning programs. These recommendations cover collaborative planning, curriculum and pedagogy, staffing and professional development, best practices in enrichment, enrollment and attendance, recommended schedules, and suggestions for funding and managing costs (Augustine et al., 2013). They recommend planning for enrichment from the very start, stating that leaders had multiple goals and expectations in providing enrichment activities, including improving attendance over the summer, closing the opportunity gap, social-emotional development, and supporting academics through related art or hands-on activities (Augustine et al., 2013). Recent research around how a well-designed, research-based Hip Hop-integrated strategy may complement summer learning strategies and help improve mental health outcomes for low-income middle school youth. The study determined incorporating this into a complete summer program is a potential way to mitigate learning loss (Travis, Gann, Crooke, & Jenkins, 2019).

Purpose and Research Questions

The quantitative study sought to determine an effective mechanism for teaching reading and literacy as well as math during the summer months. The following were the guiding questions for the study. The questions led and directed the research and development of a framework of best practices for middle school literacy and math summer programs.

1. What is the impact of the Summer Academy on students' achievement?
    a. What is the impact of the Summer Academy on the participants' reading score?
    b. What is the impact of the Summer Academy on the participants' math score?
2. What is the academic growth between Summer Academy participants and non-participants?
    a. How do the reading growth scores between Summer Academy participants and non-participants compare?
    b. How do the math growth scores between Summer Academy participants and non-participants compare?

Methodology

Using student achievement data from Diversity Middle School in 2019-2020, this paper examines the effects of reading and writing instruction as well as math instruction on student achievement comparing students that receive instruction during the summer months to those that do not. To address the research questions, quantitative research is used. This section is outlined as follows: (a) research design and approach; (b) setting and sample; (c) instrumentation and materials; (d) data collection and analysis; and (e) the role of the researcher.

Research Design

This study can be considered as quasi-experimental. In this non-randomized controlled trial, participants are allocated to an intervention but the allocation is not randomized. This study can also be considered as a quantitative exploration program evaluation because the before and after comparison involves collecting data before and after a group of participants receive an intervention (Bowling, Ebrahim, 2005). Comparing paired data makes this a useful design; therefore, this study is a retrospective quantitative approach in which an established database with student information will be used as the main source of data. These data will include two sets of student cohort scores collected in the spring of 2019 and then in the fall of the same year to determine if the intervention in place was effective to close the achievement gap and prevent summer learning loss. Achievement data will be collected and analyzed from the spring of the 2018-2019 school year and the fall of the 2019-2020 school year.

Non-Equivalent (Pre-test and Post-test) Control-Group Design

Experimental (Treatment) Group A within the fifth and sixth grade cohorts and Control-Group (Non-Treatment) Group B the other students within the fifth and sixth grade cohorts are selected without random assignment. Both groups are pre-tested and post-tested.

All students were given the spring and fall reading assessment through the Northwest Evaluation Association (NWEA). This test provides the Lexile level for each child as well as the Rasch Unit (RIT) score, which indicates the level of each student's readiness to learn. The design of the study examines the reading and math growth of each student from the spring to the fall and scrutinizes what factors impact student achievement such as gender, race, language learner status, and socioeconomic status. This study has a quasi-experimental design whereas there is one group of students in each cohort that received the intervention and one group of students in each cohort that did not receive the intervention. The independent variable is the Summer Academy.

Group A: Spring NWEA --------Summer Academy--------Fall NWEA
Group B: Spring NWEA ----------Fall NWEA
Control group – one group with no intervention
Experimental group – one group with intervention

Setting and Sample

For the purposes of this study, reading and math achievement data will be used for analysis that was collected from two cohorts of students at the Diversity Middle School in Connecticut. The school is in DRG H in Connecticut. The school profile shows 703 total students with 61% of students receiving free or reduced lunch and the school qualifies for Title I funds.

This study has a quasi-experimental design in that there is one group of students in each cohort that received the intervention and one group of students in each cohort that did not receive the intervention. The group of students that received the intervention qualified for this as a result of their spring NWEA scores. If the student scored in the 25th percentile or lower based on the 2105 nationally normed data, the student was enrolled in the Summer Academy to receive the intervention. A percentile rank indicates how well a student performed in comparison to the students in the specific norm group, for example, in the same grade and subject. A student's percentile rank indicates that the student scored as well as, or better than, the percent of students in the norm group. The remainder of the cohort did not receive the intervention.

The participant scores will be from students who were students who exited fifth and sixth grade in the 2019-2020 school year. The fifth-grade cohort consisted of 245 students. Table 1 below has the student demographics of the students. The sixth-grade cohort consisted of 267 students.

Table 1

Student Demographics Fifth and Sixth Grade Cohorts

Demographics	Percentage 5th Grade Cohort	Percentage 6th Grade Cohort
Male	52.2	46.8
Female	47.8	53.1
Black	17	17
White	22	22
Hispanic	55	55
Asian	5	5
Other Races	2	2
Special Education	13.7	13.7
Free - Reduced Lunch	64.6	64.6
English Language Learners	16.9	16.9

Treatment

The mechanism in place is individual, small group, and whole group reading and writing instruction as well as daily student engagement in a STEM performance task. This program is the independent variable and is four hours, five days a week for five weeks and occurred during the summer of 2019. Students had reading and writing instruction as well as a STEM performance task activity in which they applied their learning to the real world through projects. There were also four field trips over the course of the five weeks.

The cohorts were divided into five homerooms and the program consisted of five teachers – two reading, two writing, and one teacher that teaches the daily STEM performance task. The schedule rotates with consistency in the amount of time on each component: forty-five minutes of reading instruction, forty-five minutes of writing instruction, forty-five minutes for work on a

STEM performance task, then an additional forty-five minutes for conferring, skill development, and independent reading. Students were then provided lunch and recess.

The expectations included emphasis on all types of literacy, science, technology, engineering, and math, which creates a transition experience for the next grade level, encouraging the sixth-grade cohort to serve as mentors to the fifth-grade cohort, and general collaboration. See the content and design of the program below. Within each homeroom, students with needs around English language acquisition had additional support.

There are also two periods of non-instructional time during the day that students in Summer Academy interact with students have been recommended for the Extended School Year (ESY) program as a result of their qualifications and needs within Special Education. ESY had 8 students that qualified in 2019, and the program provides the opportunity to students to maintain the progress made during the year. All students interact during designated times during both summer programs.

Daily Schedule for Summer Academy at Diversity Middle School

8:30 – 8.40	Staff Reports (preparation time for teachers)
8:40 - 8:55	Students arrive, breakfast is served, paraeducators supervise
9:00 - 12:27	Homeroom/SEL and Expectations Instruction - students rotate through 4 classes with aligned curriculum: Reading, Writing, STEM, Additional Literacy and Conferring
12:30 - 12:52	Lunch for Summer Academy and ESY students
12:30	Teachers dismissed, but remain for a 90-minute data team meeting once/week beginning on week 2 (12:30 pm - 2:00 pm or 7:30 am - 9:00 am), paraeducators remain with one certified staff member to facilitate lunch and engagement/recreation
12:55 - 1:15	Engagement/Recreation for Summer Academy and ESY
1:15	Dismissal
1:30	Paraeducators dismissed

Instrumentation

As an evaluation assessment Northwest Evaluation Association (NWEA) map test was utilized. The NWEA map test is a research based, norm-referenced test administered to students in a group setting in September and April of each school year. Students take the assessment on the computer, as it is an online, adaptive benchmark and progress monitoring assessment that efficiently measures oral reading fluency, literal comprehension, and foundational skills in math and reading. The reading and math tests are separate and include a combination of multiple choice and open-ended questions. The test is untimed, but the average student completes it in about 90 minutes. There is reliability and validity evidence that is pertinent in the context of accountability of this high stakes assessment. In these situations, the accuracy and consistency of classification decisions based on test scores becomes a form of validity evidence (Cronin, 2007). Reliability is a fundamental requirement of any assessment and is central to test design.

It can be defined as the consistency of achievement estimates obtained from the assessment (Cronin, 2007). Findings of a study to determine whether test administration method influence reliability demonstrated that there was not any significant difference in test scores between participants who took a computer-based test and those who took a paper-based test. The delivery mode did not have any impact on the reliability and validity of the tests administered (Öz & Özturan, 2018).

Data Collection and Analysis

The data is in an existing database within the Norwalk Public Schools District. After extracting data from the district office of both the fifth and sixth grade cohorts in the fall of 2020, the researcher looked to determine that summer reading and math gains occurred in both cohorts, and what factors impacted the scores. Because the Norwalk Public Schools District has many requests for research studies, it limits approval to collect data in the district to residents and staff. Approval was granted by the director of testing and accountability, so the process included a meeting to discuss the purpose of the study, research methods, and schedule. The request included a copy of the researcher's chapter one and IRB approval. All information was acceptable, and the district granted the necessary permission. Student names remain anonymous throughout the reporting process.

Particularly, paired sample t-tests are conducted in order to determine if there was a significant difference in the students' reading achievement scores and math achievement scores between the pre-test (Spring NWEA map test) and post-test (Fall NWEA map test) for those students that participated in Summer Academy. First, an analysis is conducted of the fifth and sixth grade cohorts that participated in Summer Academy using the reading scores. Then, the same analysis was completed to review the fifth and sixth grade cohorts that participated in Summer Academy using math scores.

Independent sample tests are conducted in order to compare growth on reading and math scores between the students that participated in the Summer Academy and non-participants. Reading and math achievement scores between the pre-test (Spring NWEA map test) and post-test (Fall NWEA map test) will show growth. First, an analysis is conducted of the fifth and sixth grade cohorts that did not participate in Summer Academy using the reading growth. Then, the same analysis is conducted comparing reading growth data of students that participated in Summer Academy and those that did not participate. Then, an analysis is conducted of the fifth and sixth grade cohorts that did not participate in Summer Academy using the math growth. Moreover, the same analysis is conducted comparing math growth data of students that participated in Summer Academy and those that did not participate.

Role of Researcher

As the building principal, the researcher had access to all students' data and facilitated the program. The district provides access to the pre and post-test reading scores as well as ongoing access to grades and progress during the summer. The district's curriculum and intervention program was communicated and the researcher had access as well as to the teachers. The

researcher was in the role one year during the time of the data collection and analysis. The past and current relationships with students and staff did not affect data collection.

Limitations

There is a chance the testing conditions will change from one year to the next, and as a result, there are some validity concerns. Teachers and settings change. There were no validity concerns based on the assessment used. The NWEA was used to measure growth or regression over the summer. This assessment is research-based, is nationally normed, and is used in all schools throughout the district. Conversely, there were limitations to this study. A limitation was the smaller sample size. Because of the transience of the population in the district, only data from students that were there both in the spring and in the fall could be analyzed. This number of students was not consistent. Finally, there are no ethical issues within this study. The students' names were removed from all data sets and replaced with identification numbers. All math and reading achievement data and personal student information will remain confidential.

Findings

This finding section presents the results of the data analysis and is organized based on the research questions. The two research questions each address reading growth and math growth separately. Particularly research questions analyze growth of summer academy participants using a paired sample t-test.

Research Question 1A: What is the impact of Summer Academy on the participants' reading score?

In order to examine whether Summer Academy participants demonstrated growth in reading, the researcher conducted a paired sample t-test. Before conducting the paired sample t-test, the normality assumptions were checked for pre and post-test scores. Two cases that were extreme outliers were removed based on inconsistent effort and other factors, so 57 Summer Academy participants were used in this study. The results showed that skewness was .15 and kurtosis was .67 based on the reading growth of the participants. Considering skewness and kurtosis together, the results meet the normality requirement and are in the acceptable range.

The test resulted in a significant difference between the participants pre-test reading score (M = 184.02, SD = 16.71) and post-test reading score (M = 192.81, SD = 12.94). The participants significantly demonstrated growth in reading after participating in Summer Academy, $t(57) = 6.37$, $p < .05$. The Cohen's d has a value of .84, which is a large effect size. Post-test results are significantly higher than the pre-test results indicating the impact of the Summer Academy on those students that participated.

Table 1

T-test Statistics Comparing Student Growth in Reading for Summer Academy Participants

	n	Mean	SD	SE
Pretest Reading Score	56	184.02	16.71	2.22

Post-Test Reading Score	56	192.81	12.94	1.70

Table 2

Paired Sample T-test Results Comparing Student Growth in Reading for Summer Academy Participants

	Mean	SD	SE	t	df	Sig.
Pretest Reading Score - Post-Test Reading Score	8.79	10.52	1.38	6.37	57	.00

Cohen's d=0.84

Research Question 1B: What is the impact of Summer Academy on the participants' math score?

In order to examine whether Summer Academy participants demonstrated growth in math, the researcher conducted a paired sample t-test. Before conducting the paired sample t-test, the normality assumptions were checked for Pre and Post-test scores. The results showed that skewness was .07 and kurtosis was .72 based on the math growth of the participants. Considering skewness and kurtosis together, the results are close to meeting the normality requirement just outside the acceptable range.

The test resulted in a significant difference between the participants pre-test math score (M = 200.86, SD = 11.47) and post-test math score (M = 194.38, SD = 15.68).

Table 3

T-test Statistics Comparing Student Growth in Math for Summer Academy Participants

	n	Mean	SD	SE
Pre-Test Math Score	56	200.86	11.47	1.51
Post-Test Math Score	56	194.38	15.68	2.06

The participants significantly regressed in math even though they participated in Summer Academy, $t(57) = 5.00$, $p < .05$. The Cohen's d has a value of .65, which is medium. There is a medium impact regarding math growth for participants in Summer Academy.

Table 4

Paired Sample T-test Results Comparing Student Growth in Math for Summer Academy Participants

	Mean	SD	SE	t	df	Sig.
Pre-Test Math Score - Post-Test Math Score	-6.48	9.95	1.31	5.00	57	.00

Cohen's d=0.65

Research Question 2A: How do the reading growth scores between Summer Academy participants and non-participants compare?

In order to examine whether Summer Academy non-participants demonstrated growth in reading, the researcher conducted a paired sample t-test. Before conducting the paired sample

t-test, the normality assumptions were checked for pre and post-test scores. The results showed that skewness was .44 on the pre-test and .36 on the post-test. The value of kurtosis was 1.08 on the pre-test and .97 on the post-test. Considering skewness and kurtosis together the results meet the normality assumption.

The test resulted in a significant difference between the non-participants pre-test reading score (*M* = 212.67*, SD* = 12.80) and post-test reading score (*M* = 216.47*, SD* = 13.47).

Table 5

T-test Statistics Comparing Student Growth in Reading for Summer Academy Non-Participants

	n	Mean	SD	SE
Pre-Test Reading Score	357	212.67	12.80	0.68
Post-Test Reading Score	357	216.47	13.47	0.71

The non-participants did not demonstrate as much growth in reading between the pre and post-test as those students that participated in Summer Academy, $t(358) = 9.57$, $p < .05$. The Cohen's was 0.50 and although students maintained literacy skills through independent reading and other experiences, students did not show the same growth as those that participated.

Table 6

Paired Sample T-test Results Comparing Student Growth in Reading for Summer Academy Non-Participants

	Mean	SD	SE	t	df	Sig.
Pre-Test Reading Score - Post-Test Reading Score	3.80	7.53	0.40	9.57	358	.00

Cohen's d=0.50

When comparing the growth of the Summer Academy participants with the Summer Academy non-participants, the effect size of the participants is large whereas the non-participants is medium. The mean growth is more than double in the participant group. More work still needs to be done as the mean score in this group is still below grade level.

Table 7

Independent Sample T-test Comparing Student Growth in Reading for Summer Academy Participants and Non-Participants

	Levene's Test for Equality of Variances		t-test for Equality of Means						
					Sig.	MD	Std. Error	95% Confidence Interval of the Difference	
	F	Sig.	*t*	*df*	*p*	Difference		Lower	Upper
Eq. Var.	7.127	.008	-3.558	411	.00	-3.96	1.11	-6.15	-1.77
Not Eq. Var.			-3.041	66.65	.00	-3.96	1.30	-6.56	-1.36

Research Question 2B: How do the math growth scores between Summer Academy participants and non-participants compare?

In order to examine whether Summer Academy non-participants demonstrated growth in math, the researcher conducted a paired sample t-test. Before conducting the paired sample t-test, the normality assumptions were checked for pre and post-test scores. The results showed that skewness was .01 on the pre-test and .02 on the post-test. The value of kurtosis was .12 on the pre-test and .24 on the post-test. Considering skewness and kurtosis together, the results meet the normality assumption.

The test resulted in a significant difference between the non-participants pre-test math score (M = 220.45, SD = 14.52) and post-test math score (M = 217.14, SD = 18.12).

Table 8

T-test Statistics Comparing Student Growth in Math for Summer Academy Non-Participants

	n	Mean	SD	SE
Pre-Test Math Score	357	220.45	14.52	0.77
Post-Test Math Score	357	217.14	18.12	0.96

The non-participants significantly regressed in math between the pre and post-test, $t(358) = 4.86$, $p < .05$. The Cohen's d was .26. There is little to no impact regarding math growth for non-participants in Summer Academy.

Table 9

Paired Sample T-test Results Comparing Student Growth in Math for Summer Academy Non-Participants

	Mean	SD	SE	t	df	Sig.
Pre-Test Math Score - Post-Test Math Score	-3.32	12.95	0.68	4.86	358	.00

Cohen's d=0.26

Table 10

Independent Sample T-test Comparing Student Growth in Math for Summer Academy Participants and Non-Participants

	Levene's Test for Equality of Variances		t-test for Equality of Means						
					Sig.	MD	Std. Error	95% Confidence Interval of the Difference	
	F	Sig.	*t*	*df*	*p*	Difference		Lower	Upper
Eq. Var.	10.93	.00	3.24	411	.00	3.34	1.03	1.31	5.36
Not Eq. Var.			2.46	63.18	.02	3.34	1.36	.62	6.05

When comparing the regression of the Summer Academy participants with the Summer

Academy non-participants, unfortunately the effect size of the participants is medium whereas the non-participants is small. The mean regression is almost double in the participant group.

The findings of this research indicate that the students that participated in Summer Academy grew in reading almost double compared to those students that did not participate in Summer Academy. Students that participate in Summer Academy score in the bottom 25%. According the nationally normed data. The growth of these students is the most important as they are well below grade level. Summer Academy is designed to remediate reading and writing skills over the course of 5 weeks. Although this is positive, the mean score on the post-test is still below grade level standard and nearly 22 points below the non-participants, which is example that the achievement gap exists. More work needs to be done throughout the year and summer to close this gap.

The findings of this research also indicate that the students that participated in Summer Academy regressed in math almost double compared to those students that did not participate in Summer Academy. Students that participate in Summer Academy score in the bottom 25%. According the nationally normed data. The growth of these students is the most important as they are well below grade level. Summer Academy is designed to remediate important skills over the course of 5 weeks. The scores are disheartening, as the mean score on the post-test is still below grade level for all students and the achievement gap is widening. More work needs to be done to enhance the math component of Summer Academy as well as the math requirement of all students during the summer months. Summer Academy does not have a math component, so the participants, which are students with the highest needs, regressed more than the non-participants because of no math instruction during the summer months. This demonstrates a need for a math component of summer academy as well as a more impactful summer math assignment for all students. The implications for policy and practice will be discussed in the next chapter.

Discussion

Research Question 1: What is the impact of the Summer Academy on students' achievement?

Students were recommended for Summer Academy based on their reading scores from the NWEA map test, and the focus of the program was around literacy; therefore, alternative hypothesis 1a is supported. The NWEA map test is a research based, norm-referenced test administered to students in a group setting in September and April of each school year. Students take the assessment on the computer; it is an online, adaptive benchmark and progress monitoring assessment that efficiently measures oral reading fluency, literal comprehension, and foundational skills in math and reading. The reading and math tests are separate and include a combination of multiple choice and open-ended questions. The test is untimed, but the average student completes it in about 90 minutes.

The focus of Summer Academy was reading and literacy as seen in the curriculum as well as lesson design and resources. The curriculum and daily instruction focused primarily on reading and literacy. The schedule included reading as a whole group, reading in smaller groups, independent reading, writing, and science-bases performance tasks. Because of 80% of the students throughout Summer Academy specifically working on reading and general literacy,

comparing the average pre-test reading score with the average post-test reading score of all participants shows a growth of over eight points.

The study from Roman and Fiore (2010) shows students who participate in a summer reading program score higher on the reading achievement test at the beginning of specific grade levels and do not experience summer reading loss. Roman and Fiore's study supported the findings of previous research studies in the following ways: students who participated in the summer reading program maintained and increased their reading skills, recreational reading outside of school made a difference in improving reading scores, and libraries being accessible to all students is essential regardless of economic status (Roman & Fiore, 2010). This is an area of improvement as noted in recommendations.

Students were recommended for Summer Academy based on their reading scores as opposed to math and the focus of the program was around literacy; therefore, the alternative hypothesis 1b is accepted. Students were not recommended for Summer Academy based on their math scores and there was no math instruction during that time. As a result, Summer Academy participants regressed in math between their pre-test in math and their post-test in math. These are the students with the greatest need. The program was effective with regard to increasing literacy skills for participants, but not math. This is an area in need of improvement as noted in the recommendations.

In a different study regarding math summer learning loss, Slates, Alexander, Entwisle, and Olson (2012) found that learning loss was more pronounced in the area of math than any other content area or topic. Moore (2010) explained that struggling math students typically participate in fewer activities at home during the summer months and therefore experience more of a loss than other students experience.

Research Question 2: What is the academic growth between Summer Academy participants and non-participants?

Summer Academy participants grew more than non-participants in reading based on a comparison between individual pre-test and post-test scores, which supports alternative hypothesis 1a. The non-participants did not grow enough to close the achievement gap; however, students that participated scored well below grade level on the post-test even after Summer Academy. Participants were selected for Summer Academy because of their scores in reading and all were well-below grade level.

Non-participants' pre-test reading scores and their post-test reading scores were higher than those of participants. These results are consistent with the research. The National Assessment of Educational Progress (NAEP) results indicate that recent efforts to increase the percentage of students scoring above the basic level have not resulted in large improvements (National Center for Education Statistics, 2014).

Prior research indicates that reading comprehension proficiency arises through an interaction between exposure to text (Pucell-Gates, Jacobsen, & Degener, 2004), self-efficacy beliefs about reading competence (Bandura, 1977), motivation to read voluntarily (Wigfield Eccles, & Rodriquez, 1997), and reading practice (Heyns, 1978). These studies demonstrate that students that show these characteristics before the assessment would be more likely to achieve

higher than those students that did not. Increased access to books such as the school or public library would provide that opportunity which is addressed in the recommendations.

Both participants and non-participants regressed in math from their pre-test to their post-test, which supports the alternative hypothesis 2b. Non-participants had a higher pre-test and post-test math score. Because of their proficiency level and access to enrichment over the summer, they were able to maintain more skills than their peers that participated in Summer Academy. Again, the participants were scoring below grade level in reading, which affects their ability to be successful in some components of math such as word problems.

There was no math instruction during Summer Academy. There was an opportunity, but the instructional time was focused on science and students engaging in performance tasks. Linder (2010) emphasized this as a necessary strategy for students who struggle with mathematics and explained that completing an alignment process between the textbook and the math standards helped teachers focus more on the individual student, design specific strategies for connecting students to a lesson, and help them experience success in each lesson. This did not occur and is addressed in the recommendations.

One previous study from the NAEP showed little improvement between 2007 and 2013 in the percentage of students scoring at the proficient level or above (National Center for Education Statistics, 2014) in math. Although school districts have provided extra math instruction during the regular school day, through tutoring after school, and through summer school programs, math achievement still has not increased (Krawec, et. al, 2013). The necessity of direct math instruction is evident.

General Implications for School Leaders

The need for summer school programs is clearly defined in the research, which indicates that students experience approximately one month's worth of academic loss in math and literacy during the three months of summer vacation (Cooper, 2003). However, specific strategies are suggested to not only mitigate this summer loss but to also show academic gains. These strategies include small class sizes, individualized instruction, cooperative learning, rewards, and standards-based report cards (Jesson et al., 2014). Because of the shorter time frame available during a summer program, the following should occur at minimum: complex topics should be taught early in the program, assignments should be shortened to an appropriate length, and a minimum of 30 hours of instruction should be delivered over the course of the summer program in order for students to experience an increase in literacy and math achievement (Zvoch & Stevens, 2013).

The importance of this research is that for the first time, it emphasizes the effect school leaders have in designing research-based summer programs that are aligned to the regular school year (McCombs, 2011). School leadership development is integral to the success of summer programs especially with regard to the impact programs have on economically disadvantaged students. The research has been clear on the elements to close the achievement gap, but what is missing is the mechanism that needs to be in place and how the educational leaders need to impact all aspects of it. This includes instructional strategies, time, location, and attendance expectations for students.

Studies that analyze educational leaders of summer programs in other geographic locations are crucial to support the general improvement. Using the same survey across different

geographical regions and school sizes may help to make clear what hinders or supports schools in creating comprehensive summer learning environments. The inclusion of those principals' voices would also help to clarify what obstacles stand in the way of principals, creating more opportunities in this environment.

Educational leaders also must create a three-year strategic plan that will outline goals, identify expected outcomes, and name potential funders. With this data accumulated from a first year summer program, educational leaders need to consider the successful areas and how they can act as a foundation for school change. These are all areas to be considered as when planning programming during the following schoolyear.

Parents and community partnerships are assets that can support and grow sustainable summer programs. Educational leaders must create a plan to identify community assets, build relationships with these extended community stakeholders, and implement a plan of action to benefit the summer program with community resources. These assets decrease programming costs, assist personnel, and garner additional funding from outside resources (McCombs, 2011). Parents and community partners want meaningful relationships with schools. Educational leaders can develop them by creating a community engagement plan that identifies measurable goals and assets, timelines, and ways to sustain relationships. Planning for sustainability remains difficult because so many current factors need attention, thereby interfering with considering future needs (McCombs, 2011).

Without effective leadership, the chances for systemic improvement in teaching and learning are futile (Tirozzi, 2001). Given the findings from numerous studies that have found positive relationships between principals' practices and various school outcomes, policymakers and educational experts are increasingly turning to educational leadership development as a strategy for improving schools and student achievement (Orr & Orphanos, 2011).

Implications for Social Justice and Equity

The problem with math and literacy achievement is both a national and a local problem. The longitudinal results from the NAEP showed that there has been little if any progress with math achievement at the fourth and eighth grade levels (National Center for Education Statistics, 2014). If a summer math or literacy program could be designed to effectively address the problem of achievement at the local level, it would have a great impact for positive social change within the local district. Diversity Middle School needs to move in this direction by incorporating a math curriculum into Summer Academy that aligns with the curriculum used during the regular school year, as well as making the literacy curriculum more robust. The school can make adjustments that will lead to social change by identifying aspects of the program that can be modified to increase its effectiveness. As the school district improves its math and literacy instructional programs, students will be better prepared for high school and beyond. Proficiency in math and literacy will benefit students whether they enroll in a college or university or enter the workforce. An effective summer school program has the potential to generate a great deal of social change for the students involved and for the local community.

How moral principles are related to social justice is apparent in Glickman and others' (2009) example of how inclusion combines the beliefs in equality and equity. Summer programming provides opportunity for learning to continue for all students. As identified,

students that receive special education services or have ELL status need more support than those students that do not. All students are of equal worth as human beings and as members of the school community. A belief in that moral principle maintains a commitment to equity by providing special assistance to those with specific needs to enable them to remain members of the community and lead fulfilling lives as students and later as adults. Glickman et al. added that a good school actually reaches out to all categories of students. This is how an effective summer program can not only close the achievement gap for its students with the highest needs, but also create systemic change as those students achieve and have a more successful future.

References

Augustine, C. H., McCombs, J. S., Schwartz, H. L., & Zakaras, L. (2013). Getting to work on summer learning: Recommended practices for success(Rep.). Santa Monica, CA: RAND Corporation.

Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. American Sociological Review,72(2), 167-180. doi:10.1177/000312240707200202

Allington, R. L., & McGill-Franzen, A. (2003, November). Use students' summer setback months to raise minority achievement. *Education Digest*,69(3), 19-24.

Allington, R. L., McGill-Franzen, A., Camilli, G., Williams, L., Graff, J., Zeig, J., Zmach, C., & Nowak, R. (2010). Addressing summer reading setback among economically disadvantaged elementary students. Reading Psychology ,31(5), 411-427. doi:10.1080/02702711.2010.505165

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bowling A., Ebrahim S. (2005) Handbook of health research methods: Investigation, Measurement and Analysis. Open University Press Maidenhead.

Chan, D.W. (2000). Dimensionality of hardiness and its role in the stress-distress relationships among Chinese adolescents in Hong Kong. Journal of Youth and adolescence, 29(2), 147-161.

Christiansen, J., Christiansen, J. L., & Howard, M. (1997). Using protective factors to enhance resilience and school success for at-risk students. *Intervention in School and Clinic*, *33*(2), 86-89.

Cooper, H. (2003). Summer learning loss: The problem and some solutions. *ERIC Clearinghouse on Elementary and Early Childhood Education*. Retrieved from: http://www.ericdigests.org/2003-5/summer.htm

Corcoran, J., & Nichols-Casebolt, A. (2004). Risk and resilience ecological framework for assessment and goal formulation. *Child and adolescent social work journal*, *21*(3), 211-235.

Creswell, J. W. (2017). Educational research: planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Boston: Pearson.

Cronin, J., Dahlin, M., Adkins, D. & Kingsbury, G. G. (2007). The proficiency illusion. Portland,OR: Northwest Evaluation Association.

Fifer, M. E., & Krueger, A. B. (2006). The Hamilton Project: Advancing opportunity, prosperity and growth. *PolicyBrief*, 3, 1-8.

Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. American Psychologist, 56(3), 218-226.

Glickman, C.D., Gordon, S.P. and Ross-Gordon, J.M. (2009), *The Basic Guide to Supervision and Instructional Leadership***,** 2nd ed., Pearson Education-Allyn & Bacon, Boston, MA.

Hanover Research (2017). Best practices for comprehensive summer school programs. (pp. 1-31, Rep.). Arlington, VA: Hanover Research.

Heyns, B. (1978). *Summer learning and the effects of schooling*. New York: Academic Press.

Keiler, L. S. (2011). An effective urban summer school: Students' perspectives on their success. Urban Review, 43(3), 358–378. https://doi.org/10.1007/s11256-010-0154

Kotter, J. P. (2012). Leading change. Boston, MA: Harvard Business Review Press.

Krawec, J., Huang, J., Montague, M., Kressler, B., & de Alba, A. M. (2013). The effects of cognitive strategy instruction on knowledge of math problem-solving processes of middle school students with learning disabilities. Learning Disability Quarterly, 36(2), 80-92. doi:10.1177/0731948712463368

Jesson, R., McNaughton, S., & Kolose, T. (2014). Investigating the summer learning effect in low SES schools. Australian Journal of Language and Literacy, 37(1), 45. Retrieved from http://www.alea.edu.au/publications

Kuhfeld, M. (2019). Surprising new evidence on summer learning loss. Phi Delta Kappan, 101(1), 25–29. https://doi.org/10.1177/0031721719871560

McCombs, J. S., Augustine, C. H., Schwartz, H. L., Bodilly, S. J., McInnis, B., Lichter, D. S., &
Cross, A. B. (2011). Making summer count: How summer programs can boost children's learning. Santa Monica, CA: Rand Corporation.

McEachin, A., Augustine, C., & McCombs, J. (2016). Best practices in summer programming. In Alexander, K. L., Pitcock, S., & Boulay, M. (Eds.) The summer slide: what we know and can do about summer learning loss (pp. 193-207). New York: Teachers College Press.

Moore, C. (2010). The effects of summer vacation on mathematical knowledge of rural students transitioning from third to fourth grade. Journal for the Liberal Arts and Sciences, 14(2), 58. Retrieved from http:// http://www.oak.edu/academics/schoolarts-sciences-jlas.php

Mraz, M.,& Rasinski, T. (2007). Issues and trends in literacy, summer reading loss. *The Reading Teacher*,60(8), 784-789.

Murray, C. (2003). Risk Factors, Protective Factors, Vulnerability, and Resilience: A Framework for Understanding and Supporting the Adult Transitions of Youth with High-Incidence Disabilities. *Remedial and Special Education*, *24*(1), 16–26. https://doi.org/10.1177/074193250302400102

National Center for Education Statistics (2014). The Nation's report card: 2013 Mathematics and Reading Grade 12 Assessments. National Center for Education Statistics. Retrieved from https://nces.ed.gov

Orr, M. T., & Orphanos, S. (2011). How graduate-level preparation influences the effectiveness of school leaders: A comparison of the outcomes of exemplary and conventional leadership preparation programs for principals. *Educational Administration Quarterly*, *47*(1), 18-70.

Öz, H. & Özturan, T. (2018). Computer-based and paper-based testing: Does the test administration mode influence the reliability and validity of achievement tests?. Journal of Language and Linguistic Studies, JLLS Mart 2018 Sayısı, 67-85. Retrieved from https://dergipark.org.tr/en/pub/jlls/issue/43213/527697

Pedditzi, M. L., Fadda, R., & Lucarelli, L. (2022). Risk and Protective Factors Associated with Student Distress and School Dropout: A Comparison between the Perspectives of Preadolescents, Parents, and Teachers. *International Journal of Environmental Research and Public Health*, *19*(19), 12589. https://doi.org/10.3390/ijerph191912589

Purcell-Gates, V., Jacobson, E., & Degener, S. (2004). Print Literacy Development: Uniting Cognitive and Social Practice Theories. Cambridge, MA: Harvard University Press.

Roman, S., & Fiore, C. D. (2010). Do public library summer reading programs close the achievement gap? The Journal of the Association for Library Service to Children, 8(3), 27-3.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry, 57(3), 316- 331.

Schien, E. H. (2010). Organizational culture and leadership (4th ed.). San Francisco: JosseyBass.

Slates, S. L., Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2012). Counteracting summer slide: Social capital resources within socioeconomically disadvantaged families. Journal of Education for Students Placed at Risk, 17(3), 165-185. doi:10.1080/10824669.2012.688171

Smith, L. (2012). Slowing the summer slide. *Educational Leadership*, *69*(4), 60-63.

Tirozzi, G. N. (2001). The artistry of leadership: The evolving role of the secondary school principal. *Phi Delta Kappan*, *82*(6), 434-439.

Travis, Raphael, Jr., Gann, Elliot, Crooke, Alexander H.D., & Jenkins, Susan M. (2019) Hip Hop, empowerment, and therapeutic beat-making: Potential solutions for summer learning loss, depression, and anxiety in youth, Journal of Human Behavior in the Social Environment, 29:6, 744-765, DOI: 10.1080/10911359.2019.1607646

Ungar, M. (Ed.). (2005). Handbook for working with children and youth

Wigfield, A., Eccles, J. S., & Rodriquez, D. (1998). The development of children's motivation in school contexts. *Review of Research in Education*, 23, 73-118.

Zvoch, K., & Stevens, J. J. (2011). Summer school and summer learning: An examination of the short-and longer term changes in student literacy. Early Education & Development, 22(4), 649-675. doi:10.1080/10409289.2010.489891

Relationships Between Dual Enrollment Parameters and Community College Success in Tennessee

Victoria N. Mellons
TBR – The College System of Tennessee

Jill Channing
East Tennessee State University

Kwangman Ko
East Tennessee State University

James Lampley
East Tennessee State University

Amy Moreland
TBR – The College System of Tennessee

The purpose of this non-experimental quantitative study was to evaluate the relationships between completion of high school dual enrollment courses and subsequent success of first-time, full-time community college students as measured by completion of an associate degree and time to completion of the degree. In addition to comparing dual and non-dual enrollment student performance, the effects of the number of dual enrollment courses completed and the subject areas of those courses were evaluated. Student subgroups reviewed included gender, race, socioeconomic status, and prior academic preparation (ACT score). Archival data from Tennessee community colleges used in this study included 62,644 students across four years (2015-2018) comprising 11,949 dual enrollment students and 50,695 non-dual enrollment students. Six research questions were answered from these data utilizing independent samples t tests, two-way contingency tables using crosstabs, Pearson correlations, logistic regression, or descriptive statistics. Findings revealed that completing just one dual enrollment course significantly increased the probability of completing an associate degree, and this finding was consistent across all subgroups studied. In addition, dual enrollment students completed associate degrees in significantly less time. Completing more dual enrollment courses tended to further increase the probability of completing a degree and further reduce the time to completion.

Keywords: dual enrollment, community college success, degree completion

In the wake of the *Every Student Succeeds Act*, more emphasis has been placed on ensuring that America's workforce receives some level of education beyond high school (Darling-Hammond et al., 2016). In response, states such as Tennessee have established aggressive college completion goals, and thus college readiness continues to garner considerable attention (Meehan & Kent, 2020). Dual enrollment is an area of educational policy that has gained momentum to address college readiness as it can help students prepare for college in both academic and non-academic areas (Community College Research Center, 2012).

Students who have participated in dual enrollment and learned skills to manage the rigorous college work transition those skills to their courses in college (Fuline, 2018). As a result, dual enrollment students have demonstrated improved performance in numerous high school and college success measures. From higher grade-point averages (GPA) and graduation rates in high school (Karp et al., 2007) to a greater likelihood of enrolling, graduating, and graduating on time in college (Giani et al., 2014), dual enrollment appears to be a program with wide-reaching impact. Added to the improvement gained by simply participating in dual enrollment, research indicates that the number and types of dual enrollment courses students take are linked to college success (Giani et al., 2014). Students who accrue more dual enrollment credits demonstrate higher degrees of college success, as do students who take high-rigor core academic courses through dual enrollment. In addition, the effects of dual enrollment are often stronger for traditionally underrepresented or underserved populations (Henneberger et al., 2022). With the long list of benefits and associated improvements in college outcomes, dual enrollment continues to expand and has been labeled as the "fastest growing movement in higher education in the 21st century" (Jones, 2014, p. 24).

Statement of the Problem

Tennessee, as with several other states, has continually increased its investment in the efficacy of dual enrollment programs. In 2005, Tennessee adopted statewide dual enrollment policies to guide local school districts and higher education institutions in implementing and running dual enrollment programs (Mokher & McLendon, 2009). That same year the Dual Enrollment Grant was established. In the 17 years since, the grant has provided over $200 million to more than 300,000 students to help pay for dual enrollment courses (Tennessee Higher Education Commission, n.d.).

In addition to providing most of the funding that students need to pay for dual enrollment courses, the state has also implemented legislation that pushes for the expansion of dual enrollment at both the community college and high school levels. In 2010, the *Complete College Tennessee Act* restructured funding for public institutions of higher education, and community colleges' funding is now partially based on the number of students dually enrolled each semester (Finney et al., 2017). This has encouraged the colleges to broaden their dual enrollment efforts. On the high school side of the aisle, legislation stemming from the *Every Student Succeeds Act* now measures Tennessee high schools by the number of early postsecondary opportunities (EPSO) each student completes by the time they graduate (Tennessee Department of Education, 2018). Dual enrollment falls into the pool of EPSOs, and according to an executive from the Tennessee Higher Education Commission, it is the most impactful of all the EPSOs (Hanemann, 2021).

Because of Tennessee's increasing investment in dual enrollment and the priority to expand the program, more and more students in Tennessee are taking dual enrollment courses. In the past decade (2012-2021), community colleges in Tennessee have seen a 51% increase in dual enrollment while experiencing an 18% decline in overall enrollment (Tennessee Board of Regents, n.d.). Tennessee's focus on dual enrollment is predicated on the underlying assumption that by starting college early, the students will be more likely to earn a college credential and earn it in a shorter timeframe, thus boosting the overall economy in the State.

The purpose of this non-experimental quantitative study was to evaluate the relationships between completion of high school dual enrollment courses and subsequent success of first-time, full-time community college students in Tennessee as measured by completion of an associate degree and the time it took to complete the associate degree. The guiding questions for this research were the following:

1. When comparing dual enrollment and non-dual enrollment students, is there a significant difference in college completion rates and time to completion?
2. For dual enrollment students, is the number of dual enrollment courses completed in high school significantly related to college completion and time to completion?
3. For dual enrollment students, is there a significant difference in college completion rates based on the dual enrollment subjects completed in high school?

Definition of Dual Enrollment

Dual enrollment is a program that allows high school students to take college courses and earn college credit while still in high school (Bailey & Karp, 2003). These courses can be taught at the high school, on the college campus, or online and may be academic, career-technical, or student success focused (Cassidy et al., 2011; Edwards et al., 2011). Students earn postsecondary credit for the coursework by passing the course. The students may or may not earn high school credit simultaneously (Cassidy et al., 2011).

Literature Review

Although originally designed as a strategy to increase course rigor and accelerate the progress of advanced high school students (Kim et al., 2006), dual enrollment has morphed into a credit-based transition program that is no longer just for high-achieving college-bound youth (Bailey & Karp, 2003). Today's dual enrollment programs are used as a strategy to improve college access and success for middle- to low-performing students as well as students from populations traditionally underrepresented in postsecondary education (Bailey & Karp, 2003; Struhl & Vargas, 2012). By participating in college-level classes, high school students gain an understanding of the financial, academic, psychological, and social demands of college (Bailey & Karp, 2003). Exposure to the increased rigor of college courses better prepares students academically and provides them with more realistic information about the skills they will need to succeed in college.

Dual Enrollment Participation and College Success

When comparing students who participated in dual enrollment courses to those who did not, dual enrollment students tend to outperform their non-dual enrollment peers. Research indicates that dual enrollment students perform better in multiple college-success metrics including college enrollment, persistence, completion, and time to completion. This holds true even when considering the potential for self-selection bias regarding dual enrollment students.

College Enrollment and Persistence

In a longitudinal study of more than three million students over 11 years in Texas, Villarreal (2018) detected that participation in at least one dual enrollment course increased application, admission, and enrollment at four-year colleges. Studies that tracked students through six years of postsecondary education in Colorado and Texas revealed that dual enrollment students were 1.25 to 2.21 times more likely to attend any college than their non-dual enrollment peers (Morgan et al., 2018; Struhl & Vargas, 2012). Dual enrollment students in Maryland and Illinois attended community college at rates of 22 to 28 percentage points higher than non-dual enrollment students (Henneberger et al., 2022; Taylor, 2015).

In addition to attending college at higher rates, dual enrollment students are also retained at higher rates. In one Tennessee community college, students who had participated in dual enrollment stayed at college until their second year at a rate of 76% compared to only 49% of non-dual enrollment students (Hunter & Wilson, 2019). Similar results were detected in Colorado and Texas, where dual enrollment students were 1.16 to 2.0 times more likely to return for their second year (Morgan et al., 2018; Struhl & Vargas, 2012). In contrast, Jones (2014) discovered that dual enrollment had a significant, positive relationship to persistence at the university level but not at the community college level.

College Completion

Research in the area of college completion is very consistent, indicating that dual enrollment students are more likely to complete a college degree than their non-dual enrollment peers. Researchers in Illinois, North Carolina, and Maryland documented that dual enrollment students were 7 to 15 percentage points more likely to attain any postsecondary credential and seven to eight percentage points more likely to attain a bachelor's degree (Blankenberger et al., 2017; Ganzert, 2014; Henneberger et al., 2022; Taylor, 2015). At the national level, An (2013a) found that students who completed at least one dual enrollment course were nine percentage points more likely to attain a bachelor's degree, and Hughes (2016) observed that dual enrollment students were 2.07 times more likely to earn a bachelor's degree.

In contrast to the abundance of research indicating a positive correlation between dual enrollment and subsequent college success, Speroni (2011) tracked two cohorts of students through college for six years in Florida and detected no significant difference between dual and non-dual enrollment students in the areas of college enrollment or degree completion. A smaller study at one community college in Mississippi yielded similar results when Lawrence (2017) discovered that dual enrollment participation did not significantly increase the likelihood of

attaining an associate degree.

Time to College Completion

Although most research concerning dual enrollment participation addresses college completion, researchers have shown that students who took dual enrollment classes in high school were more likely to graduate within benchmark timeframes than their non-dual enrollment peers. At one community college in Tennessee, dual enrollment students were 25% more likely to graduate within two years of enrollment and 28% more likely to graduate within three years (Grubb et al., 2017). This is consistent with statewide studies in Texas and Mississippi where researchers found dual enrollment students were 1.83 to 2.51 times more likely to graduate with an associate degree within three years than their non-dual enrollment peers (Oakley, 2015; Struhl & Vargas, 2012). Similar results emerged in Colorado, where students who participated in dual enrollment were 1.26 times more likely to graduate with any degree within six years (Morgan et al., 2018), and in Texas, where dual enrollment students were 1.46 times more likely to complete a four-year degree in six years (Struhl & Vargas, 2012).

Results from a study by the Southern Regional Education Board (SREB) that tracked time to degree completion among its 16 member states indicated that dual enrollment students were earning associate degrees in an average of 2.9 years versus 4.6 years for their non-dual enrollment peers (Marks & Lord, 2011). Likewise, dual enrollment students were earning their four-year degrees in an average of 4.6 years versus 5.0 years for the non-dual enrollment students. Similarly, in a national-level study, Hughes (2016) showed that participation in dual enrollment reduced students' time to bachelor's degree by an average of two months.

Self-Selection Bias

One concern surrounding dual enrollment research is the issue of self-selection bias. Some people believe that students who choose to take dual enrollment classes while in high school tend to be students who perform well academically and would be successful regardless of dual enrollment participation. Therefore, it is logical to think that the evaluation of dual versus non-dual enrollment students presents a self-selection bias that may confound the results.

The potential for self-selection bias has been addressed in several quantitative studies using propensity score matching (PSM) to "equalize observed characteristics between treatment and control groups removing observed bias from the comparison" (Grubb et al., 2017, p. 86). After using this technique to match student characteristics in the dual enrollment and non-dual enrollment groups, researchers found that students who participate in dual enrollment are more likely to succeed in college despite any preexisting tendencies to do so (An, 2013a; Blankenbarger et al., 2017; Giani et al., 2014; Grubb et al., 2017; Henneberger et al., 2022; Hughes, 2016; Struhl & Vargas, 2012; Taylor, 2015). In addition to these quantitative studies, Ozmun (2013) conducted a series of interviews with dual enrollment students and noted that high college and academic self-efficacy were not factors in students' decisions to participate in dual enrollment.

Number of Dual Enrollment Courses and College Success

As students complete additional dual enrollment courses, the benefits continue to accrue (Giani et al., 2014). Although fewer studies have examined the relationship between the number of dual enrollment courses a student completes and subsequent college success, researchers have shown a positive relationship at various levels of study. An eight-year longitudinal study of 4,600 students at a midwestern university revealed that each additional credit hour in dual enrollment had a statistically significant impact on increasing the probability of degree attainment (Burns et al., 2019). This finding is supported by a North Carolina study of over 15,000 community college students in which researchers found that the number of dual enrollment courses a student took positively related to college GPA and graduation rate (Ganzert, 2014). Similar findings in Texas and Tennessee confirmed that an increase in the number of dual enrollment credits corresponded to an increase in a student's likelihood of enrolling in and completing college (Struhl & Vargas, 2012; Villarreal, 2018; Young, 2021). The results of the study by Burns et al. (2019) also indicated that each additional credit hour in dual enrollment had a statistically significant positive effect on reducing time to graduation.

In contrast, An (2013a) conducted a national-level study and observed that most of the gain for dual enrollment students occurred for students who took two dual enrollment courses, and there was little added benefit beyond that. Additionally, Karp et al. (2007) discovered that the positive relationship between the number of dual enrollment courses and college success was dependent on which state was investigated. In Florida, the positive effects were the same regardless of the number of dual enrollment courses taken. Whereas in New York, the positive relationship was tied to taking two or more dual enrollment courses.

Dual Enrollment Subject and College Success

As researchers continue to investigate dual enrollment from all points of view, some of them have begun to dig into the impact dual enrollment subject has on student success. These researchers have uncovered a positive relationship between high-rigor core academic dual enrollment courses and subsequent college success (Giani et al., 2014; Morgan et al., 2018). However, the specific subjects that provide the most benefit are not consistent among the studies. Researchers conducting a longitudinal study in Colorado discovered that students who completed dual enrollment courses in gateway math and language arts were 1.82 to 1.86 times more likely to enroll in college than students who took dual enrollment courses in other subjects (Morgan et al., 2018). However, researchers in Texas observed that the effect of dual enrollment math courses on college enrollment was not significantly different than the average gain of taking any dual enrollment subject (Struhl & Vargas, 2012).

In terms of college completion, Morgan et al. (2018) noted that students who took dual enrollment gateway math courses were 1.78 times more likely to persist to their second year and 3.23 times more likely to graduate within six years. This aligns with work by Giani et al. (2014), which revealed that each additional dual enrollment math course increased a student's odds of attaining a bachelor's degree within six years by 60% to 90%. Similarly, Struhl and Vargas (2012) discovered that students who participated in any dual enrollment course were 1.43 times more likely to complete college than non-dual enrollment students, but if students took a dual enrollment English language arts or math course, they were 1.72 and 1.83 times more likely to graduate respectively.

In addition to the studies on core academic dual enrollment courses, researchers have also shown that participating in Career and Technical Education (CTE) dual enrollment courses is positively correlated to college success metrics (Hughes et al., 2012; Karp et al., 2007). Students who completed a CTE dual enrollment course were statistically more likely to complete college than students who had no dual enrollment (Hoffman, 2017; Struhl & Vargas, 2012) and more likely than general dual enrollment students to enroll in a four-year college and enroll full-time (Karp et al., 2007). In contrast, Giani et al. (2014) discovered little impact of dual enrollment vocational or occupational courses on students' postsecondary outcomes.

Dual Enrollment for Special Populations and College Success

Dual enrollment programs have been praised for the benefit they can provide to populations that have traditionally been underrepresented in the college-going culture; populations such as lower socioeconomic status (SES), non-White races, and first-generation college students (Henneberger et al., 2022; Latino et al., 2020). States are increasingly employing dual enrollment as a strategy to improve the transition from high school to postsecondary for all students and especially for members of these underrepresented groups (Giani et al., 2014).

In the area of student academic preparation, the positive effects of dual enrollment participation on college enrollment, first-year retention, and college GPA remained after controlling for ACT scores (An & Taylor, 2015; Lichtenberger et al., 2014). Similarly, when controlling for ACT and high school GPA, dual enrollment had a positive and statistically significant impact on increasing the probability of degree attainment and reducing the time to degree completion (Burns et al., 2019).

The75esearchh comparing male and female students presents conflicting results. Some researchers found that male students had higher GPAs and were significantly more likely to complete a degree (Karp et al., 2007; Oakley, 2015). Other researchers reported that dual enrollment provides positive effects for female students only (Ganzert, 2012) and that female dual enrollment students were more college-ready than male dual enrollment students (An & Taylor, 2015). However, some researchers observed no difference in college success when comparing male and female dual enrollment students (Morgan et al., 2018; Young et al., 2013).

Taylor (2015) noted that dual enrollment students of color enroll in college and complete college at significantly higher rates than non-dual enrollment students of color. Other researchers have reported the same positive effects when comparing dual enrollment to non-dual enrollment students in all racial categories (Struhl & Vargas, 2012). Ganzert (2012) found a statistically significant advantage in higher GPAs and graduation rates for non-White dual enrollment students when compared to their non-dual enrollment peers. Young et al. (2013) found that Black dual enrollment students had higher college GPAs than White non-dual enrollment students.

An (2013a) concluded that dual enrollment may especially benefit students in the lower SES category after finding a positive relationship at the national level between dual enrollment and degree attainment for first-generation students and students whose parents attended college but did not complete a bachelor's degree. Reinforcing this finding, researchers in Texas and Illinois observed that students from low-income families who completed dual enrollment courses were more likely to attend college, persist in college, and complete a college degree than

their peers who did not participate in dual enrollment (Struhl & Vargas, 2012; Taylor, 2015).

Although research generally indicates that dual enrollment positively affects all students, smaller effect sizes have been detected for low-income students and students of color (Taylor, 2015). Supporting this finding, Oakley (2015) observed that GPAs were lower among the lower SES students. Additionally, dual enrollment participation has not been shown to account for the gap in college GPA and remediation between low-income and moderate- to high-income students (An, 2013b). Other researchers have detected little evidence that the influence of dual enrollment differed by race (An & Taylor, 2015; Morgan et al., 2018). Oakley (2015) found that Black students had significantly lower GPAs than White students, and Hoffman (2017) showed a disproportionately lower number of Black dual enrollment students persisted in college.

Methodology

Instrumentation

Student-level administrative data were used in this study. The use of this type of data ensured that none of the students were aware of their inclusion in the study during the time periods in which data were collected. Therefore, there was no opportunity for their inclusion in the study to result in behavior modification that would have altered the results. Additionally, no surveys or interviews were conducted. Student data provided to me was de-identified; no personally identifiable information was included in the data file. Finally, data files were maintained on a password-protected computer to ensure the confidentiality and security of the data received.

Population

The population for this study included all first-time, full-time students at Tennessee community colleges in the fall semesters of 2015, 2016, 2017, and 2018 who had graduated from a Tennessee high school in the 12 months preceding their enrollment in the community college. The timeframe established to determine associate degree completion was three years from the semester that students began college as first-time, full-time students. Students who did not complete an associate degree within the three-year timeframe were recorded as did not complete an associate degree for the purposes of this study. All students were tagged as either dual enrollment or non-dual enrollment. Dual enrollment students completed at least one dual enrollment course in high school with a grade of C or better. Non-dual enrollment students completed no dual enrollment courses in high school with a grade of C or better.

Dataset

Data for this study included 62,644 student records consisting of 11,949 dual enrollment students and 50,695 non-dual enrollment students from the 13 Tennessee community colleges. Records were removed for students who had received college credits through programs other than dual enrollment to eliminate the possible confounding effects of the students' participation in other college-preparatory programs such as Advanced Placement or dual enrollment through an institution other than a Tennessee community college. Records with inaccurate or missing data

were also removed. Student characteristics are included in Table 1.

Table 1

Study Population Characteristics by Dual Enrollment Status

	Dual Enrollment		Non-Dual Enrollment		Total
	Number	Percent	Number	Percent	
Total Enrollment	11,949	19%	50,695	81%	62,644
ACT Score					
0-18	1,715	6%	27,259	94%	28,974
19+	10,234	30%	23,436	70%	33,670
Gender					
Male	4,458	16%	23,205	84%	27,673
Female	7,481	21%	27,490	79%	34,971
Race					
Asian	78	10%	697	90%	775
Black	525	5%	9,431	95%	9,956
Hispanic	394	11%	3,174	89%	3,568
White	10,579	23%	35,015	77%	45,594
Other	373	14%	2,378	86%	2,751
Socioeconomic Status					
Pell Recipient	5,161	15%	28,779	85%	33,940
Non-Pell Recipient	6,788	24%	21,916	76%	28,704

Results

To address the guiding questions of this study, a series of six individual research questions were evaluated using inferential and descriptive statistics.

Dual Enrollment Students Significantly More Likely to Complete an Associate Degree

A series of two-way contingency table analyses using crosstabs were utilized to compare associate degree completion rates between dual and non-dual enrollment students in the study population and for subgroups of ACT score, gender, race, and SES. Dual enrollment completion and associate degree completion were significantly related for each of the analyses, as depicted in Table 2. Students in the study population and in each subgroup who completed at least one dual enrollment course in high school were significantly more likely to complete an associate degree than their non-dual enrollment peers in the same group.

Table 2
Chi-Square Results and Graduation Rates for Dual versus Non-Dual Enrollment Students

	Number of Students	Pearson chi-square	*p* value	Cramer's *V*	Dual Enrollment Graduates	Non-Dual Enrollment Graduates
Population	62,644	3484.39	<.001	.24	46%	20%
ACT Composite Score						
0-18 Group	28,974	632.83	<.001	.11	29%	13%
19+ Group	33,670	1346.81	<.001	.20	49%	28%
Gender						
Male	27,673	1412.27	<.001	.23	44%	18%
Female	34,971	1992.58	<.001	.24	47%	21%
Race						
Asian	775	6.50	.011	.09	41%	27%
Black	9,956	128.95	<.001	.11	30%	11%
Hispanic	3,568	91.76	<.001	.16	42%	20%
White	45,594	2450.78	<.001	.23	47%	23%
Other	2,751	116.17	<.001	.21	40%	16%
Socioeconomic Status						
Pell Recipient	33,940	1587.82	<.001	.22	41%	17%
Non-Pell Recipient	28,704	1587.91	<.001	.24	50%	24%

To further evaluate the relationship between dual enrollment and associate degree completion, a bivariate logistic regression was performed to determine if dual enrollment completion is significantly related to associate degree completion when controlling for ACT score, gender, race, and SES. The model was statistically significant, $\chi^2(8, N = 62{,}644) = 6497.67$, $p < .001$. The model explained 15% (Nagelkerke R^2) of the variance in college completion and correctly classified 75.7% of cases. According to the Wald criterion, each of the five predictor variables (dual enrollment, ACT score, gender, race, and SES) were significant in the model, as presented in Table 3. Dual enrollment students were 2.13 times more likely to graduate with an associate degree than their non-dual enrollment peers when controlling for ACT score, gender, race, and SES.

Table 3
Logistic Regression Analysis Results

Predictor	*β*	*SE*	Wald (χ^2)	*df*	*p*-value	Exp(*β*) (odds ratio)
Dual Enrollment	.755	.023	1053.413	1	<.001	2.129
ACT Score	.135	.003	1970.796	1	.000	1.144
Gender	- .304	.020	227.412	1	<.001	.738

Race (categorical)						
White (contrast variable)			184.849	4	<.001	
Asian	.379	.084	20.311	1	<.001	1.461
Black	- .399	.036	125.242	1	<.001	.671
Hispanic	.070	.043	2.628	1	.105	1.073
Other Race	- .291	.052	31.642	1	<.001	.748
Pell Recipient	- .283	.020	197.388	1	<.001	.754
Constant	- 3.303	.067	2447.753	1	<.001	.037

Dual Enrollment Students Exhibited Significantly Less Time to Degree Completion

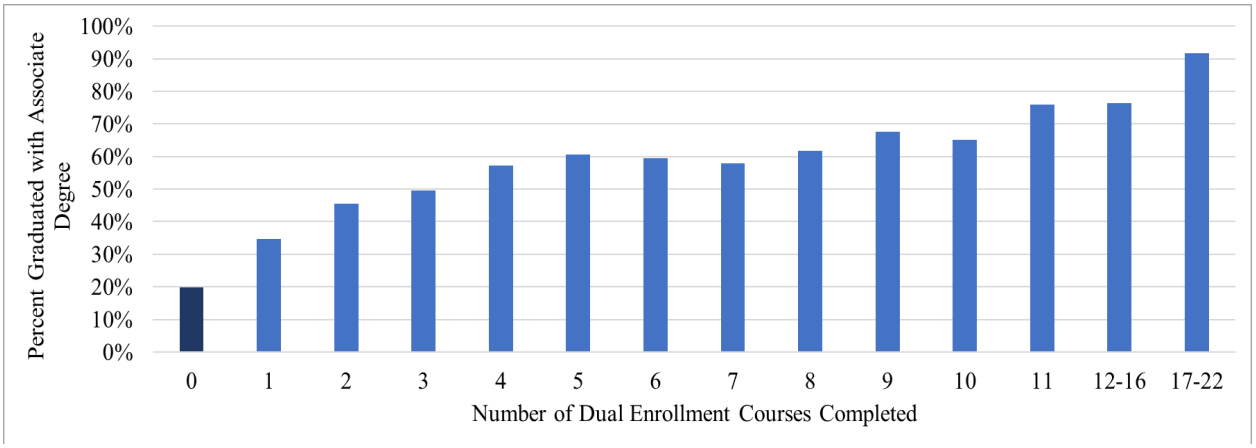
An independent samples *t* test was conducted to evaluate the hypothesis that dual enrollment students complete an associate degree in significantly less time than non-dual enrollment students. The number of semesters from first-time, full-time enrollment until graduation was the test variable and dual enrollment status (yes, no) was the grouping variable. The *t* test was significant, $t(15{,}562) = 34.11$, $p < .001$. In general, students in the dual enrollment group completed their associate degree in significantly fewer semesters ($M = 5.82$, $SD = 1.41$) than their non-dual enrollment counterparts ($M = 6.59$, $SD = 1.31$). The 0.77 semester difference in the means represents 11.6 weeks of a 15-week semester, or approximately a 3-month difference in average time to graduation. The 95% confidence interval was -0.81 to -0.73. The Cohen's *d* index was 1.34, which indicated a large effect size.

As Number of Dual Enrollment Courses Increased, Degree Completion Rates Increased

A descriptive analysis was conducted to evaluate the hypothesis that each additional dual enrollment course results in higher associate degree completion rates. Associate degree completion rate was calculated for 14 levels of dual enrollment courses (0 through 11, 12-16, and 17-22). The results indicate that students who completed just one dual enrollment course were 1.73 times more likely to graduate than students who completed no dual enrollment courses, and the trend of increased graduation rates continued with each dual enrollment course through five courses. After five courses, the graduation percentage fluctuated with each additional course, but as Figure 1 illustrates, the general trend indicates that the more dual enrollment courses students completed, the more likely they were to graduate with an associate degree.

Figure 1

Graduation Percentages by Number of Dual Enrollment Courses

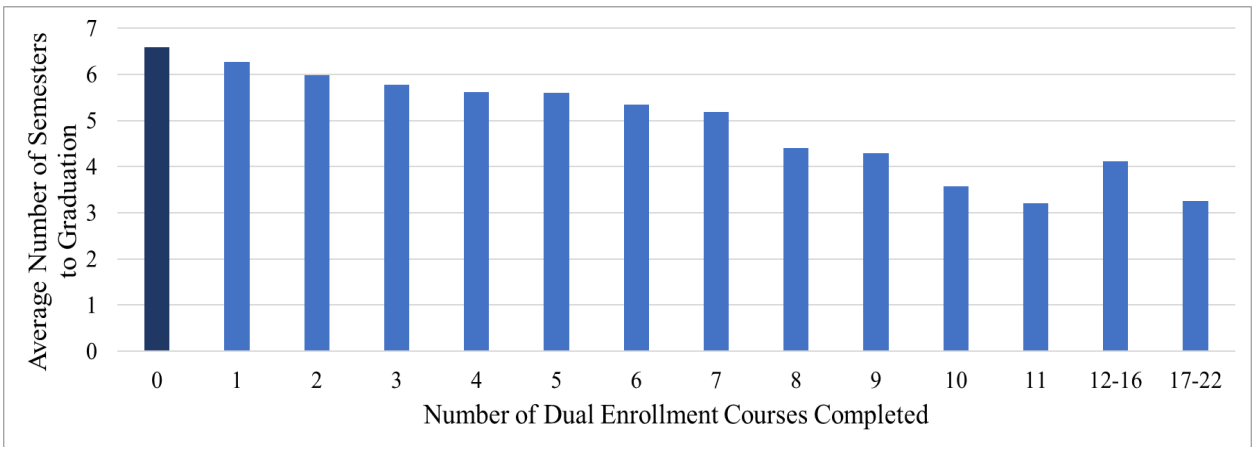


As Number of Dual Enrollment Courses Increased, Time to Degree Completion Decreased

To determine if there is a significant relationship between number of dual enrollment courses completed (1-22) and time to completion of an associate degree (1-9 semesters), a Pearson correlation coefficient was computed using the data for the community college students who graduated. The results of the correlational analysis revealed a weak negative relationship between number of dual enrollment courses (M = 1.04, SD = 1.89) and time to completion (M = 6.32, SD = 1.39) and a statistically significant correlation [$r(15{,}564) = -.322$, $p < .001$]. In general, the results suggest that when students complete more dual enrollment courses, they are likely to complete an associate degree in fewer semesters. The average time to completion ranged from 3.3 to 6.7 semesters, as represented in Figure 2.

Figure 2

Time to Degree Completion by Number of Dual Enrollment Courses



Notes: 1) The bar representing zero dual enrollment courses was added to the graph for comparative purposes but was not included in the correlational analysis. 2) Although categories with fewer than five students were grouped for presentation purposes (12-16 and 17-22), the Pearson correlation was performed using the individual student data.

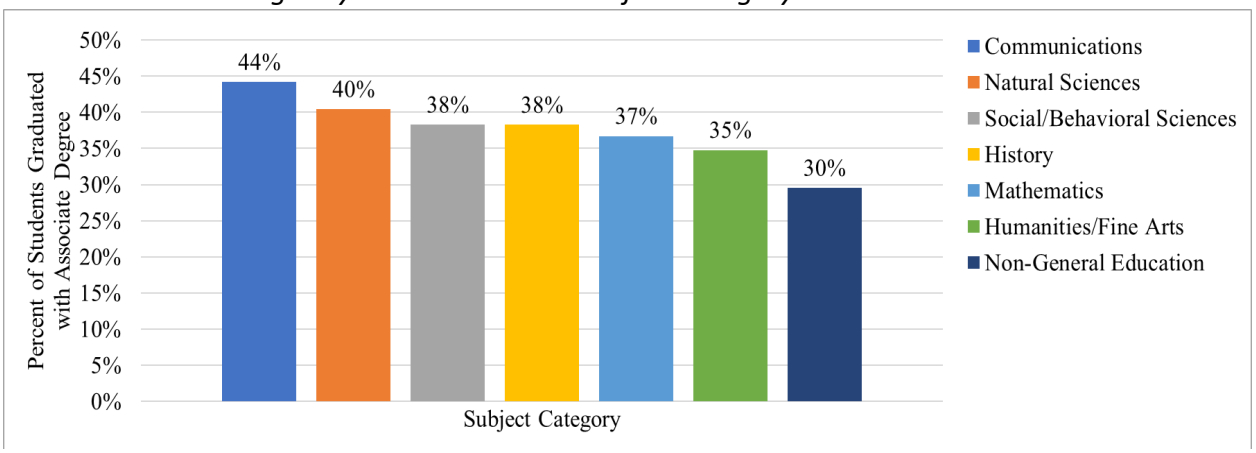
Dual Enrollment Subject Area Significantly Related to Associate Degree Completion

For this study, dual enrollment courses were divided into seven subject categories: communications, humanities/fine arts, history, mathematics, natural sciences, social/behavioral sciences, and non-general education. Communications included English composition and speech courses. Humanities/fine arts included courses such as art history, literature, and philosophy. Non-general education included any course that was not included in one of the other six general education core categories – subjects such as those in business, the medical field, or the trade skills areas.

A two-way contingency table analysis using crosstabs was conducted to evaluate whether associate degree completion is significantly different among the different dual enrollment subject areas. To reduce the confounding effects of students who completed courses in multiple dual enrollment subjects, only students who completed all dual enrollment courses in one subject area were considered for this analysis. The two variables were dual enrollment subject area at seven levels and associate degree completion at two levels (yes, no). Dual enrollment subject area and associate degree completion were significantly related, Pearson $\chi^2(1, N = 6{,}350) = 87.19$, $p < .001$, Cramer's $V = .12$. Graduation rates for students who completed all dual enrollment courses in one of the seven subject areas are presented in Figure 3.

Figure 3

Graduation Percentages by Dual Enrollment Subject Category



Discussion

When comparing dual enrollment and non-dual enrollment students, is there a significant difference in college completion rates and time to completion?

When comparing college success between dual and non-dual enrollment students, dual enrollment students came out on top in every measure. Dual enrollment students completed associate degrees at significantly higher rates than their non-dual enrollment peers, which agrees with the results of multiple prior studies concerning associate degree completion (An, 2013a;

Blankenberger et al., 2017; Ganzert, 2014; Henneberger et al., 2022; Hughes, 2016; Taylor, 2015). This finding held true for each subgroup analyzed – dual enrollment students graduated at significantly higher rates than their non-dual enrollment peers regardless of ACT score, gender, race, or SES. However, the effect sizes were smaller for students in the lower ACT score range, students of color, and low-income students indicating that dual enrollment does not lessen the achievement gap for these groups. These results support Taylor's (2015) research that revealed smaller effect sizes for students of color and low-income students and research by An (2013b), Hoffman (2017), and Oakley (2015) that noted dual enrollment did not account for the gap in college success between low-income and middle- to high-income students nor between Black and White students. Further analysis revealed that dual enrollment students were 2.13 times more likely to graduate when controlling for ACT score, gender, race, and SES. Findings from the multiple studies that used PSM techniques to evaluate dual enrollment in relation to college completion support this finding that the effects of dual enrollment are not confounded with other student characteristics (An, 2013a; Blankenberger et al., 2017; Giani et al., 2014; Grubb et al., 2017; Henneberger et al., 2022; Hughes, 2016; Struhl & Vargas, 2012; Taylor, 2015).

Results indicated that dual enrollment students completed college in significantly fewer semesters. The difference in average time to completion between dual and non-dual enrollment students was almost three months. This supports Hughes' (2016) finding that dual enrollment students graduated about two months sooner than non-dual enrollment students and closely aligns with results from other studies indicating reduced time to graduation for dual enrollment students (Grubb et al., 2012; Oakley, 2015; Villarreal, 2018; Marks & Lord, 2011).

For dual enrollment students, is the number of dual enrollment courses completed in high school significantly related to college completion and time to completion?

When evaluating the number of dual enrollment courses students completed, the results revealed that students who completed an associate degree completed significantly more dual enrollment courses, which agrees with the results of Burns et al. (2019), Ganzert (2014), Villarreal (2018), Struhl and Vargas (2012), and Young (2021). Further results indicated that students who completed just one dual enrollment course were 1.73 times more likely to graduate with an associate degree than students who completed no dual enrollment courses. The probability of graduation continued to increase with each additional dual enrollment course through the first five courses. After five courses, there was some fluctuation in graduation rates, but in general, the trend continued – the more dual enrollment courses a student completed, the more likely they were to graduate. This finding contradicts An's (2013a) research which indicated that beyond two dual enrollment courses, there was little added benefit for students. However, Burns et al. (2019) discovered that each additional credit hour in dual enrollment was positively related to graduation, which aligns with the results of this study. Burns et al. also found that each additional dual enrollment credit significantly reduced the time to graduation, which supports the finding in this study that increasing the number of dual enrollment courses was associated with a significantly reduced time to degree completion.

For dual enrollment students, is there a significant difference in college completion rates based on the dual enrollment subjects completed in high school?

Evaluation of the relationship between college completion and dual enrollment subject was performed using data for students who completed all dual enrollment courses in one of seven subject areas. The analysis revealed that dual enrollment subject area and associate degree completion were significantly related. In general, students who completed all dual enrollment courses in communications were more likely to graduate with an associate degree than students who completed courses in other subjects and were 2.2 times more likely to graduate than non-dual enrollment students. Students who completed all dual enrollment courses in non-general education courses were generally less likely to graduate with an associate degree than students who completed dual enrollment in core education subjects but were 1.5 times more likely to graduate than non-dual enrollment students.

The results of this study aligned with prior research that revealed students in any dual enrollment subject are more likely to graduate than non-dual enrollment students (Hoffman, 2017; Struhl & Vargas, 2012); courses in English language arts tend to be most influential on graduation rates (Morgan et al., 2018; Struhl & Vargas, 2012; Villarreal, 2018); and vocational dual enrollment courses tend to be less impactful in terms of college completion (Giani et al., 2014). However, in the area of mathematics, the study results contradicted earlier findings that students in dual enrollment math courses were more likely to graduate than students in other dual enrollment subjects (Giani et al., 2014; Morgan et al., 2018).

Implications for Practice

The results of the study led to several implications for practice which would be most applicable to the people and students who are associated with community colleges. *First*, study data frequently to ensure the positive effects of dual enrollment continue to be realized as the dual enrollment program changes. *Second*, provide greater access to dual enrollment in regions that may not currently have the facilities or staffing needed to implement the program. *Third*, encourage students to participate in at least one dual enrollment course while in high school. *Finally*, based on the finding that students who completed just one dual enrollment course were 1.73 times more likely to graduate from college, policymakers should focus on funding fewer classes for more students (breadth) before funding more classes for fewer students (depth) when determining how to allocate the finite funds in the Dual Enrollment Grant.

Implications for Further Research

With the continuing and increasing focus on dual enrollment as a strategy to prepare students for college success, additional research is needed to further investigate the relationships between dual enrollment parameters and college success measures. *First*, evaluate dual enrollment subject relationship to college success measures at the individual subject level and for the various subject combinations. *Second*, interview community college students who completed dual enrollment courses in high school to determine which aspects of their dual

enrollment courses are most beneficial in the college setting. *Third*, replicate this study with data from four-year universities to discover how dual enrollment parameters are related to bachelor's degree completion. *Fourth*, research dual enrollment completion as it relates to student enrollment and retention at community colleges and universities. *Finally*, research the gaps in college success measures among population subgroups in relation to dual enrollment.

Conclusions

Students are faced with many choices for college preparation while in high school. To meet the goals set by states for college completion, high schools and colleges must partner to provide access to and support in college preparation strategies for high school students. Dual enrollment is an option that provides significant benefits for students, and in Tennessee, is a low-cost option because of state-provided funding. Continuous evaluation of the dual enrollment program is crucial as the program grows and changes. Ongoing research into topics such as the impact of dual enrollment subjects will aid in continuous improvements in the implementation of dual enrollment programs.

References

An, B. P. (2013a). The impact of dual enrollment on college degree attainment: Do low-SES students benefit? *Educational Evaluation & Policy Analysis, 35*(1), 57–75. https://doi.org/10.3102/0162373712461933

An, B. P. (2013b). The influence of dual enrollment on academic performance and college readiness: Differences by socioeconomic status. *Research in Higher Education, 54*(4), 407–432. https://doi.org/10.1007/s11162-012-9278-z

An, B. P., & Taylor, J. L. (2015). Are dual enrollment students college ready? Evidence from the Wabash National Study of Liberal Arts Education. *Education Policy Analysis Archives, 23*(58), 1–26. https://doi.org/10.14507/epaa.v23.1781

Bailey, T., & Karp, M. M. (2003). *Promoting college access and success: A review of credit-based transition programs.* Community College Research Center, Teachers College, Columbia University. https://files.eric.ed.gov/fulltext/ED482497.pdf

Blankenberger, B., Lichtenberger, E., & Witt, M. A. (2017). Dual credit, college type, and enhanced degree attainment. *Educational Researcher*, *46*(5), 259–263. https://doi.org/10.3102/0013189X17718796

Burns, K., Ellegood, W., Bernard Bracy, J., Duncan, M., & Sweeney, D. (2019). Early college credit programs positively impact student success. *Journal of Advanced Academics, 30*(1), 27–49. https://doi.org/10.1177/1932202X18801274

Cassidy, L., Keating, K., & Young, V. (2011). *Dual enrollment: Lessons learned on school-level implementation*. U.S. Department of Education, Office of Elementary and Secondary Education. https://www2.ed.gov/programs/slcp/finaldual.pdf

Community College Research Center (2012). *What we know about dual enrollment*. Teacher's College, Columbia University. http://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-research-overview.pdf

Darling-Hammond, L., Bae, S., Cook-Harvey, C. M., Lam, L., Mercer, C., Podolsky, A., & Stosich, E. L. (2016). *Pathways to new accountability through the Every Student Succeeds Act*. Learning Policy Institute. https://learningpolicyinstitute.org/product/pathways-new-accountability-through-every-student-succeeds-act

Edwards, L., Hughes, K. L., & Weisberg, A. (2011). *Different approaches to dual enrollment: Understanding program features and their implications*. Community College Research Center, Teachers College, Columbia University. https://folio.iupui.edu/bitstream/handle/10244/949/dual_enrollment_2011oct10.pdf

Finney, J. E., Leigh, E. W., Ruiz, R., Castillo, W., Smith, E., & Kent, D. C. (2017). *Driven to perform: Tennessee's higher education policies & outcomes: A case study*. Institute for Research on Higher Education, Graduate School of Education, University of Pennsylvania. https://repository.upenn.edu/cgi/viewcontent.cgi?article=1480&context=gse_pubs

Fuline, S. L. (2018). *Community college transitioning experiences of dual enrollment students* [Doctoral dissertation, Walden University]. ScholarWorks. https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6471&context=dissertations

Ganzert, B. (2012). The effects of dual enrollment credit on gender and race. *Current Issues in Education, 15*(3), 1–8. https://cie.asu.edu/ojs/index.php/cieatasu/article/view/903/365

Ganzert, B. (2014). Dual enrollment credit and college readiness. *Community College Journal of*

Research and Practice, *38*(9), 783-793. https://doi.org/10.1080/10668926.2012.719483

Giani, M., Alexander, C., & Reyes, P. (2014). Exploring variation in the impact of dual=credit coursework on postsecondary outcomes: A quasi-experimental analysis of Texas students. *High School Journal, 97*(4), 200–218. https://doi.org/10.1353/hsj.2014.0007

Grubb, J. M., Scott, P. H., & Good, D. W. (2017). The answer is yes: Dual enrollment benefits students at the community college. *Community College Review, 45*(2), 79–98. https://doi.org/10.1177/0091552116682590

Hanemann, L. (2021, October 1). Plenary address. Tennessee Association of Student Success and Retention 2021 Annual Conference, Chattanooga, TN, United States.

Henneberger, A. K., Witzen, H., & Preston, A. M. (2022). A longitudinal study examining dual enrollment as a strategy for easing the transition to college and career for emerging adults. *Emerging Adulthood 10*(1), 225-236. https://doi.org/10.1177/2167696820922052

Hoffman, S. B. (2017). *Dual enrollment: Bridging the agendas of college completion and equity*. [Doctoral dissertation, California State University]. ScholarWorks. http://hdl.handle.net/20.500.12680/5138jf76f

Hughes, K. L., Rodriguez, O., Edwards, L., & Belfield, C. (2012). *Broadening the benefits of dual enrollment: Reaching underachieving and underrepresented students with career-focused programs*. Community College Research Center, Teachers College, Columbia University. https://files.eric.ed.gov/fulltext/ED533756.pdf

Hughes, T. E. (2016). *The impact of high school dual enrollment participation on bachelor's degree attainment and time and cost to degree*. [Doctoral dissertation, Old Dominion University]. ODU Digital Commons. https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1027&context=efl_etds

Hunter, M., & Wilson, J. (2019). Dual enrollment and retention in Tennessee community colleges: Implications for practice. *Community College Journal of Research and Practice*, *43*(3), 232–236. https://doi.org/10.1080/10668926.2018.1428240

Jones, S. (2014). Student participation in dual enrollment and college success. *Community College Journal of Research and Practice*, *38*(1), 24–37. https://doi.org/10.1080/10668926.2010.532449

Karp, M. M., Calcagno, J. C., Hughes, K. L., Jeong, D. W., & Bailey, T. R. (2007). *The postsecondary achievement of participants in dual enrollment: An analysis of student outcomes in two states.* Community College Research Center, Teachers College, Columbia University. https://files.eric.ed.gov/fulltext/ED498661.pdf

Kim, J., Kirby, C., & Bragg, D. D. (2006). *Dual credit: Then and now*. In Brief. Office of Community College Research and Leadership. https://files.eric.ed.gov/fulltext/ED495242.pdf

Latino, C. A., Stegmann, G., Radunzel, J., Way, J. D., Sanchez, E., & Casillas, A. (2020). Reducing gaps in first-year outcomes between Hispanic first-generation college students and their peers: The role of accelerated learning and financial aid. *Journal of College Student Retention: Research, Theory & Practice, 22*(3), 441–463. https://doi.org/10.1177/1521025118768055

Lawrence, T. B. (2017). *Associate's degree attainment for dual enrollment versus non-dual enrollment students at a rural Mississippi community college*. Mississippi State University. [Doctoral dissertation, Mississippi State University]. Theses and

Dissertations. https://hdl.handle.net/11668/17724

Lichtenberger, E., Witt, M., Blankenberger, B., & Franklin, D. (2014). Dual credit/dual enrollment and data driven policy implementation. *Community College Journal of Research and Practice*, *38*(11), 959–979. https://doi.org/10.1080/10668926.2013.790305

Marks, J. L., & Lord, J. M. (2011). *New measures, new perspectives: Graduates' time-and credits-to-degree in SREB states*. Southern Regional Education Board. https://www.voced.edu.au/content/ngv:49434

Meehan, K., & Kent, D. C. (2020). *Developing a Statewide College Completion Agenda: Lessons from Tennessee.* Research for Action. https://files.eric.ed.gov/fulltext/ED603803.pdf

Mokher, C. G., & McLendon, M. K. (2009). Uniting secondary and postsecondary education: An event history analysis of state adoption of dual enrollment policies. *American Journal of Education, 115*(2), 249–277. https://doi.org/10.1086/595668

Morgan, T., Zakem, D., & Cooper, W. (2018). From high school access to postsecondary success: An exploratory study of the impact of high-rigor coursework. *Education Sciences, 8*(4), 191. https://doi.org/10.3390/educsci8040191

Oakley, N. R. (2015). *Dual enrollment and dual credit as predictors of community college graduation, grade point average, and credit hour accumulation*. [Doctoral dissertation, Mississippi State University]. Electronic Theses and Dissertations. https://www.proquest.com/dissertations-theses/dual-enrollment-credit-as-predictors-community/docview/1737762838/se-2?accountid=10771

Ozmun, C. D. (2013). College and academic self-efficacy as antecedents for high school dual-credit enrollment. *Community College Enterprise, 19*(1), 61–72.

Speroni, C. (2011). High school dual enrollment programs: Are we fast-tracking students too fast? An NCPR Working Paper. *National Center for Postsecondary Research*. https://eric.ed.gov/?id=ED527527

Struhl, B., & Vargas, J. (2012). *Taking college courses in high school: A strategy for college readiness*. Jobs for the Future. https://jfforg-prod-new.s3.amazonaws.com/media/documents/TakingCollegeCourses_101712.pdf

Taylor, J. L. (2015). Accelerating pathways to college. *Community College Review, 43*(4), 355–379. https://doi.org/10.1177/0091552115594880

Tennessee Board of Regents (n.d.). *Community college – data dashboards: Dual enrollment*. Office of Policy and Strategy: Data and Research. Retrieved March 10, 2022, from https://www.tbr.edu/node/30681

Tennessee Department of Education (2018). *Every Student Succeeds Act: Building on success in Tennessee*. ESSA State Plan. https://www.tn.gov/content/dam/tn/education/documents/TN_ESSA_State_Plan_Approved.pdf

Tennessee Higher Education Commission (n.d.). *Tennessee Education Lottery Scholarship Program*. https://www.tn.gov/thec/research/tn-hope-scholarship-program.html

Villarreal, M. U. (2018). *The impact of dual credit as a school district policy on secondary and postsecondary student outcomes*. Ray Marshall Center for the Study of Human Resources, The University of Texas at Austin. https://core.ac.uk/download/pdf/211333138.pdf

Young, R. (2021). *Dual enrollment's impact on completion*. [Doctoral dissertation, East

Tennessee State University]. Electronic Theses and Dissertations. https://dc.etsu.edu/etd/3852

Young, R. D., Joyner, S. A., & Slate, J. R. (2013). Grade point average differences between dual and nondual credit college students. *Urban Studies Research, 2013*, 1-6. https://doi.org/10.1155/2013/638417

First-Generation Women Students' Perceptions of Support While Enrolled in Higher Education Institutions: A Phenomenological Study

Erin Messmer
East Tennessee State University

Jill Channing
East Tennessee State University

This phenomenological study explored the perceptions of support first-generation women students enrolled in college have. Eleven first-generation women students who were enrolled in undergraduate and graduate programs across the United States completed one-on-one interviews. The participants explained the support they felt from family, friends, and members of their institutions, as well as areas where further support could be given. Key themes emerged, such as the role of mentorship, the need for financial assistance, the role of family, the roles of intersectional factors such as race and motherhood, and the offering of support during a crisis, particularly the COVID-19 pandemic.

Keywords: first-generation women students, mentorship, COVID-19

Among the large number of students attending college in the United States of America is a unique group known as first-generation students. These students have been described as students whose parents had no more than a high-school education (Ward et al., 2012). They have also been defined as students whose parents may have begun college but never completed their baccalaureate degree (Ward et al., 2012). Whether their parents have limited or no higher education experience, first-generation students are generally viewed as a group in need of support (Ward et al., 2012).

First-generation students are more likely than their peers to have poor academic preparation for college, limited knowledge about college curriculum, and fewer available finances (Ward et al., 2012). Chatelain (2018) argued that first-generation students are guided on how to achieve good grades and to be admitted to a university, but they are not given guidance on how to navigate the world of higher education once they get there. First-generation students are at a distinct disadvantage upon their college admittance.

First-generation students face a unique set of challenges and, as such, need multiple types of support. The intersectionality of race, gender, and socioeconomic class play a role in the development of students' identities. It also creates opportunities and challenges for them. For example, first-generation students struggle to become active members of campus life due to work and life obligations (Pascarella et al., 2004). Higher education institutions can play a critical role in offering support to this student population.

Statement of the Problem

The problem addressed in this study was that first-generation women students may experience critical differences in the amount of support they receive while enrolled in college in comparison to their non-first-generation peers. These problems can be exacerbated by the multiple intersections of their identities and may not be fully known by higher education administrators. The purpose of this phenomenological study was to understand these challenges further through the lived experiences of first-generation college women, as well as to understand what support they perceived receiving and not receiving. In this study, support was generally defined as any form of guidance, assistance, or mentorship offered by family, friends, or branches of/people working at higher education institutions the student was attending. First-generation college students were defined as students whose parents or single parent did not have a four-year college degree at the time of the interview. Women were defined as anyone who identified as such, either cisgender or transgender.

Literature Review

The differences between first-generation students and their peers are apparent upon their college enrollment. Phillips et al. (2020) state that higher education is seen as "the great equalizer" (p.1113). This perspective asserts that first-generation students can gain access to and persist through college, eventually graduating and adjusting to the upper- and middle-class rewards of a college education (Phillips et al., 2020). However, only a small amount of first-generation students smoothly transition from high school to college and continue onwards to graduation (Ricks & Warrne, 2021).

Differences Between First-Generation and Non-First-Generation Students

During college, first-generation students are more likely to live off-campus, work full-time, and take classes part-time (Tinto & Engle, 2008). First-generation students are less likely to graduate in their fourth or fifth year of college attendance than their peers (Ishitani, 2006). They are also less likely to complete their degree than their peers (Whitley et al., 2018). Among first-generation students, women are more likely to graduate within a four-year period than their male counterparts (Ishitani, 2006). The rate of graduating Hispanic and Black first-generation students is significantly lower than the rate of White first-generation students (Ishitani, 2006).

The differences between first-generation students and their non-first-generation peers extend beyond academics. First-generation students are not as engaged with their institution as their peers are (Pike & Kuh, 2005). They are less likely to try a variety of experiences while enrolled (Pike & Kuh, 2005). These characteristics are particularly true of first-generation students with limited educational goals and those who live off-campus (Pike & Kuh, 2005). The authors of the National Survey of Student Engagement (NSSE, 2019) found that first-generation students who identified as seniors were less likely to participate in high-impact practices, such as study abroad, internships, or conducting research with faculty members (p. 15). First-generation students may not understand how important it is to be engaged with their college because their parents do not have the background experience to share with them (Pike & Kuh, 2005). They express feeling isolated during their freshman year, retreating to their dormitories often and being afraid of building relationships with others (Ricks & Warren, 2021).

First-generation students are comprised of many characteristics. A demographic sheet from the Center for First-Generation Student Success stated that 60% of first-generation students in 2015-2016 were women (RTI International, 2019). First-generation students are also likely to come from a minority background, be non-native English speakers, and be financially independent of their parents (Tinto & Engle, 2008). They are also at greater risk of dropping out of college than their peers (Ishitani, 2016).

Women in Higher Education

As higher education progressed, the role of women in academia grew. However, the obstacles that women face have transformed over the years. Women are more likely than men to enroll part-time at an institution (Hagedorn et al., 2002). Lohfink and Paulsen (2005) reported that men first-generation students are 9.4% more likely to persist towards completing college than women first-generation students are (p. 415). Women face different expectations within their families and communities then men do (Laajala-Lozano & Jenkins, 2022). This may be a reason for the dip in first-generation womens' persistance towards college completion.

Regardless of their enrollment status, women are often predominantly in charge of or responsible for childcare, domestic tasks at home, and are employed alongside being enrolled in college (Hagedorn et al., 2002). Persisting through college requires outstanding time management abilities (Hagedorn et al., 2002). Significant sources of stress for first-generation women students include the loss of connection to their home and distress within their families (Laajala-Lozano & Jenkins, 2022). Higher levels of stress in this population lead to lower self-esteem and higher depressive symptoms, indicative of the need for more institution-provided

counseling to support and retain first-generation women students (Laajala-Lozano & Jenkins, 2022).

Intersectionality

As authors of the Community College Survey of Student Engagement (CCSSE, 2020) stated, first-generation students face challenges that non-first-generation students do not. To better understand first-generation students and the differences they experience, it is critical to view their identities through an intersectional lens. Intersectionality provides a lens for viewing how the world is constructed through multiple intersections of identity (Crenshaw, 1991). The concept of intersectionality was first explored by Kimberlé Crenshaw (1991). Crenshaw (1991) used intersectionality to explain the overlapping identities of Black women to understand violence directed at them. Crenshaw (1991) argued that racism and sexism were both at hand in creating this violence, something that prior feminist and anti-racist discourse had not considered. Carastathis (2014) furthered this explanation, offering that intersectionality posits "that oppression is not a singular process or a binary political relation, but is better understood as constituted by multiple, converging, or interwoven systems…" (p. 304). Essentially, intersectional theorists argue that understanding the connection of multiple identities is essential to understanding how an individual is treated in society. Today, intersectionality is commonly used to refer to the many ways people identify, such as race, gender, class, and sexuality (Cooper et al., 2017).

In their 2019 study, Arch and Gilman wrote that first-generation students "… are not a homogenous group for whom a single set of services will address all needs at every institution" (p. 997). They explained that the struggles first-generation students experience are not only influenced by their first-generation status, but also by identifying factors such as race and gender (Arch & Gilman, 2019). Knowing that first-generation students are more likely to be women, minorities, and lower-class, intersectionality is a great way to explore the systems of oppression facing first-generation students in their attainment of higher education.

Intersectionality matters when assessing assistance offered to first-generation students. Assistance is often given by institutional agents. An institutional agent is "an individual who occupies one or more hierarchical positions of relatively high-status and authority" (Stanton-Salazar, 2011, p. 1067). The role of an institutional agent is assumed when a valuable resource, such as information about college, is transmitted from the agent to a receiver (Stanton-Salazar, 2011). Essentially, institutional agents hold valuable information about college and are in a position to pass it along to students. Because of their intersectional identities, institutions may believe that first-generation students are being served through offices that meet the other facets of their identities, such as muticultural offices and diversity programs, when they are actually being overlooked (Whitley et al, 2018).

Theoretical Framework

This study was conducted using a phenomenological research design. Creswell (2014) identified phenomenological research as a design in which the researcher details the lived experiences of participants, pertaining to a phenomenon that they face. Phenomenology is a concept rooted in

the fields of philosophy and psychology (Creswell, 2014). Central to phenomenology is the concept of intentionality (Sokolowski, 2000). In the phenomenological tradition, intentionality refers to a persons' ability to be conscious of the things they do and the objects around them (Sokolowski, 2000). Phenomenological research aims to understand how participants view and make sense of a specific situation (McMillan & Schumacher, 2010). How participants understand their situations will be rooted in their intentionality, or awareness, of their lived experience. Phenomenology seeks to capture the essence of lived experiences, making them available for analysis (McMillan & Schumacher, 2010).

In this study, being a first-generation woman enrolled in college was considered a phenomenon, one that could only be learned about through the lived experiences of those women. Intersectionality theory was used to explore the intersections of gender, race, and socioeconomic status as they pertained to first-generation women students and their perceptions of forms of support.

Methods

Research Questions

This study's research questions were crafted with the study's purpose in mind, which is to understand how first-generation women students perceive support during their college experience. To fully understand support as it pertains to these women, the research questions center around the key concepts of academic and emotional needs, institutional support, and intersectionality.

1. What do the lived experiences of first-generation women students tell us about their academic and emotional needs?
2. What do the lived experiences of first-generation women students tell us about their perceptions of forms of support?
3. What do the lived experiences of first-generation women students tell us about the role that identity intersectionality plays in today's higher education environment?
4. What do the lived experiences of first-generation women students tell us about the ways crises are handled by higher education institutions?

Population

tudents selected to participate in this study identified as female and first-generation. For the purposes of this study, first-generation was defined as students whose parents or single parent did not have a four-year college degree. All participants were 18 years of age or older and had completed at least one full year of college. Eleven women from across the United States participated in the study. Five were undergraduate students, and six were graduate students. Only three of the women identified as a race other than White. Each participant selected a pseudonym to be identified by in the final reporting of the study. The pseudonyms used are Anna, Kauni, Alexis, Christina, Michaela, Katie, Michelle, Carol, Georgia, Lucy, and Isabel.

Data Collection and Analysis

This study used what Patton (2015) called a standardized open-ended interview. An interview protocol was created, and follow-up questions were asked as needed. Interviews were conducted over Zoom and data was coded by-hand by identifying themes through key words and phrases used in the interviews.

Data were analyzed using an inductive reasoning process. McMillan and Schumacher (2010) described this process as one "…of organizing data into categories and identifying patterns and relationships among the categories" (p. 367). The coding process started with a thorough reading of each interview, alongside highlighting of key phrases and quotations. Notes were made in the margins to indicate a theme that the key phrases identified. After this initial phase was completed for all 11 interviews, data was organized into themes to identify which ones were the most prominent. Research questions were written on a piece of paper and notes were taken under them regarding which themes emerged that best answered each question. Next, each quotation from the interviews that corresponded with the prominent themes was numbered. Notecards were created with the corresponding numbers and used to organize an outline of presentation of the data.

Reflexivity, Trustworthiness, and Ethical Considerations

My role in the study was that of a partial participant. McMillan and Schumacher (2010) identify a partial participant as someone who participates to an extent in the setting they are conducting research in or population which the research is coming from. While I do not identify as a first-generation student, I do identify as a woman. Furthermore, as a college instructor, I have my own perceptions of what quality support for students looks like. These characteristics were potential barriers to my expectations or analysis of some participants' responses. By acknowledging my role as a partial participant, I made strategic choices in my sampling, question-asking, and data analysis that increased the reflexivity of my study. I used bracketing and kept a reflex journal to avoid letting bias slip into the final data analysis.

To establish the trustworthiness, or credibility, of the data, triangulation and member checking were used. Researchers use triangulation to justify discovered themes when examining multiple data sources (Creswell, 2014). In this study, I searched for common themes among multiple participant responses and used institutional resources, such as university websites, to compare to the responses. Creswell (2014) described member checking as allowing participants to review the final report, descriptions, or themes to determine if they find them to be accurate representations of their responses. In this study, each participant reviewed the transcript of their interview to approve its accuracy.

Ethical considerations were given throughout the data collection process. Permission to conduct the study was obtained through the Institutional Review Boards (IRB) of East Tennessee State University. All participants signed an informed consent form. The informed consent form was read to them prior to the interview and all participants gave verbal consent before being interviewed. They also had the ability to ask me questions prior to the interview. Because all interviews were conducted online via Zoom, I was in an isolated space to maintain the privacy of interviewees. All interviews were recorded using audio and video technology. Participants were

assured that all efforts to maintain their privacy would be taken. Participant names were omitted from this research publication, as well as any identifiable information. Each participant was asked to create a pseudonym for themselves that is used in the final report. Risks were minimal for this study.

Limitations

This study was limited by its participants. The perspectives gathered in this study might not be those of other first-generation women students across the country or the world. As such, the results of the study were another limitation. Data collected could not be generalized to the entire population of first-generation women students because of the qualitative lens used to conduct the study. Furthermore, the phenomenon explored in this study served as a limitation. It was assumed that definitions of women and first-generation students were clear and that consistent meaning was held in the research. It was further assumed that participants would understand what support meant as it pertained to them and their experiences.

Results

The data collected for this phenomenological study was coded and grouped into prominent themes to address each of the four research questions. Direct quotations from the research participants are provided below as supporting evidence to each research questions' answers.

Mentorship Matters

Mentorship plays a significant role in the lives of first-generation college students. Whether good, bad, or nonexistent, these mentorships, or lack thereof, had an impact on participants. Mentors can improve the academic goals and retention numbers of first-generation students, making them comparable to their peers (Fruiht & Chan, 2018).

Faculty members play a particularly important role in student mentorship. Certainly, this was the case for Kauni. When speaking about her decision to come back to college as a non-traditional student, Kauni mentioned a professor who serves as her mentor. She said, "My professor, who is my mentor … Her view of me is way better than what I see." Throughout the interview, Kauni praised her mentor for her levels of assistance. Kauni's motivation to perform well and earn her degree was connected to the strong mentorship she received.

This level of support from faculty was also expressed by Isabel. As an undergraduate student, Isabel had an advisor who supported her. She indicated that his support made a significant impact on her ability to earn her degree.

> I think the transition to undergrad, where I had this really supportive advisor … he was amazing. He … helped me during my second year and then continued throughout the rest of my bachelor's … He even said to … me and my friend … he was like, 'I see you guys as my daughters. I just want you to succeed.' So … having that support system made me finish.

Some women noted that bad interactions with professors and guidance counselors have been impactful as well. Kauni dropped out of college because of a bad interaction with a

professor. She continues to feel the impacts of the interaction today.

> I loved writing when I was younger. I wrote poems and stories … I loved English and I loved writing, and I wrote my very first paper for my English class and I got an F and she told me my writing was absolutely atrocious and that I needed to reconsider being in school. I dropped out. I got an email from her after she found out I dropped out and she apologized, but damage was done … I didn't actually write after that … It took me probably a good, 5, 6, 7 years maybe before I even started writing again and even to this day I struggle … I'll send my papers to different people and have them proofread them now because … I don't have the confidence that … I mean, you would think that was back when I was 19 years old … that would go away, but it hasn't. My confidence, it's really shattered … That one paper.

When first-generation students encounter negative professors, they may lose interest in the class or respect for the professor's teaching skills (Wang, 2014). In Kauni's case, she lost interest and self-confidence, and dropped out of college as a result. Now enrolled as an undergraduate student at a different institution, Kauni continues to notice the way professors treat her. She said, "I'm kind of animated a little bit and I had a professor who told me my personality absolutely blew. [laughter] Yeah. I almost dropped out …" This professor teaches in the department Kauni studies in. She was considering attending graduate school at the institution but has changed her mind, partly due to her interaction with the professor, saying, "…I can't go to grad school here, because she … would be the professor I would need to mentor me, so I can't stay here." Again, a negative interaction has impacted Kauni's decision-making. By negatively speaking to Kauni, her professor led Kauni to lose respect for her, and lost a potential graduate student (Wang, 2014).

Some participants expressed a desire for faculty to fulfill the role of mentor in their educational journeys. Christina noted that she needed support from people who understood what the college experience was like.

> I think maybe professors and people who work at the university could give more support because they have the background. My immediate family had no idea what it was like to go to college, so they couldn't really help me in that way.

This sentiment was further shared by Georgia. Now in her doctoral program, Georgia longs for a mentor to help guide her.

> I feel … that some of the people in my cohort … knew the ropes much better than me because either they'd had family members who had done … doctoral studies, or they were married to someone who had a doctoral degree. And so, I often felt like I was trying to play catch up … So, I think … to had [sic] a mentor would have been helpful…

Financial Support is Needed

A large theme that developed over the course of the study was financial support. As Roksa & Kinsley (2019) noted, first-generation students do not benefit financially from their families in the same way that their non-first-generation peers do. All eleven participants mentioned finances during their interviews. For most participants, the conversation centered around needing help financially to attend or complete college. Several women identified needing

assistance navigating the financial aid process. For example, Michaela described the difficulty she has encountered completing FAFSA.

> I feel like first-generation students are definitely students that need help with financial aid stuff, because their parents don't know how to do it, and they don't know how to do it … I didn't have anyone that knew how to do the FAFSA. So, we [my family] just had to figure it out. And I feel like that's something that there can definitely be more support in, is the financial aid from, like, the federal standpoint.

Money was a source of stress for several participants. Carol and Lucy addressed the difficulty of having out-of-pocket expenses to complete class assignments. Carol described having to make a difficult decision about her education due to financial circumstances.

> Some people, from the art school perspective, many first-gens left because we couldn't afford the supplies, 'cause they're very expensive. Um, things like that which other, I'm sure, first-gen students who come from wealthy backgrounds didn't have to go through … Like, oil paints are, like, $20-30, like, a tube. So, if you need, like, ten colors, that's $200 out of pocket … Um, and that could go to rent and food … That's part of the reason why I, I dropped out of art school. Like, another friend dropped out too, who was also a first-gen.

Isabel's financial experience was different from the other participants. A child of a low-income family, she stated, "I send money home." She described having to work outside of her graduate fellowship, despite school regulations.

> The job thing? I'm not even supposed to work. Like, I was working … I think 25-hour shifts on top of grad school and you're only supposed to work a maximum of ten hours if you're on fellowship. If you GSI, which is graduate, like, a TA, graduate student instructor, you're supposed to work twenty hours max and even beyond that you can't work more than ten hours. So, I was already violating that … Because then the problem is, like, they'll ask you …'Oh, well, why are you working?' 'Cause I need money.' 'Okay, well, we'll give you, like, this little bit of $300 and that's going to suffice for the rest …' It's not gonna suffice. I need money … It's not a problem that just goes away.

In several instances, money served as a motivator. Katie was also motivated by financial incentives. When asked why she went back to college after earning her bachelor's degree, she responded, "This may sound shallow, but one thing is because I worked at [place of employment], you know, they would reimburse the degrees and … I felt I needed to take advantage of that." Carol described financial assistance being a motivating factor for her as well. "The only way I was able to afford it was I got a huge hefty financial aid scholarship, which … I don't have any student loans, which I'm grateful for … Yeah, so … that's the only reason why I went … It was free … It was a free education."

Institutional Support

Several participants described feeling like they had to seek out support from their institution when they needed help. This contrasts with the institution directly offering support. For example, Alexis said, "I don't know if they [my institution] know I'm first-generation, and I think when it comes to that, usually you have to communicate with them that you're in need as a first-generation…," indicating that first-generation women students need to express their first-

generation status if they need help.

Support for first-generation students may exist on a campus, but first-generation students may have difficulty finding it. Isabel explained that she had to look for the support she needed. She said, "… I didn't get career support until I was in my later years. Like, I'm just getting support now … and that's because I had to go look for it. If I didn't look for it, I would still not have it." Carol described students receiving financial assistance from her institution needing to find a work study job. She said, "… Like, that's out there for you, but being able to find the job that you need to use that work study fund was all on your own."

Isabel and Christina spoke about their need for help in understanding the unwritten rules of college. Because they are unaware of basic college expectations, first-generation students may encounter negative experiences with institutional members. For example, Isabel emphasized that faculty should "… [sigh] Realize that there are ways that they can support us by, like … Like, simple things, like not making us feel dumb for asking questions …," an experience that non-first-generation students may have. Christina further addressed the unwritten rules of being a college student that she thinks first-generation students would benefit from knowing.

> … I think it would be awesome if a university published, like, first-generation college FAQs [frequently asked questions]. Like, "Should I meet with friends? Yes, you should do this often. Should I go to office hours? Yes, your professors are there to talk to you and they want to talk to you about it. This does not mean you're stupid. This does not mean you did not do your homework. This does not mean any of those negative things that you might have in your brain."

Family Support

Overwhelmingly, participants indicated that they wanted and valued support from their families. For some participants, support from their family was limited or nonexistent. This was the case for Kauni. She explained:

> Oh, my dad is upset with me for being in college. My dad thinks it's a waste of time and he does not understand why, after I get my four-year degree, why I will not go and start making money. He thinks that with your four-year degree, you should be able to make a crap ton of money. And I've tried to explain to him … as a four-year degree psychology student, I'm not a psychologist yet, I will not make any more money than I was making before. I have to explain that to him and he doesn't understand that. Again, when you talk to somebody who's not educated much past high school, it's very difficult …

Katie expressed that her family seemed indifferent to her educational aspirations. When asked if she perceived that her family and friends support her, she said:

> To be honest, I don't know. It's like, with the more degrees I get, the less support I seem to get. [laughter] And I don't … I may sound strange, but it's just like, 'Really? Another degree?' is kind of the attitude I get … from some people … This is sounding terrible, but when I went to get my master's, my sister was like, 'Why are you getting a master's?' you know, and so it's just been kind of spotty, I guess, the support.

In some cases, families were uncertain how to support the participants. Michaela explained:

> I feel like, for me, like, my parents don't understand necessarily what college courses and

> things are like, so they just kind of, you know, listen to my experience and they don't really have experience to add to it, so they don't have that input, you know, maybe my friends do have that … But, I think that, you know, friends with a similar family structure to mine, they still receive the same level of support, it's just a little bit different. They've actually, you know, taken the college coursework and stuff, so they're like, "Oh, this class was hard. You're going to need to take a lot of notes in this course," or something like that, but I think the same general level of support's been pretty similar.

Despite support being limited, participants acknowledged the ways their families helped them, particularly in reaching college. Several participants in this study stated that they did not feel pressure to attend college. Rather, their parents assisted them in whatever ways they could. Lucy provided a clear example of this. She elaborated on her experience talking to her mother about college. When asked if they had conversations about Lucy attending college, she said:

> Not really. It was more, just sort of like, it's be mentioned in passing … Well, I guess when I was looking at colleges, then we started having conversations about it … but it was more just, like, her asking questions about it and, like, money was a really big concern, so of course she was asking a lot about that. Um, she did take me on college visits, which was a big surprise. I didn't think I'd get to do any of those … Looking back, I think that she definitely, like, wanted to be more involved with it, but didn't really know how to engage with it, if that makes sense.

It is clear that parental assistance and support is valued by first-generation women students. They believe the support from those closest to them, especially their parents, is critical to their accomplishments in college (McCulloh, 2022).

Motherhood

Of the eleven participants, four identified as being mothers. They spoke about the challenges they encountered balancing both roles. Georgia and Christina addressed the need for childcare. Georgia's family supports her by providing her with this assistance. Christina spoke about the disservice institutions do to students who are mothers by enacting policies that ban children from the classroom. As a former teacher, she experienced students emailing her to let her know they couldn't make it to class because they did not have childcare. She said, "…that's something I'm really passionate about that I wish universities and employers would do a better job of supporting women with."

Feelings of guilt are part of the role conflict that mothers face when deciding between their education and their children (Kensinger & Minnick, 2018). Balancing the two can cause tremendous stress. Georgia explained the physical and mental toll that balancing college and motherhood had on her.

> Um, it's been tough. Like, there's been a lot of time I've looked back from a mother's standpoint and felt really guilty because I took time away from my kids. And it made it more challenging. I mean, I think … it was physically harder on me because I probably went a lot more without sleep and things like that to be able to complete assignments and stuff, because I would try to wait until I got my kids in bed … and then I would be up … sometimes all night long. I mean, I remember as a bachelor's student, I was up sometimes two or three days at a time, and I don't even know how I did that now, 'cause

> I can't go one day without sleep. But, I think physically, it probably took a toll on me … And still, you know, I still look back and wonder if it was worth it all sometimes … I guess I feel like I missed some of my kids' childhood.

Race

The women who identified as White did not feel that their race or ethnicity influenced the support they receive from their institutions, or they did not acknowledge them as influential factors. Christina acknowledged the privilege that her race provides her:

> No, I mean, I've never felt that my race mattered. I'm lucky because I'm White. So, I've never had any … You know, I know people say white is the default, so you don't think about races often, which I think is true. I never thought about it. It's probably more difficult if you're a person of color, but I haven't had that experience.

For the three women of color who participated in this study, their race has contributed to their college experience. As expressed earlier, first-generation women students are perceptive to how they are treated by professors and other institutional members. Carol took notice of how professors at her institution treated students of color. She explained:

> Um … Yeah, I think that … Since I have a foreign name, [Carol's name], and, um, though it's pronounced [Carol's name], um, a lot of the professors, when I talk to them first, they don't expect me to have this, like, Midwestern accent, fluent English kind of thing. So, they're kind of taken aback by that … Sometimes I see from afar, how white professors talk to international students, and it's kind of aggressive, and they just talk at them … And I don't let that happen to me.

Havlik et al. (2020) found that participants at predominantly White institutions (PWIs) reported a feeling of otherness, or a feeling of being left out or misunderstood, in regard to their status as first-generation students, their socioeconomic status, and their race or ethnicity (Havlick et al., 2020). The intersectionality of multiple identities furthers the feelings of otherness first-generation students felt from peers and faculty members (Havlick et al., 2020), as demonstrated by Carol's experience and observations.

COVID-19

The closing of college campuses resulted in feelings of insecurity for disadvantaged students such as low-income and first-generation students (Fischer, 2020). For these students, college can be "…a provider of hot meals and health care and a place to sleep" (Fischer, 2020). The COVID-19 pandemic increased some students' risk of physical and mental health problems and put their academic careers in jeopardy (Lederer et al., 2020).

Many of the women interviewed for this study explained the ways their institutions supported them during COVID-19. They described positive experiences with their institutions and professors during the beginning months of the pandemic, saying that the support was greater than normal. Michelle described the flexibility that her professors demonstrated to her, saying that two of them "… said, you know, 'If something's wrong, if you need time, whatever it may be, just let me know and we'll adjust.'" She also described one of her professor's actions as soon as

the pandemic hit, saying he "… Eliminated the due dates and said … 'This is the final date of the course, and you need to have it done by this date,' um, but he didn't enforce, you know, 'You've got to have it in by midnight or I'm docking five points,' kind of stuff. He did not do that."

Despite feeling strong support from some areas of their institutions, participants acknowledged needing more support in other ways. Carol described needing more understanding from her professor in terms of teaching during the pandemic.

> So, um … So, I decided to stay at home with my parents for the fall semester … But I told the professor of the class I'm teaching, 'My parents are older and I do not want to be in a room full of …' I'm teaching a senior design course … 'I do not want to be in a room full of seniors who are going to be partying all weekend and bringing their germs in on Monday.' But then, he emailed me back saying that, 'You should prepare to teach mostly in class.'… Um, but then I got advice from another female professor who said, 'You should have the right to choose to teach it online or in person.' … So, I'm trying to fight with him right now.

When asked if there were any other things that could have been done differently to make her feel more supported, Michaela said:

> I think definitely, you know … And I know that the university was in a struggle with, you know, 'What do we do next?' and stuff. I just, I felt like through this whole process, and even still now, I've been in a constant state of uncertainty. And though they're communicating with us, it's in lengthy, wordy emails that contain a lot of information that just all kind of gets lost in each other. So, I feel like there's got to be a better way to make students feel less uncertain and unstable about what's going on. So, I think that's definitely something that could have been done differently.

Michaela's perspective that the communication her university provided was too lengthy indicates that simplicity and conciseness may be key for institutional effectiveness. Consistent and clear communication with students has been necessary during the pandemic (Lederer et al., 2020).

Discussion

The purpose of this phenomenological study was to understand the lived experiences of first-generation college women as it pertained to the support they receive as students. The themes derived from the data further support the current literature on first-generation women students, as well as add new perspectives.

First-generation women students have a love of and a desire to learn but need emotional support during the process. Several participants addressed the helpfulness supportive faculty members or advisors provided to them. Supportive college faculty and administrators can help first-generation students feel a greater sense of belonging (Means & Pyne, 2017). Mentorships such as these have a significant impact on the emotional development of women as they attend college. They also expressed the impact that negative experiences with faculty members. Kauni's experience of being put down by an undergraduate professor was impactful enough to cause her to drop out of school. That experience carries over into Kauni's current undergraduate life, causing her to question the work she submits as a returning student.

First-generation women students perceive a greater need of financial support from family and institutions. Several participants expressed facing financial hardships while enrolled in college. They stated they were not able to participate in campus events, had to drop out of

academic programs because they could not afford the necessary supplies, or had to change academic plans because of a lack of money. Christina, Michaela, Katie, Carol, and Lucy explained how much financial aid had helped them be able to attend college. In some cases, scholarships and other financial assistance were motivating factors for the women to attend school. Kauni, Michaela, and Isabel expressed the difficulties they face finding financial aid opportunities and navigating the financial aid system.

Another theme that emerged from the research is that the participants wanted more institutional support that is specific to them as first-generation women students. Participants felt that institutional support is minimal at best. Anna, Alexis, Carol, and Isabel stated that they have to ask for or seek out assistance from their institution. Christina specifically referenced the unwritten rules of college and argued that they should be published somewhere for all incoming students. She mentioned an example of this being that she did not know she could form a study group with her classmates until a professor told her it was a good idea. She believed that it was cheating until that conversation. Not knowing that this kind of academic strategy can be used is a prime example of the knowledge non-first-generation students have in comparison to their first-generation peers.

Another difference between these two groups is the role of family support in their lives. Several of the participants indicated that their parents did not know how to support them in college. Christina, Michaela, Katie, Georgia, Carol, and Isabel explained this sentiment further. A few of them indicated that their parents offered various levels of emotional support. However, the overarching theme was that parents were often unsure of how to support their daughters and were not able to give them input about college. These responses correspond to previous findings about parents' responses to their first-generation children attending college, and range from supportive to dismissive (Gofen, 2009; Wang, 2014).

None of the white participants felt that their race had influenced the support they were given while in college. Christina and Georgia specifically acknowledged having white privilege. Meanwhile, Alexis, Carol, and Isabel, the three students of color, described having experiences that were influenced by their race. Specifically, participants mentioned experiencing microaggressions from professors and advisors. Considering the definition of Crenshaw's (1991) theory of intersectionality and Carastathis's (2014) further explanation of it, the stories of first-generation women students explain how the intersection of their race with their womanhood and first-generation status play into levels of power and oppression they feel at the university level.

Four of the participants identified as mothers. Christina, Katie, Michelle, and Georgia described different experiences and challenges they faced as mothers and college students. Christina mentioned how difficult it would have been to be a mother as an undergraduate student and explained that she saw a need for more childcare assistance at universities. Indeed, the CCSSE (2020) reported that first-generation students are more likely to find childcare services provided by their institutions very important in comparison to their peers (p. 12). Georgia expressed feeling guilt for the time she had missed with her children and grandchildren while earning her degrees. The intersection of motherhood, womanhood, and being a college student offers unique challenges to first-generation women students.

This research study took place as the COVID-19 pandemic unfolded across the globe. Participant interviews were conducted several months after colleges and universities

transitioned to remote learning. The largest theme that participants addressed was that they felt greater levels of support than usual during the pandemic, particularly from their professors. Participants indicated that they felt flexibility from faculty and enjoyed periodic check-ins from their professors and other institutional members. There were, however, mentions from participants of places where more support could have been offered, such as providing more certainty to students and more understanding for their personal needs. The levels of support that were and were not provided to the women during the start of the pandemic align with what first-generation students need when they begin college. Gist-Mackey et al. (2018) identified these supports as informational, emotional, appraisal, and instrumental. Participants in this study indicated needing support in all those ways during the pandemic.

Implications

Based on the research findings, we recommend several areas of improvement for future practice. First, there is a need for institutional support in bridging the gaps between first-generation and non-first-generation students. The "unwritten rules" are difficult for these first-generation women to ascertain when they do not have personal resources, such as parents, to show or tell them what to do or expect. It is the responsibility of higher education administrators and faculty members to find ways to assist first-generation students in learning about the norms they do not know or have access to. Second, institutions need to more clearly provide resources for first-generation students. Institutional leaders should identify areas where they can improve access to first-generation women students, such as assistance with FAFSA and other financial aid or first-generation campus initiatives where first-generation students can connect with their first-generation peers. Third, institutions need to better support students who are mothers. Students with children should be given equal opportunities to attend classes. Institutions should find ways to provide this much needed resource on campus. Finally, institutions should aid the families of first-generation students. Many participants expressed their family members being supportive of their college journeys, but not knowing how to support them. Institutions should consider offering an orientation directed towards the parents of first-generation students. At these orientations, institutions could provide parents with pamphlets and trainings that share resources specific to them and their first-generation children.

The results of this study display areas for further research. First, the interviews for this study took place after the first few months of the COVID-19 pandemic. Participants had completed part of their spring 2020 semester online and were preparing for the uncertainty of the upcoming fall term. Now in 2022, the state of the pandemic is ever-changing. Future research could be done to assess if first-generation women students perceived any changes to the levels of support they felt as the pandemic continued into 2021.

There is room for research on the family of first-generation women students as a motivation to attend college. Several women in this study expressed a desire to support their families, whether it be their parents or their children. I was not able to further explore these statements in this study but believe them worthy of future examination. Another point addressed by Isabel was the cultural expectations she faced as a Hispanic woman. This study had only three participants of color. Further research on a greater population of first-generation women students of color could be done to understand the impact cultural implications have on first-

generation women students and their decision to attend and stay in college. The role of intersectionality in first-generation women students is worth further exploration.

More research could be done to understand the impact that motherhood has on the decision to attend and remain in college. It was apparent during the study that the women who were mothers faced challenges that those who were not mothers did not face, such as mother's guilt and access to childcare. More attention should be paid to the experiences of college students who are mothers.

Conclusion

This phenomenological study sought to explore the perceptions that first-generation women enrolled in college have of the support that is offered to them. As demonstrated in this article, first-generation students are a vibrant and critical part of the college and university population. The women of this group are determined, intelligent, and motivated to achieve their academic goals. The challenges that they face are unique. They deserve institutional support and guidance to ease the impact of those challenges and make their journey in higher education a more equitable one.

References

Arch, X., & Gilman, I. (2019). First principles: Designing services for first-generation students. *College & Research Libraries, 80*(7), 996-1012. https://doi.org/10.5860/crl.80.7.996

Carastathis, A. (2014). The concept of intersectionality in feminist theory. *Philosophy Compass*, *9*(5), 304–314. https://doi.org/10.1111/phc3.12129

Chatelain, M. (2018). We must help first-generation students master academe's 'hidden curriculum'. *The Chronicle of Higher Education*. https://www.chronicle.com/article/We-Must-Help-FirstGeneration/244830?cid=wcontentgrid_hp_2

Community College Survey of Student Engagement. (2020). *Community College Survey of Student Engagement- 2020 cohort- 2020 frequency distributions- Main survey: Breakout by first-generation status [weighted].*

Cooper, B. C., Morris, S. M., & Boylorn, R. M. (2017). Crunk glossary. In Cooper, B.C., Morris, S.M., and Boylorn, R.M. (Eds.), *The crunk feminist collective* (pp. 325-329). Feminist Press.

Crenshaw, K. (1991, July). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, *43*(6), 1241-1299. https://doi.org/10.2307/1229039

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE.

Fischer, K. (2020, March 11). When Coronavirus closes colleges, some students lose hot meals, health care, and a place to sleep. *The Chronicle of Higher Education*. https://www.chronicle.com/article/when-coronavirus-closes-colleges-some-students-lose-hot-meals-health-care-and-a-place-to-sleep/?cid=gen_sign_in

Fruiht, V., & Chan, T. (2018, June). Naturally occurring mentorship in a national sample of first-generation college goers: A promising portal for academic and developmental success. *American Journal of Community Psychology, 61*(3/4), 386-397. https://doi.org/10.1002/ajcp.12233

Gist-Mackey, A. N., Wiley, M. L., & Erba, J. (2018). "You're doing great. Keep doing what you're doing": Socially supportive communication during first-generation college students' socialization. *Communication Education, 67*(1), 52-72. https://doi.org/10.1080/03634523.2017.1390590

Gofen, A. (2009, February). Family capital: How first-generation higher education students break the intergenerational cycle. *Family Relations*, *58*(1), 104–120. https://doi.org/10.1111/j.1741-3729.2008.00538.x

Hagedorn, L. S., Womack, F. I., Vogt, C., Westebbe, S., & Kealing, J. (2002). Persistence. In A.M. Martinez Aleman & K.A. Renn (Eds.), *Women in higher education* (pp. 339-343). ABC-CLIO, Inc.

Havlik, S., Pulliam, N., Malott, K., & Steen, S. (2020). Strengths and struggles: First-generation college-goers persisting at one predominantly white institution. *Journal of College Student Retention: Research, Theory, and Practice, 22*(1), 118-140. https://doi.org/10.1177/1521025117724551

Ishitani, T. T. (2006, September/October). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher*

Education, *77*(5), 861–885. https://doi.org/10.1353/jhe.2006.0042

Ishitani, T. (2016). First generation students' persistence. *College & University*, *91*(3), 22–35.

Kensinger, C., & Minnick, D. (2018). The invisible village: An exploration of undergraduate student mothers' experiences. *Journal of Family and Economic Issues, 39*(1), 132-144. https://doi.org/10.1007/s10834-017-9535-6

Laajala-Lozano, A. & Jenkins, S. R. (2022). Undergraduates' academic acculturative stress at the intersection of first-generation status and gender in a public university setting. *Journal of College Student Retention: Research, Theory, & Practice,* 1-18. https://doi.org/10.1177/1520251221120396

Lederer, A. M., Hoban, M. T., Lipson, S. K., Zhou, S., & Eisenberg, D. (2020). More than inconvenienced: The unique needs of U.S. college students during the COVID-19 pandemic. *Health Education & Behavior, 48*(1), 14-19. https://doi.org/10.1177/1090198120969372

Lohfink, M. M., & Paulsen, M. B. (2005, July/August). Comparing the determinants of persistence for first-generation and continuing-generation students. *Journal of College Student Development*, *46*(4), 409–428. https://doi.org/10.1353/csd.2005.0040

McCulloh, E. (2022, May). An exploration of parental support in the retention of rural first-generation college students. *Journal of College Student Retention: Research, Theory, & Practice, 24*(1), 144-168. https://doi-org.iris.etsu.edu/10.1177/1521025120907889

McMillan, J. H., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry* (7th ed.). Pearson Education.

Means, D. R., & Pyne, K. B. (2017, September). Finding my way: Perceptions of institutional support and belonging in low-income, first-generation, first-year college students. *Journal of College Student Development, 58*(6), 907-924. https://doi.org/10.1353/csd.2017.0071

National Survey of Student Engagement. (2019). *Engagement insights: Survey findings on the quality of undergraduate education- Annual results 2019.* https://doi.org/10.5967/epah-zn62

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004, May-June). First generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75*(3), 249-284. https://doi.org/10.1353/jhe.2004.0016

Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). SAGE Publications.

Phillips, L.T., Townsend, S. S. M., Stephens, N. M., & Godeau, S. (2020). Access is not enough: Cultural mismatch persists to limit first-generation students' opportunities for achievement throughout college. *Journal of Personality and Social Psychology: Interpersonal Relations and Group Processes, 119*(5), 1112-1131. http://dx.doi.org/10.1037/pspi0000234

Piper, J. (2018). New roles focus on first-generation students' issues*. The Chronicle of Higher Education.* https://www.chronicle.com/article/New-Roles-Focus-on/244783

Ricks, J. R., & Warren, J. M. (2021). Transitioning to college: Experiences of successful first-generation college students. *Journal of Educational Research & Practice, 11*(1), 1-15. https://doi.org/10.5590/JERAP.2021.11.1.01

Roksa, J. & Kinsley, P. (2019, June). The role of family support in facilitating academic success of low-income students. *Research in Higher Education, 60*(4), 415-436.

https://doi.org/10.1007/s11162-018-9517-z

RTI International. (2019). *First-generation College Students: Demographic Characteristics and Postsecondary Enrollment*. Washington, DC: NASPA. Retrieved from https://firstgen.naspa.org/files/dmfile/FactSheet-01.pdf

Sokolowski, R. (2000). *Introduction to phenomenology.* Cambridge University Press.

Stanton-Salazar, R. D. (2011). A social capital framework for the study of institutional agents and their role in the empowerment of low-status students and youth. *Youth & Society*, *43*(3), 1066–1109. https://doi.org/10.1177/0044118X10382877

Tinto, V., & Engle, J. (2008). *Moving beyond access: College success for low-income, first-generation students.* The Pell Institute for the Study of Opportunity in Higher Education. http://www.pellinstitute.org/downloads/publications-Moving_Beyond_Access_2008.pdf

Wang, T. R. (2014). "I'm the only person from where I'm from to go to college": Understanding the memorable messages first-generation college students receive from parents. *Journal of Family Communication*, *14*(3), 270–290. https://doi.org/10.1080/15267431.2014.908195

Ward, L., Siegel, M. J., & Davenport, Z. (2012). *First-generation college students: Understanding and improving the experience from recruitment to commencement*. Jossey-Bass.

Whitley, S. E., Benson, G., & Wesaw, A. (2018) *First-generation student success: A landscape analysis of programs and services at four-year institutions.* Center for First-Generation Student Success, NASPA-Student Affairs Administrators in Higher Education, and Entangled Solutions.

Uniforms in Three Middle Schools: Student Opinions

Andrew Yoxsimer
University of Nevada, Reno

Jafeth E. Sanchez
University of Nevada, Reno

This quantitative study used an existing dataset with responses from 1,848 public middle school students' opinions on the benefits of wearing a school uniform. Efforts in favor of and against school uniforms are noted, and the analyses used to examine demographic variables (i.e., gender, grade-level, and race/ethnicity) reveals that students in the 7th grade and Hispanic/Latino students benefited from the uniforms as compared to their peers. These insights can help school leaders identify practices that promote positive responses to the factors measured by the Student School Uniform Survey. Positive increases in students' perceptions of the constructs identified in the Student School Uniform Survey could support efforts toward increased learning experiences for all students. This is especially important with the understanding that, when students' social-emotional needs are met within a school culture of learning, positive learning outcomes can transpire. A discussion of these findings is shared, along with a conclusion.

Keywords: quantitative, opinions, survey, middle school, school uniforms

School leaders and teachers are increasingly under pressure to make schools safe from internal and external threats, close the achievement gap, and continuously improve the quality of education for all students (Fotheringham et al., 2020). These are daunting challenges under the best of circumstances but even more so in the face of budget reductions and ongoing demands for increased accountability. Since the mid-1980s, school officials began turning to school uniforms to address the issues plaguing United States (U.S.) public schools (Anderson, 2002; Brunsma, 2004). Yet, our search for peer-reviewed literature using Academic Search Premier with the words "school uniform" resulted in only 119 articles, and that was with the inclusion of areas outside of the U.S. and in non-academic settings. This is still quite minimal in the context of U.S. public schools implementing school uniform policies to improve educational outcomes. For example, the U.S. Department of Education's National Center for Education Statistics ([NCES] Wang et al., 2020) accounted for school uniforms as part of school crime, safety, and security measures. Wang et al. (2020) detailed that 23% of elementary schools required students to wear uniforms, with lower percentages at the middle (18%) and high school (10%) levels.

The increased implementation of school uniform policies at the elementary level has been a long-standing pattern; Cherry Hill Elementary School in Baltimore, Maryland was among the first to actively publicize a uniform policy (Anderson, 2002). As an elementary school, Cherry Hill served predominantly students from African American families of low- to middle-income backgrounds and initiated a uniform policy in 1987 to reduce clothing costs and minimize social pressure on students (Brunsma, 2004). Soon after, leaders at several other Baltimore area schools adopted a uniform policy known as The Uniform Project (Brunsma, 2004). A year after this project, a pilot school uniform project was also proposed and then implemented in 1989 in New York. In turn, leaders in school districts across the country, including districts in Chicago, Detroit, and Los Angeles implemented uniform policies. Some were district-wide initiatives, while others were initiatives in individual schools. Yet, common factors among early uniform policies reflected schools with students from historically marginalized racial/ethnic groups and of low-income family backgrounds in urban areas (Brunsma, 2004). Modern explorations of uniform policies link dress code or uniforms to violence, which is deemed an extension of school discipline (Baumann & Kriskova, 2016).

Nearly a decade after the initial push for school uniforms, in 1994, Long Beach Unified School District (LBUSD) was one of the first and largest school districts in the U.S. to require all students in the district to wear uniforms. It is in California and serves 67,700 students; their district information noted that they are listed as being among five of the world's highest performing school systems (LBUSD, 2022). Long Beach received a great deal of attention from researchers and politicians, and the impetus for their uniform policy was, "To combat 'gang wear', or gang-related clothing, soothe the frenzy over designer clothing that highlights economic disparities and help pupils focus on learning" (Melvin, 1994, p. 7).

A year into the effort, LBUSD reported extensive gains in safety and improvement in student behavior (Stanley, 1996). In addition to the tremendous gains in safety, district officials noted that in some of the schools, there was a significant improvement in grades and student achievement. However, Stamison (2006) argued that no empirical studies were conducted with reliable data for LBUSD, which undermined the credibility of the results. Despite the credibility concerns, the results reported by LBUSD prompted presidential advocacy for school uniform

policies highlighted in the U.S. State of the Union with President Clinton's endorsement of school uniforms. This encouraged school district leaders around the country to implement mandatory uniform policies.

More recently, Baumann and Krskova (2016) sought to identify the linkages between school uniform policies and academic performance. They emphasized that one area largely overlooked in this effort is discipline, which uniforms aim to reduce. Ultimately, their findings demonstrated that school uniforms were associated with key elements of school discipline that reflect academic performance among students. In Sanchez et al.'s (2012) work, though, they indicated that students who were tasked with wearing the uniforms were commonly excluded from the evaluation process. Therefore, this study sought to empirically include student perceptions regarding the benefits of wearing a school uniform in alignment with decreases in disciplinary needs and improved school culture toward overall school improvement efforts.

In Favor of School Uniforms

Despite aims toward school improvement, effects through school uniform policies are debated. One concern with the U.S. has been the dearth of empirical research on school uniforms, but school administrators highlight the need to implement mandatory school uniform policies to improve school safety by eliminating the clothing associated with gang membership (Ramirez et al., 2011). Because gang members identify themselves by wearing certain colors, accessories, or wearing clothing in a particular way, enacting a uniform dress code may minimize the overt symbols of gang activity (Holloman, 1995; Starr, 2000). Indeed, students' perceived benefits in all intended constructs have been noted (Sanchez et al., 2012), despite students' clear lack of preference to wearing a uniform, including critical decreases in discipline and school police data in the school's first year of uniform implementation.

Furthermore, advocates have pointed to evidence that school uniforms are more cost effective for parents (Caruso, 1996), and that they create an equalizing effect for students of different socio-economic status (Holloman et al., 1998). The implementation of uniforms is not only aimed to eliminate a sense of competition among students, but it also intended to lower the parental or family cost on clothing; students have also reported that it makes it easier for the to go to school, particularly for those from marginalized backgrounds (Sanchez et al., 2012). Ultimately, uniforms have continued to be used in schools to safeguard against a multitude of disruptions and issues (Gurung et al., 2018). However, there are many who indicate that mandatory school uniforms are not beneficial and are opposed to such policies.

Against School Uniforms

Opponents to school uniform policies believe that uniforms are not the way to solve the much larger problems facing school leaders. Brunsma (2006) argued that school uniform policies are mere quick fixes and do not address the deeper issues in U.S. schools. A plethora of existing research (Brunsma & Rockquemore, 1998; Caruso, 1996; Isaacson, 1998) also emphasized that those against mandatory uniform policies believedd the policies impede on students' First Amendment rights and stifled their creativity and developmental needs for expression. Opponents have argued that students will continue to find more subtle ways to distinguish

themselves with accessories that are not usually regulated by uniform policies (Caruso, 1996; Isaacson,1998; Seigel, 1996). In addition, opponents have argued that families spent more on clothing because of the purchase of the uniform in addition to clothing needs outside of the school setting and over the summer months (Boutelle, 2008).

In an effort to identify specific uniform impacts, Hughes (2006) examined the role of uniforms in enhancing a sense of belonging, identity, social cohesion, safety, and security in sixth, seventh, and eighth grade students in Houston and San Antonio, Texas. Hughes (2006) found that students who wore a school-specific identifying logo or uniform had a greater sense of belonging in their school community than did students in the standard dress group. The significance of this finding rested in earlier research that suggested a sense of belonging as a major motivational dimension of the school environment and an important role in the development of a student's sense of community within the school and in the larger community (Fosseen, 2006).

Tucker (2006) surveyed middle school teachers to assess the impact that a mandatory uniform policy had on teacher perceptions of climate and academic orientation. He found that teachers at schools with a uniform policy had a more positive view of the climate and safety of their school than teachers at a school without a uniform policy. Teachers indicated that outsiders were more easily identified, and students could not hide weapons as easily because there was less baggy clothing. In addition, teachers at schools with uniforms perceived a higher academic orientation among the students than teachers at schools without a uniform.

Focusing on international students and school uniforms, Kim and Delong (2006) compared student, parent, and teacher attitudes in the U.S. and South Korea on various school uniforms issues. Parents and teachers in both countries had a more favorable perception of school uniforms than did students. Students in both countries did not indicate that wearing uniforms would improve the school environment or student behavior; however, the parents in both countries disagreed with the students. Uniquely, students had a more positive attitude toward uniforms the longer they wore them. The authors posited that an elementary start to wearing a uniform could contribute to student acceptance in their secondary school years. Thus, the focus on uniforms to support students' educational experiences remains essential.

Study Purpose

The literature has affirmed that research on current school uniform efforts is minimal, especially when examining students' opinions and uniform outcomes to school violence and safety issues. For example, the Student School Uniform Survey was specifically designed to assess student perceptions of the benefits of a mandatory school uniform, including increased safety, ease of going to school, bullying, decreased disciplinary issues, gang involvement, confidence, and self-esteem. A better understanding of student experiences to potential benefits can allow school leaders to better understand their connectivity to reduced discipline, improved school culture, and overall school performance. Thus, given continued interest surrounding school uniform policies, the purpose of this study was to further examine public middle school students' opinions on the benefits of wearing a school uniform.

Method

A quantitative methodology was used for the purpose of this study. Of note, this work builds off the work of Authors (DateA) to investigate relationships among responses based on middle school student membership in specific demographic groupings of a survey factor structure. Upon institutional review board approval, the authors utilized de-identified existing data collected from students at three middle schools in an urban area in the western U.S. These middle schools had mandatory uniform policies and were all located in the same school district. The existing data reflected 1,848 middle school student responses for the instrument, Student School Uniform Survey. The existing survey data included three demographic grouping: gender, grade-level, and race/ethnicity. Therefore, the research questions that guided this study were: What are middle school student opinions regarding the benefits of wearing school uniforms? Do student opinions on school uniforms differ by demographic groupings?

Instrumentation and Existing Dataset

The instrument from which the data originated is a researcher-created instrument designed to measure student perceptions of the benefits of wearing a school uniform at the conclusion of the first year of a mandatory uniform policy at the middle school level. The school administration of one middle school approached the university with aims to measure the perceived benefits of the school uniform policy. After conducting a review of literature, the lead developer of the survey worked with the school principal to identify areas of inquiry and determine factors to be measured by the Student School Uniform Survey. The instrument was constructed around six perceived factors: decreases in discipline, gang involvement, bullying and increases in safety, ease of going to school, confidence, and self-esteem. After developing an initial set of questions for the instrument, we consulted with the school administration and modified the survey based on the administration's feedback. Importantly, while the school principal provided feedback on the survey for his respective school site; the lead researchers implemented the survey across multiple schools. At that point, the principal was not involved in continued study efforts. As such, the data were existing but only one study at one school had been published. This study reflects a subsequent analysis across all existing data previously collected.

Graduate students with an educator background also provided feedback on the survey; finally, students in a middle school leadership class also reviewed the survey and provided feedback. This content validity led to having the instrument center on 49 questions, with primarily 4- and 5-point Likert-type items and dichotomous yes/no questions. Items 15-46 on the survey ask respondents to select a, b, c, or d with a = Strongly Disagree and d = Strongly Agree. The final three questions focus on demographic groupings that asked students to self-identify gender, grade-level, and race/ethnicity.

All response choices used similar lettering options to align with a scantron sheet that students were familiar with using through testing initiatives. The Student School Uniform Survey was initially administered to students in their English or advisory class by the lead researcher and volunteer graduate students who had completed their Collaborative Institutional Training Initiative program. Middle school students were informed that their responses to the survey would not impact the mandatory school uniform policy. In addition, students were told that

completion of the survey was voluntary. Survey questions were read aloud to students to support pacing needs to limit a disruption to their school day, as well as to attend to possible difference in student reading levels. Completion of the survey took no longer than approximately 10 minutes. These measures and procedures represent the origin of the existing dataset.

Data Analyses

First, descriptive statistics were used to gain a better understanding of the existing dataset, examine the data for missing cases and outliers, and test for assumptions of the additional analyses. Next, to identify possible group differences in student perceptions, the Multivariate Analysis of Variance (MANOVA) was used for each of the demographic variables (i.e., gender, grade-level, and race/ethnicity). Importantly, in Authors (Sanchez et al., 2012), reliability using Cronbach's alpha was .93, which was deemed appropriate to conduct additional analyses. Furthermore, this work is part of a larger study (Yoxsimer, 2015) that also conducted a factor analysis on the Student School Uniform Survey. Yoxsimer (2015) found that Factors 1-3 of the Student School Uniform Survey included *Safety and Behavior of Others*, *Acceptance of my Behavior*, and *Ease of Going to School*. Items within these factors reflected a coefficient alpha of .89 with n = 1,109. Also, although this existing dataset included three grade levels (i.e., sixth, seventh, and eighth) and five categories for race/ethnicity (i.e., White/Caucasian, Hispanic/Latino, Black/African American, Asian/Pacific Islander, Native American/Alaskan Native), the 6th-grade students were not considered in the MANOVA, and only White/Caucasian and Hispanic/Latino were included because of the small n-size in the other groups. Finally, for statistically significant results, post-hoc analyses were conducted, and the mean scores were examined to identify group distinctions.

Limitations

The data were limited to one school district. The data reflects student perceptions and are a snapshot view. Results do not encompass longitudinal outcomes to the uniform policy. The data also reflect self-reported information and were not linked to specific student or school achievement outcomes. Comparisons across school demographics used for this study or their unique school programming that was in place during the start of the uniform policies was not explored, which may have contributed to experiences while wearing their uniforms.

Results

All Students

These descriptive results represent the survey responses from the first year of school inform implementation at three urban middle schools and total of 1,848 students. Of the 1,848 surveys collected, 85% (n = 1,577) had the race/ethnicity question completed, but 15% (n = 271) of the surveys did not have this question completed (see Table 1).

Table 1

Frequencies and Percentages of Groups Established by Ethnicity

Ethnicity	Frequency	Percent
White/Caucasian	567	31
Hispanic/Latino	807	44
Black/African American	60	3
Asian/Pacific Islander	93	5
Native American/Alaskan Native	40	2
No Response	271	15
Total	1848	100

The data on gender reflected 91% completion (*n* = 1,681) with 46% (*n* = 846) as male and 45% (*n* = 832) as female. The data revealed that 9% (*n* = 167) of the surveys had this question blank. In terms of grade-level, 6th-grade students accounted for 7% (*n* = 135), 7th-grade students 39% (*n* = 728), and 8th-grade students 44% (*n* = 808) of the dataset. The low number of 6th-grade students relative to other grades was because only one of the three middle schools included in the study had that grade level. Missing data for grade level accounted for 9% (*n* = 160) of the data.

In addition to the demographics, when students were asked if they liked wearing a uniform to school, 10% indicated "Yes," while the remaining 90% indicated "No." Also, 70% of the students agreed or strongly agreed that there were behavior problems at their school. When asked how often students saw bullying, gang activity, violence, teasing, or drugs at their school, over 40% of the students indicated "sometimes" to "almost always" for each of the categories. The only exception was the drugs category, which had 35%. The highest category was teasing, with 65% of the students saying they "sometimes" to "almost always" saw this occur at their school.

While most students did not like wearing uniforms, 30% of the students believed that wearing uniforms might reduce discipline issues. Yet only 10% said they would wear them if given a choice. Also, 44% of the students admitted getting easily distracted in the classroom, while 17% indicated that wearing a uniform helped them (*self*) focus in school, and 24% affirmed uniforms help *other* students focus on school. Considering consequences for not wearing a uniform, only 30% had gotten detention for not having worn it at some point.

Students' Highest/Lowest Perceived Benefits

Two groups were created using the results of the 32 specific statements related to behavior problems, self-esteem, confidence, feeling equal to others, feeling accepted by others, ease of going to school, and more. The two groups were: (a) the five highest ratings of agreement and (b) the five lowest ratings of agreement, as shown in Figures 1 and 2 respectively. The five highest ratings with "agree" and "strongly agree" had more than 40% of the students in agreement with

the statements. The five lowest ratings with "agree" and "strongly agree" had only 12% to 19% of students in agreement with the statements.

Figure 1

Highest Rated Statements with "Agree" and "Strongly Agree"

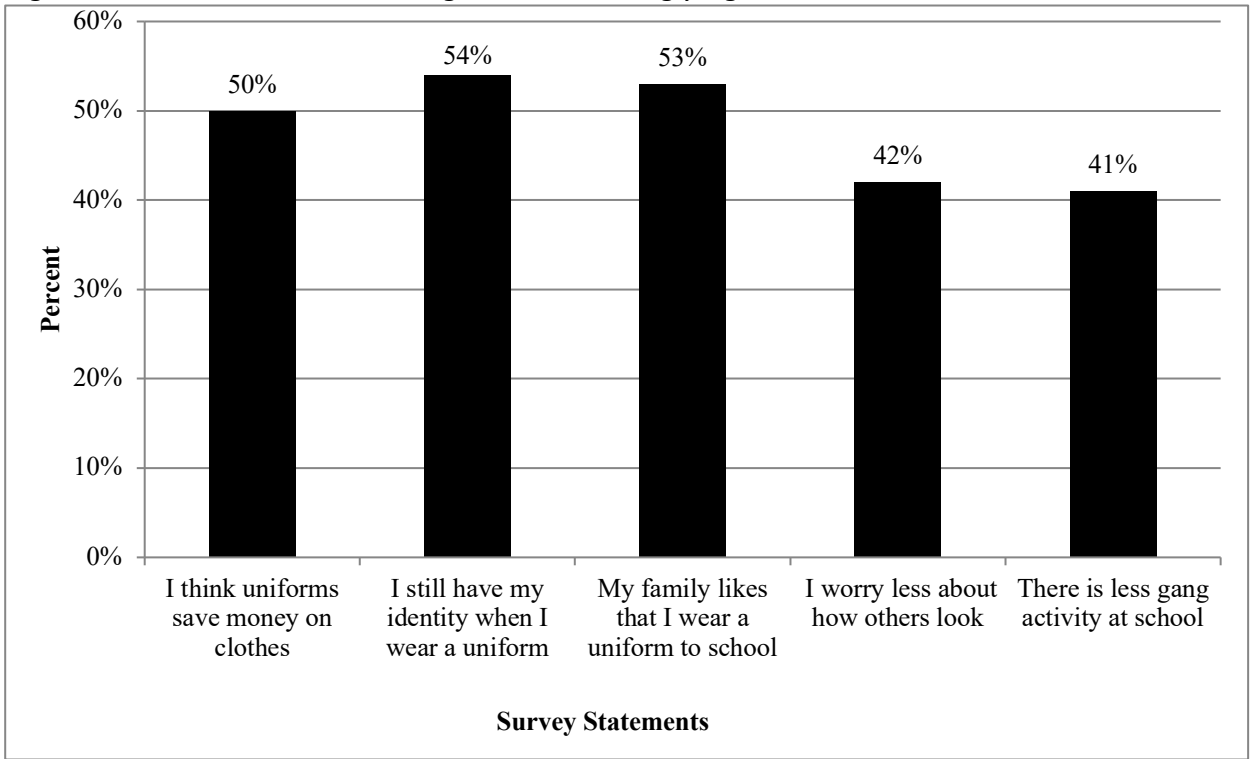
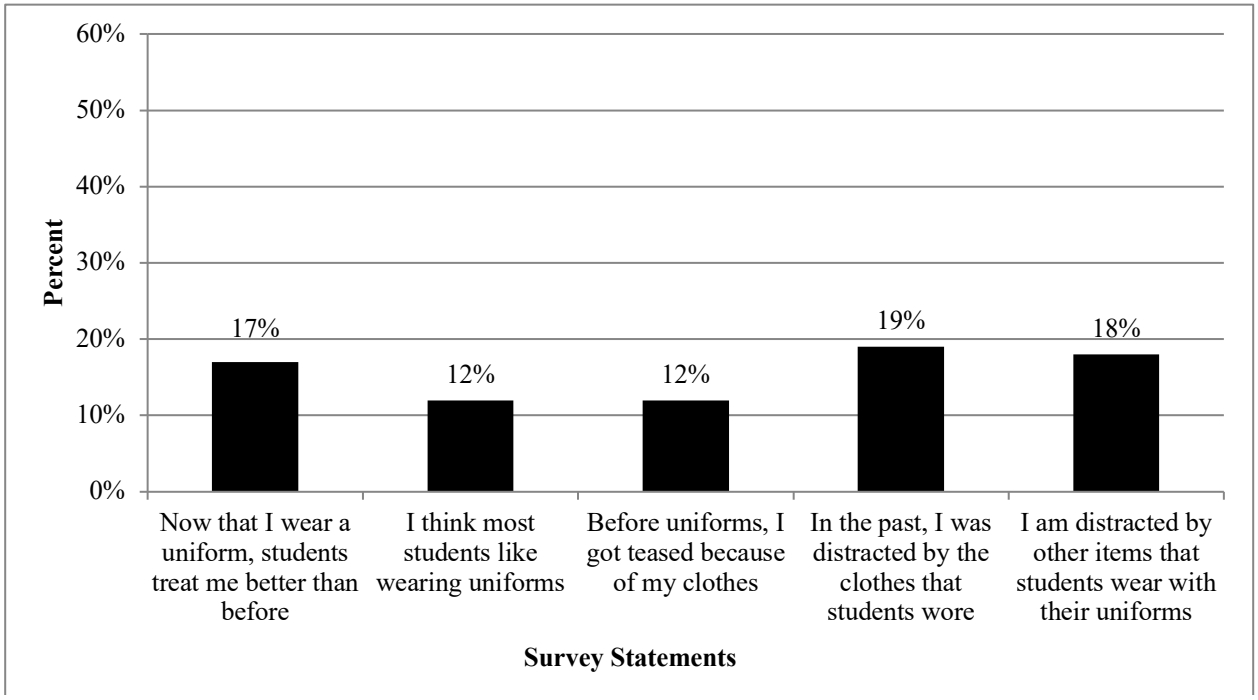


Figure 2

Lowest Rated Statements with "Agree" and "Strongly Agree"



Other Notable Student Opinions

There were eight statements for which 30% to 37% of the students indicated as "agree" and "strongly agree." These statements were as follows:

- I think uniforms help our school succeed (30%)
- With uniforms, there are fewer distractions at school (31%)
- With uniforms, there are fewer problems at school (33%)
- Wearing a uniform makes me feel equal to other students (33%)
- Wearing a uniform makes it easier for me to go to school (33%)
- My school is safer because we wear uniforms (34%)
- I think uniforms help our school look better (36%)
- With uniforms, I worry less about my appearance at school (37%)

These statements attend to multiple aspects of the intentions for the implementation of school uniforms. Although the level of agreement for these was not in the majority for students, they represent at least one-third of the students and a degree of perceived benefits in unique areas.

Gender Comparisons

A one-way MANOVA was conducted to determine if differences existed in survey response patterns by gender, male (n = 442) and female (n = 450). Mean factor scores were used, Box's M was not significant, and the assumption of variance-covariance was met. As a result, Wilk's Lambda was used to interpret the MANOVA. The main effect revealed there were no significant differences in response patterns between males and females [$F(3, 888) = 1.84$, $p < .01$].

Grade-Level Comparisons

A one-way MANOVA was conducted to determine if differences existed in response patterns by grade level, seventh (n = 423) and eighth grade (n = 473). Mean factor scores were used and Box's M was significant, so Pillai's Trace was used as the appropriate statistic to interpret the MANOVA. Main effects indicated statistical significance [Pillai's Trace = .000, F (3, 892) = 9.53, $p < .05$]. A subsequent ANOVA indicated differences existed between grade levels in Factors 1 and 3, with mean scores indicating that seventh grade students responded higher for both factors. Table 2 summarizes the main effects results of the univariate ANOVAs for Factors 1 and 3.

Table 2

Univariate Main Effects for Grade Level on Three Factor Scores

Variable	df	ms^2	*F*	Sig	η^2
Safety and Behavior of Others	1	1.58	25.23	.00*	.03
Error	894	.06			
Ease of Going to School	1	5.88	10.88	.00*	.01
Error	894	.54			

Note. *Significant at p < .05

Race/Ethnicity Comparisons

A one-way MANOVA was conducted to investigate potential differences in the mean survey scores of the two groups, White/Caucasian (*n* = 374) and Hispanic/Latino (*n* = 522) on Factors 1-3. Homogeneity of variance-covariance was assessed by interpreting Box's *M*, which was not significant, so Wilk's Lambda was determined to be the appropriate statistic. The one-way MANOVA revealed a multivariate main effect for ethnicity [Wilk's Lambda = .97, $F(3, 892) = 9.56$, $p < .05$]. The ANOVA revealed that group differences were significant for Factors 2 and 3, with mean scores indicating that Hispanic/Latino students responded higher both factors. Table 3 summarizes the univariate main effects results.

Table 3

Univariate Main Effects for Race/Ethnicity on Three Factor Scores

Variable	df	ms^2	*F*	Sig	η^2
Safety and Behavior of Others	1	.24	3.69	.06	.00
Error	894	.06			
Acceptance and My Behavior	1	1.00	17.88	.00*	.02
Error	894	.06			
Ease of Going to School	1	10.23	19.12	.00*	.02
Error	894	.54			

Note. *Significant at $p < .05$

Discussion

A large majority (90%) of students in their first year of having a school uniform policy at three urban middle schools indicated that they do not like to wear school uniforms. Yet, when examining more unique areas on the benefits of school uniforms, perceived benefits were found. For example, the survey item on student identity reflected 54% of students indicating they still had their identity. For items, such as the statement indicating they get treated better now that they wear uniforms, responses were low at 17%, but many might argue that the percentage still reflects strong practical significance when nearly one-fifth of the of the school's population has been positively impacted. While the percentages may seem low, this also aligned with Gurung et al. (2018) who found that "clothing is enough of a cue for people to make significant character judgments" (p. 556), as it is expected that educators remain unbiased and equitable in their practices to support all students.

Also, even though there are studies on differences in student and faculty perceptions regarding uniforms (Draa, 2005; Firmin et al., 2006), very few have examined the differences of perceptions within schools by demographic student groups. Results of this study revealed that there were no statistically significant differences by gender; whereas, in Sanchez et al. (2012), females tended to identify differences as compared to males with distinct differences by grade-level and race/ethnicity. The demographic group of grade-level revealed that 7th-grade students responded statistically significantly higher on Factor 1 (Safety and Behavior of Others) and Factor 3 (Ease of Going to School). Additionally, race/ethnicity differences existed on Factors 2 (Acceptance and My Behavior) and 3 (Ease of Going to School) with Hispanic/Latino responding higher than White/Caucasian on both factors. These results were like the recent findings by Jones (2020) in which Hispanic students viewed uniforms more positively and may have found them more helpful than their counterparts. Certainly, further work may help determine how mandatory uniform policies impact such perspectives. Altogether, this work continues to support and inform education stakeholders when implementing a mandatory school uniform policy, but it also provides important considerations on examining benefits based on the intersectionality of identities, such as 7th-grade Hispanic/Latino students.

These insights can help school leaders identify practices that promote positive responses to the factors measured by the Student School Uniform Survey. Positive increases in students' perceptions of the constructs identified in the Student School Uniform Survey could support efforts toward increased learning experiences for all students. This is especially important with the understanding that, when students' social-emotional needs are met, including feelings of safety, acceptance, and ease of going to school, they learn better (Zins et al., 2004).

Conclusion

A deeper understanding of students' perceived benefits of wearing a school uniform can facilitate and strengthen alignment of the intended purpose of school uniform policies with outcomes. For example, broader administration of this instrument could provide interesting data about the effect of school uniforms on diverse demographic groups, especially when considering one argument against school uniforms is that they are most implemented in schools that predominantly serve students of color and from low-income family backgrounds (DaCosta, 2006).

Uniquely, in Jones (2020) work on student perceptions of the effects of uniforms indicated minimal differences by socio-economic status (SES), which supported the possibility that students may see themselves as having increased academic potential. If such students perceive greater benefits from a mandatory school uniform policy than their predominant counterparts, the implications could be far-reaching and might influence policy makers in schools across the country. Ultimately, uniforms continue to be used "to symbolize a school's cohesiveness, levels of discipline, respect for authority, and high achievement; a hierarchy of priorities that schools promote" (Happel, 2013, p. 94). Thus, these finding have immediate relevance because many school leaders in districts throughout the U.S. continue to consider the implementation of school uniform policies and are charged with making equity-centered decisions to support all students, especially our most vulnerable youth.

References

Anderson, W. (2002). School dress codes and uniform policies. *ERIC Clearinghouse on Educational Management, 4,* 3-22.

Baumann, C., & Krskova, H. (2016). School discipline, school uniforms and academic performance. *International Journal of Educational Management*, *30*(6), 1003-1029. https://doi.org/10.1108/IJEM-09-2015-0118

Bodine, A. (2003a). School uniforms, academic achievement, and uses of research. *Journal of Educational Research, 97*(2), 67-71.

Bodine, A. (2003b). School uniforms and discourses on childhood. *Sage Publications, 10*(1), 43-63.

Boutelle, M. (2008). Uniforms: Are they a good fit. *Education Digest*, *73*(6), 34-37.

Brunsma, D. L. (2004). *The school uniform movement and what it tells us about American education: A symbolic crusade*. Scarecrow Education.

Brunsma, D. (2006). *Uniforms in public schools: A decade of research and debate*. Lanham, MD: Rowman & Littlefield.

Brunsma, D. L., & Rockquemore, K. A. (1998). Effects of uniforms on attendance, behavior problems, substance use and academic achievement. *Journal of Educational Research*, *91*, 53-62.

Caruso, J. (1996). Individuality vs. conformity: The issues behind school uniforms. *NASSP Bulletin, 80*, 83-88.

Draa, V. A. (2005). School uniforms in urban public high schools. (Doctoral Dissertation, Youngstown State University, 2005; ERIC Document Reproduction Service No. ED497409).

Firmin, M., Perry, L., Smith, S. (2006). School uniforms: A qualitative analysis of aims and accomplishments at two Christian schools. *Journal of Research on Christian Education*, *15*, 143-168.

Fosseen, L. A. (2006). School uniforms in middle schools: Enhancing identity and security. In Brunsma, D. (Ed.) *Uniforms in Public Schools: A Decade of Research and Debate* (79-114). Rowan & Littlefield Education.

Fotheringham, P., Harriott, T., Healy, G., Arenge, G., McGill, R., & Wilson, E. (2020). Pressures and influences on school leaders as policy makers during COVID-19. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3642919

Gurung, R., Brickner, M., Leet, M., & Punke, E. (2018). Dressing "in code": Clothing rules, propriety, and perceptions. *The Journal of Social Psychology*, *158*(5), 553–557. https://doi.org/10.1080/00224545.2017.1393383

Happel, A. (2013). Ritualized girling: School uniforms and the compulsory performance of gender. *Journal of Gender Studies*, doi: 10.1080/09589236.2012.745680

Holloman, L. O. (1995). Violence and other antisocial behaviors in public schools: Can dress codes help solve the problem? *Journal of Family and Consumer Sciences, 87*, 33-37.

Holloman, L. O., LaPoint, V., Alleyne, S., Palmer, R., & Sanders-Phillips, K. (1998). Dress-related behavioral problems and violence in the public school setting: Prevention, intervention, and policy- a holistic approach. *The Journal of Negro Education*, *65*, 267-281.

Hughes, E. (2006). Effects of mandated school uniforms on student attendance, discipline

referrals, and classroom environment. In Brunsma, D. (Ed.) *Uniforms in Public Schools: A Decade of Research and Debate. Lanham* (51-78). Rowan & Littlefield Education.

Isaacson, L. A. (1998). Student dress codes. *ERIC Digest*, *117*, 1-5. (ERIC Document Reproduction Service No. ED15570).

Jones, A. B., Richardson, M. J., Jensen, B. T., & Whiting E. F. (2020). Perceptions of school iniforms in relation to socioeconomic statuses, *RMLE Online*, 43(6), 1-13. doi: 10.1080/19404476.2020.1759298

Kim, Y., & DeLong, M. (2006). School dress codes and uniforms: Perspectives on wearing uniforms in Korea and the United States. In Brunsma, D. (Ed.). *Uniforms in Public Schools: A Decade of Research and Debate* (137-150). Rowan & Littlefield Education.

Long Beach Unified School District (2022). A national and international reputation for excellence. https://www.lbschools.net/District/

Melvin, T. (1994). Blackboard: Uniform diversity in California. *The New York Times.* p.7.

Ramirez, M., Ferrer, R. R., Cheng, G., Cavanaugh, J. E., & Peek-Asa, C. (2011). Violation of school behavioral policies and its relationship with overall crime. *Annals of Epidemiology*, *21*(3).

Stamison, V. (2006). The implementation and impact of mandatory school uniforms in Long Beach, California. In D. Brunsma (Ed.), *Uniforms in Public Schools: A Decade of Research and Debate.* Rowan & Littlefield Education.

Stanley, M. S. (1996). School uniforms and safety. *Education and Urban* Society, *28*, 424-435.

Starr, J. (2000). School violence and its effect on the constitutionality of public school uniform policies. *Journal of Law and Education*, *29*, 113-118.

Tucker III, W. H. (2006). Student uniforms and school climate: The urban middle school teacher's perception. In Brunsma, D. (Ed.). *Uniforms in Public Schools: A Decade of Research and Debate* (115-136). Rowan & Littlefield Education.

Wang, K., Chen, Y., Zhang, J., & Oudekerk, B. A. (2020). Indicators of School Crime and Safety: 2019 (NCES 2020-063/NCJ 254485). National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice.

Zins, J. E., Weisberg, R. P., Wang, M. C., & Walberg, H. J. (2004). *Building academic success on social and emotional learning: What does the research say?* Teachers College Press.

The Perspectives of Principals on the Discipline Disproportionality of Black Students with Disabilities

Wanda L. Van Dyke
University of Arkansas Fayetteville

John C. Pijanowski
University of Arkansas Fayetteville

Kara Lasater
University of Arkansas Fayetteville

Christy Smith
University of Arkansas Fayetteville

Black students with disabilities in Maple Cove School District were three times more likely to lose instructional days due to exclusionary disciplinary action than their peers without disabilities. A qualitative inquiry approach, in the form of a case study was used to determine principals' perspectives about factors that may impact discipline disproportionality. Student disciplinary records were examined to verify disproportionality and investigate patterns and categories related to students with and without disabilities being issued Office Discipline Referrals (ODRs). Interviews were conducted with building level administrators (principals and assistant principals) and their responses recorded and open coded to determine themes and develop ideas about how to address the inequities in how students are disciplined.

Keywords: discipline, disproportionality, educational leadership, special education, disability.

Black students with disabilities in Maple Cove School District lost three times as many instruction days due to exclusionary disciplinary practices than their non-disabled peers from 2017-2019. This data is consistent with trends found throughout the state of Arkansas. Since the mid 1970s, research has noted that Black students have seen higher rates of exclusionary practices such as out-of-school suspension and expulsion, than any other group of students (Losen & Gillespie, 2012; Skiba et al., 2009). Black students with disabilities are at an even greater risk of experiencing exclusionary practices than their White peers (Losen & Gillespie, 2012; Skiba et al., 2009). This cycle of removal has been identified as a leading factor to promoting the school to prison pipeline (Williams, 2016). When students with disabilities are removed from the classroom, they miss valuable academic and behavioral instruction. Loss of instruction not only creates wider achievement gaps, but it also causes students to lose out on learning behavioral strategies that could assist them in being more successful in the classroom and in life. With a few exceptions (possession of a gun, drugs, and violence), principals have the authority to determine consequences for student misbehaviors and there is an expectation that they use this authority to "create environments in schools where children are treated fairly in the ways they directly interface with the school" (Pijanowski and Brady, 2020, p. 11).

Historically, less than 5% of exclusionary practices are related to violence or student safety (Skiba, 2008). Most behaviors that result in exclusionary practices are attributed to noisemaking, tardiness or insubordination. Based upon the teacher's perception of student behavior or the student's violation of school behavior conduct policies, teachers assign an Office Discipline Referral (ODR). While principals take into consideration the information provided to them through ODRs, they have the sole responsibility of issuing In-School Suspension (ISS), Out of School Suspension (OSS) or making a recommendation for expulsion. This means that building level principals have a tremendous influence on impacting discipline disproportionality through their own decisions and as leaders of teachers.

Federal Policy Context

In 2016, the recognition of growing disproportionality led to federal guidance from the Office of Civil Rights (OCR) through the *Dear Collogue Letter: Preventing Racial Discrimination in Special Education,* (OCR, 2016), for schools receiving federal funding. This guidance called for states to review their practices and set specifications.

The reauthorization of IDEA required states to monitor disproportionality in specific categories, including exclusionary discipline practices involving students with disabilities. Section 618(d)(2)(b) of IDEA (2004), mandates that 15% of a school's Title VIB funds be allocated for Coordinated Early Intervention Services (CEIS) if there is reported to be significant racial or ethnic disproportionality (Green et al., 2018). Beginning July 1, 2018, states were not only required to comply with the new federal regulations, but also to make significant disproportionality determinations base on the new methodology during the 2018-2019 school year. States were called upon to calculate a risk ratio for each Local Education Agency (LEA) for each analysis category (identification, placement, and discipline). Each state/territory was required to set the criteria for determining when a district would flag for disproportionality. Arkansas set the criteria as having a risk ratio of three (3) for three consecutive years.

State Policy Context

Arkansas legislators took steps to remedy the disparity in exclusionary practices in 2017. Arkansas Act 1059 substantially limits the use of OSS and expulsion for students in grades K-5. As noted in the law, a student in grades K-5 cannot be suspended or expelled unless, "the student poses a physical threat to themselves or others or causes a serious disruption that cannot be addressed by other means," (State of Arkansas, Act 1059, 2017). Although the law attempts to put into place a protection mechanism from exclusionary practices, there are not similar protection mechanisms in place for secondary level students.

In 2015-2016, Arkansas reported losing 140,881 instruction days per 100 students due to exclusionary discipline and was one of 11 states that reported "higher gaps than the national average between the suspension rates of Black and White students, for both boys and girls," (US Office of Civil Rights, pp. 150). Of those days, white students lost 16 days of instruction compared to 82 days lost by black students. Students with disabilities lost 42 days of instruction compared to 28 days by students without disabilities. During the 2018-2019 school year, Maple Cove School District reported a 93% attendance rate and a 68% graduation rate. While on the surface 93% may appear to be a healthy percentage, it equates to approximately 16 days, or three weeks, of lost instruction per student during the school year. It is important to note that in MCSD, policy dictates that students who acquire greater than ten days on unexcused absences, are denied credit towards graduation.

Aside from lost instruction time, exclusionary practices cost school districts financially. Schools receive monies based on student enrollment, and average daily membership (ADM). Every day that a student is not in school, is a day that the school does not receive funding for that student. In Arkansas, student attendance is a factor that is taken into consideration on the school's state report card. This means exclusionary practices directly impact all students. The inverse relationships between student suspensions and attendance, ultimately results in loss for all students.

Race as a Factor in Exclusion

While exclusionary practice can negatively impact all students, Black students are at a much higher risk. Although Black students are more likely to receive an Office Discipline Referral (ODR) there is no published research to indicate that Black students have increased behavioral problems (McIntosh et al., 2014). Research literature, however, well documents the "disproportionately high representation of minority students among students who are suspended or expelled (Vincent et al., 2012). Black students are three to four times more likely than their White peers to be suspended from school (Losen & Skiba, 2010; Pijanowski & Brady, 2020). While White students are more likely to be suspended for objective issues such as alcohol or drugs, Black students are more likely to be suspended for subjective issues. Black elementary students are more likely to be suspended for inappropriate language, defiance, non-compliance, and disruption; at the middle school – abusive language, bullying, lying and cheating, and

tardiness or truancy[1] (Heilbrun, 2016).

Urban schools with high poverty and high minority student populations are more likely to suspend and expel students. Students from low socioeconomic status (SES) families are more likely to have a higher number of behavior problems, lower levels of literacy and more likely to have a negative attitude about school. In fact, "Schools with a high number of low SES students and a high number of minority students are strong indicators for high suspension rates" (Cagle, 2017). However, even when poverty is taken into consideration, Black students are still more likely to be suspended than White students.

Students with Disabilities

Since the beginning of formalized education, students with disabilities have experienced educational exclusionary practices that are often unethical and inhumane. Examples of these practices include institutionalizing students with disabilities to segregated education. The 1954 Supreme Court ruling of *Brown v. Board of Education* established that students could not be excluded or segregated based upon unalterable characteristics, including receiving special education services (Williams, 2016). Despite the slow move to inclusion throughout the 20th century, students with disabilities experience exclusionary practices disproportionate to their non-disabled peers (Yell, 2012). While multiple researchers have documented racial disparities in exclusionary practices, research on disparities in students with disabilities has received less attention.

The Civil Rights Data Collection Survey reports, students with disabilities are two times more likely to experience exclusionary discipline, even though they only represent 12% of the student population nationwide (U.S. Department of Education, 2014). Losen and Gillespie (2012) reported that while the national average for student suspension is approximately 7%, students with disabilities are more than double at 15%.

Students with disabilities have a higher risk of being suspended or expelled than their non-disabled peers and students identified as having emotional or behavioral disorders have an even higher rate of experiencing exclusionary practices. Suspension rates of secondary students identified under the IDEA category of emotional disturbance (ED) rose nearly 50% from 1985 to 2002 (Wagner et al., 2004). Students with academic skill deficits have a higher risk of problem behaviors and are more likely to experience exclusionary discipline (McIntosh et al., 2014). "Students with emotional and behavioral disorders, depression or mental illness," (Vincent et al., 2012) are at highest risk of receiving exclusionary practices. Vincent notes that being suspended or expelled has less to do with the behavioral violation of the student and more about the school that the student attends.

Suspensions are generally a result of serious or multiple ODRs and, "Discipline disproportionality results from an interaction between the behavior of students and the behavior of adults within schools" (McIntosh et al., 2014). Students with disabilities, especially students diagnosed with emotional disturbance (ED) or other health impairment (OHI) are more likely to

[1] "Offense types were obtained from the Safe Schools Information Resource User's Guide, which is publicly available online at https://p1pe.doe.virginia.gov/pti/. The SSIR guide included 130 disciplinary categories, which we collapsed into four broader categories" (p. 29)

receive multiple suspensions. These students are generally in need of intensive behavior interventions. One issue with implementing exclusionary practices is that it does not allow for the student's disruptive behaviors to be addressed through providing alternative ways of behavior that could allow for preventing future inappropriate behaviors. Providing quality education to–students who have learning deficits can assist in lowering behavioral risks of students (McIntosh et al., 2014).

The Intersection of Race and Disability

Data indicates that Black students with disabilities have 2.8 times greater risk than their White peers of being suspended or expelled (Skiba, et al., 2013). Black students with Other Health Impairment (OHI) and Specific Learning Disability (SLD) have long experienced disproportionate suspension (Krezmien, et al, 2006). In examining predictors of exclusionary practices, the risk was for students who "had Emotional Disability (ED) or OHI due to attention deficit hyperactive disorder (ADHD), were Black, older, male, had low SES, or attended urban schools." Furthermore, a third of all students identified as ED were twice as likely to have been suspended multiple times (Sullivan et al., 2014). Relative age may also play a role in discipline patterns (Dougan, et al., 2021). In the last decade, evidence supports a connection between school suspension and the juvenile justice system. This connection, known as the school-to-prison pipeline is most prevalent for Black students with disabilities. Studies report that though only 19% of all special education students were Black, 50% of Black inmates in correctional facilities have disabilities (Losen et al., 2014).

Impact of Exclusionary Practices on Schools

Research has long cited the ineffectiveness of exclusionary practices as a deterrent to undesired behavior (Costenbader & Markson, 1998), noting that exclusionary practices lead to lost instruction time, student disengagement from school, higher dropout rates and greater potential of students entering the juvenile justice system. When students are not in school, they are either at home or on the streets. These scenarios can lend themselves to higher criminal activity and potential violence (OCR, 2019).

Though schools often cite safety and protection of other students and staff for utilizing exclusionary practices, only 5% of exclusionary practices are related to violence or student safety issues. Historically, schools at times used suspension to get rid of "perceived troublemakers" (Skiba, 2008). This practice comes at a great cost not only for the offending student but for the overall school climate and culture. Removing students at any level fuels "a chain reaction of school disengagement, further suspensions, school failure and dropout and eventual incarceration" (Williams, 2016). Furthermore, excluding disruptive students does not improve the school climate in "schools with higher rates of suspension" (Skiba & Sprague, 2008). In a 1998 survey by Costenbader and Markson, results reported that middle school students who were suspended had greater feelings of distrust and "anger toward the suspending adult" (as cited in Vincent, 2012, p.587).

Exclusionary practices can also have negative effects of the overall perception of school culture by non-offending students. When students perceive that there are unjust practices

regarding the treatment of their peers, they are less likely to have a positive connection to the school (Gregory & Ripski, 2008; Shirley & Cornell, 2014). Even after accounting for student demographics, schools with higher suspension rates have lower achievement, and rank lower on perception of school safety.

Context

MCSD does have an explicit policy related to student behavior and student consequences, however, there is no shared behavioral expectation or tiered system of interventions. Classroom teachers do not implement consistent behavioral expectations for students, resulting in inconsistent disciplinary practices in their classrooms. There is no system to provide structured supports for students who may need emotional or behavioral supports.

The lack of a tiered system of behavioral expectations coupled with teachers' lack of knowledge of students' BIP has created noted issues at MCSD. Principals report that teachers often write ODRs for students that are counter to the student's BIP. Although the special education department documents providing teachers with copies of BIPs, teachers insist that they rarely receive a copy and therefore are unsure what they should be doing to support students. A few teachers have expressed concern having students with disabilities in their classroom, noting that students were not only difficult to serve academically, but they often distract others from instruction due to their challenging behaviors.

Disproportionality occurs when a higher number of students with disabilities are removed from their learning environment. In Maple Cove School District, only administrators (principals or assistant principals) can remove a student from their learning environment by assigning In School Suspension (ISS), Out of School Suspension (OSS) or by making a recommendation for Expulsion. Although there are occasions when an administrator initiates disciplinary action, most of the time disciplinary actions originate with the classroom teacher. Office Disciplinary Referrals (ODRs) are a result of behaviors (actual or perceived) which occur in the classroom, hallway or other area and are deemed inappropriate or unacceptable. When a teacher assigns an ODR, there is potential for the student to then receive disciplinary action from an administrator, which may result in ISS, OSS, or Expulsion. This Arkansas school district setting was selected as a "problem of practice" based dissertation project where the lead author worked for several years as a district administrator who was charged with managing the discipline data and policy implementation. As a case study the findings are not intended to be representative of other schools and yet offers a glimpse into how one system has approached discipline disproportionality that may inform similarly situated school systems.

Maple Cove School District (MCSD) is in an urban city in southern Arkansas. In 2018-2019 MCSD consisted of four elementary schools, one middle school and one high school. The city has a population size of 42,984. Maple Cove School District serves students in grades K-12 with a student enrollment of approximately 3,189 based on the 3rd quarter Average Daily Membership (ADM) for the 2018-2019 school year. Of those students, 96.5% were Black, .9% Hispanic and 1.6% White. With a poverty level of 78%, all students enrolled in MCSD qualified for free and reduced lunch.

In September 2018, Maple Cove School District was placed in Level 5 support by the Arkansas Department of Elementary and Secondary Education (DESE) due to the district's

academic and fiscal distress designation. This designation occurs when a district experiences a substantial fiscal decline and "49.5 percent or less of its students test 'proficient' or 'advanced' on state mandated math and reading exams over the three previous years" (Arkansas Code § 6-15-424 and § 6-15-431). For the last three consecutive years, MCSD received ratings based on the Elementary Secondary Education Act (ESSA) that resulted in the school being classified as being in academic distress.

Although still under state fiscal control, MCSD ended the 2019 Fiscal year able to maintain salary and maintenance of operations. The ability to reduce debt was largely due to downsizing the district through closing Forest Elementary School (K-1), absorbing the K-1 students in the remaining elementary schools and an extensive Reduction in Force (RIF) process. Since Forest Elementary School closed, only the remaining elementary schools, middle school and high school will be included in the study. Current enrollment numbers for the 2019-2020 School year reflect: North Pine Elementary (503), Cypress Elementary (270), Willow Elementary (498), Oakwood Middle School (719), and Maple Cove High School (908).

Maple Cove School District consists of 241 teachers and 12 administrators. Of the employees who serve at Maple Cove School District, with the exception of 6% of White teachers and two White assistant superintendents, all employees are Black. In 2017-2018 there was noted 3,310 incidents of Out-of-School Suspension (OSS), 12 Expulsions (EXPs) and 3,322 Exclusionary Disciplinary Actions (EDAs) also known as In-School-Suspension. The 2018-2019 school year noted 3,119 incidents of OSS, 27 EXPs and 3,146 EDAs. Although there was noted decline between years, special education students accounted for 39% of all OSS disciplinary actions in 2017-2018 and 38% in 2018-2019.

Data Collection Methods

Office Discipline Referrals were reviewed using SmartData Dashboard, a digital platform that collects information from eSchool, the state data-collection system. SmartData Dashboard allowed specific information to be pulled from eSchool and filtered as it related to disproportionality (e.g., multiple incidents of discipline per student). Data included grades served by individual teachers and administrators, ethnicity break downs of students and staff, average class size, percentage of students receiving free/reduced lunch, percentage of students eligible to receive special education services, average years of teaching experience and the current letter grade based upon the school's overall performance. Teacher ethnicity and percentage of teachers serving on alternative, provisional license, and 1240 waivers was collected through Maple Cover Human Resource office.

Interviews

Administrators were interviewed on a voluntary basis and each participant was asked to sign a consent form which complied to the University's Review Board (IRB) and federal guidelines. No monetary compensation was given for participating in the study. All building level administrators in the district were invited to participate and nine out of 11 did participate fully in the study. Interview questions were designed to gain insight about principals' perceptions of root causes

regarding discipline disproportionality; specifically factors which may contribute to Black students with disabilities having a higher risk ratio for exclusionary practices than their non-disabled peers. Interview transcripts were open coded, then a second round of axial coding was done to determine similarities in responses and interrelated themes.

Findings

Administrators indicated that the five most common reasons for students being sent to the office: 1) fighting, 2) disrespect 3) refusing to work 4) talking back and 5) failing to follow directions. When asked, principals responded that the three major reasons they received referrals for what would be deemed severe were: 1) fighting, 2) inappropriate language and 3) bullying. Note that in both scenarios, administrators listed fighting as not only the top reason students are sent to the office, but also one of the three major reasons.

Elementary leaders responded that non-disabled students were more likely to have behavioral issues which resulted in an ODR than their disabled peers. In contrast, secondary administrators noted that students with disabilities were more likely to have behavioral problems which resulted in an ODR than their non-disabled peers. According to Smartdata Dashboard, the top five categories for student infractions in 2019-2020 for General Education (GE) students were: 1) insubordination, 2) disorderly conduct, 3) cutting class, 4) fighting and 5) other. The top five categories for student infractions for special education are: 1) insubordination, 2) cutting class, 3) fighting, 4) disorderly conduct and 5) tardy. While principals reported fighting at the top level, data does not support that fighting is one of the major reasons for students being referred to the Office.

Teacher Effectiveness

Building level administrators noted that the primary reason they perceived students experienced Office Discipline Referrals (ODRs) was lack of teacher effectiveness. Specifically, they pointed to the importance of classroom management and the teacher providing engaging lessons. According to the U.S. Commission on Civil Rights, *Beyond Suspensions*:

> A teacher's skill in classroom management and providing engaging instruction has been found to be a correlating factor when looking at rates of classroom disruption. Data suggest that as teacher-student engagement increases, misbehavior and suspensions tend to decrease. Studies reflect that teachers having less classroom management and instructional skills contributes to higher risks of students—as a whole—being suspended from school (US Civil Rights, 2019. p. 79-80).

Principals further shared that when considering which teachers needed more support than others, Novice teachers, or teachers who had changed content (possibly serving under an alternative licensure plan or ALP), were more likely to struggle.

When looking at an ODR potentially resulting in suspension, "Losen and colleagues found that the risk of suspension increased for students in all K–12 grade levels when they were taught by less-experienced and novice (i.e., new) teachers," (US Civil Rights, 2019. p.80). With 18% of all teachers within the district considered to be Novice teachers, (having less than three years teaching experience), the building level administrators' perceptions may be supported.

Refusal to work (insubordination) was cited by 66.67% of administrators interviewed as one of the reasons a student would be likely to receive an office referral. They also noted that the majority of the time, when they asked students why they refused to work, students would say it was because they didn't understand how to do the work. Lack of meeting the student's academic needs along with teachers leaving students unsupervised were two factors that principals credited to students having behavioral issues.

While the teacher's strength of pedagogy and content were factors principals believed impacted ODRs, the ability to construct an environment conducive to learning was not solely centered around academic skill. Principals noted that teachers who were able to connect with students on an emotional level, teachers who were perceived to be, "compassionate," "caring," "concerned," who "mentored" students, all the while communicating and holding students to set high expectations, were less likely to make an office referral. The authoritative discipline theory proposes that learning environments that demonstrate high levels of structure and support along with clearly established academic and behavioral expectations, tend to have lower suspension rates, (Konold et al., 2017). Diana Baumrind deems these types of teachers "warm demanders," (Baumrind, 1968).

Principals communicated that effective teachers were more likely to build positive relationships with students and parents, which in turn they believed allowed teachers to create classrooms environments that were more conducive to learning. Principals noted that effective teachers knew "how to de-escalate situations," and "finds root causes of behavior." Effective teachers were credited with "rarely make(ing) an office referral." Instead, of sending students to the office, effective teachers "try to handle discipline in their classrooms by themselves," and were more likely to encourage students to "redirect their own behavior." The belief that a positive teacher-student rapport assisted in securing a safe and engaging classroom resulting in students remaining in the classroom was shared by all principals.

In contrast, ineffective teachers were described as being "combative with students," and more likely to "yell" at the student. As stated by the MCHS principal, "Ineffective teachers respond by hollering and screaming… by belittling the person who is misbehaving….and making the student feel less adequate or trying to shame them into correcting themselves."

Ineffective teachers, according to principals, "spend more time with behavior than teaching," and "let behavior (issues) take over the classroom." One principal even stated that ineffective teachers usually, "make it (behavior issues in the classroom) worse," resulting in the student being removed from the classroom. Another principal commented that ineffective teachers, "send the child out for every little thing…not having a pencil, materials," while another principal shared that in regard to student behavior issues, ineffective teachers just "want administration to fix it." Four administrators noted that ineffective teachers were more likely to use their past experience or knowledge of a student against the student. They further stated that teachers treat students differently because they have a predetermined idea about the student, which they gain from looking at the student's previous records.

Some principals contend that suspension disproportionality of students with a disability versus those without a disability is because general education teachers, "don't know how to modify," or that "teachers don't understand how to implement the IEP." Still other administrators point out that general education teachers often, "don't want to deal" with the additional paperwork or the student and therefore, are "quick to write those students up." One

administrator commented that lack of a strong foundational reading program has resulted in students being overly identified. With a higher percentage of students in special education, "…we are more likely to flag in discipline." While each of those theories may have merit, data related to teacher attendance and qualifications may shed light on the issue of disproportionality. A random sample review of student files reflects that during 2019-2020, approximately 67% of ODRs for students with disabilities originated from the special education classroom. Most of those referrals written by the substitute teacher noted that the student was, "disrespectful," "noisy," "won't sit still," "disrupting the class," or that the student was, "tardy," or "skipped class" altogether. Although not written in policy, per schools' practice, substitute teachers are permitted to write student referrals. Due to the district's struggle to obtain substitutes, administrators generally handle ODRs from substitutes harsher than the regular teacher.

Avoidance Practices of the Principal

When asked who had the greatest impact on student behavior, 78% of principals interviewed responded that the classroom teacher had the greatest impact. They stated that the classroom teacher spent more time with the student, therefore had greater opportunity to build rapport. Only two of the nine administrators stated that they believed that administrators had the greatest impact, and both contributed that administrator impact to being able to mold how the classroom teacher interacted with students. Administrators believed that most behavior which results in disciplinary action is most likely because of two reasons: the teacher failed to deescalate the situation in the classroom or students lacked needed social skills to be able to interact with their peers.

Principals were asked to describe a typical behavior scenario from beginning to end. In all scenarios, principals depicted a student being non-compliant and a teacher unable to de-escalate the situation. Once students reached the office, all principals communicated that they spent time with the student to determine the root cause of the behavior. Their depiction described interactions as compassionate, focused on problem-solving and with intent to maintain the dignity of the student. Only one of the nine administrators remarked that they would contact a parent while providing the behavior scenario. The majority of the administrators shared that unless the incident involved a weapon, physical altercation or drugs, they did not communicate with the parent. When asked at what point they would contact the parent, they stated that parents were generally not contacted until the student became a repeat offender, or if the child needed to be taken home. Not only did the majority of principals avoid contacting parents for minor disciplinary actions, but secondary principals also stated that they often allowed students who had been sent to the office to remain there until time to go to the next period without a referral to the counselor or any follow up with the classroom teacher. This practice is permissible per the district's student policy handbook.

Elementary principals reported that when they did contact parents, they were likely to take parental input into consideration when considering consequences for students. One elementary principal stated, "If the parent says they will handle it at home, I am more lenient at school." Another elementary principal stated, "Sometimes the parent handling it is enough and sometimes I need the student to know there are consequences in the building." Secondary

principals shared while they did occasionally seek parental assistance in addressing a behavior issue, most of the time, they had already decided what disciplinary steps would be taken next.

While the majority of disciplinary actions occur due to ODRs which originate from the classroom, building level administrators ultimately determine the outcome. With the exception of student possessing a gun, a building level administrator has discretion to suspend or not to suspend students. So, what factors do administrators consider when determining to use exclusionary practices? Half of administrators reported considering ensuring the safety of the school by suspending a student. Administrators noted they considered if the student's behavior was due to their disability and stated they reviewed the student's IEP before making any determination regarding removal from school.

Critical to note is that the number one factor principals considered when determining to utilize an exclusionary practice was if the student was a "repeat offender." Defined by principals as having two or more office referrals for the same or similar incident, repeat offenders, according to principals, tend to receive harsher consequences, despite the fact that parents may not have been contacted the first few times the student was seen in the office.

Lack of Multi-Tiered System of Support

Not to be confused as an academic or behavioral curriculum, MTSS is a framework that provides teachers with a clear understanding of how to ensure students receive targeted interventions for their academic, behavioral, and social-emotional needs, and should assist in building "teacher's capacity to reach varied learners," (Hollingsworth, 2019, p 35). Comprised of three tiers: 1) Tier I – whole class, 2) Tier II – small group, and 3) Tier III – intensive individualized support, MTSS should guide teachers towards a systematic approach to teaching and supporting students.

Principals noted that given the district's novice and waivered teacher rates, teachers needed additional training and support in working with challenging students. They also expressed that lack of teacher skill and available resources to implement student interventions, along with limited disciplinary options, often resulted in In-School Suspension (ISS) and Out of School Suspension (OSS) being heavily used.

Under the umbrella of the MTSS framework, Positive Behavioral Interventions and Supports, focus on teaching students appropriate school behavior. In *Beyond Suspension*, Skiba and colleagues are quoted as stating, "positive behavior supports, and social-emotional learning strategies show promise" (U.S. CCR, 2019, p.93), and that schools who implement PBIS not only see positive results related to reading and safety ratings but that they also "decreased their number of discipline referrals and reduced student aggression" (U.S. CCR, 2019, p.93).

Per the District's Comprehensive Coordinating Early Intervening Services (CCEIS) application, Maple Cove School District conducted a root cause analysis and as a result focused their CCEIS plan of action around the design and implementation of MTSS to include training all staff (teachers, paraeducators, bus drivers and office staff).

Policy Issues Contributing to Disproportionality

Seven out of nine administrators cited the district's student handbook policies as being a barrier when it came to implementing discipline. Principals reported that the student handbook, "tied their hands," and was often "too vague," or "too harsh." *Beyond Suspension* reports that, Schools that have experienced higher rates of misbehavior are more likely to adopt stricter discipline codes. Since African American students tend to be over-represented at schools that have adopted such codes, this can have an effect on rates of discipline (US CRR, 2019, p.179).

Beyond Suspension further reports that despite the differences in student codes of conduct in those schools, since student discipline is equitability administered, the discipline codes are not discriminatory. School officials at those schools and school districts, who tend to be disproportionately minority themselves, appear to have chosen it for the school or school district based on their judgment of what was useful for maintaining classrooms where students can learn. (US CRR, 2019, p.179).

In examining the Maple Cove Student Policy Handbook, a list of prohibited conduct appears in three separate locations. Though many prohibited behaviors are based upon state laws, the few factors that could be considered low level such as disrespect (insubordination) and truancy (skipping class) are the three highest reasons for ODRs. In an effort to minimize the use of exclusionary practices many schools have looked at minimizing or removing polices related to "catchall behaviors," such as disrespect and failing to comply (Dominus, 2016). All administrators interviewed stated that they believed suspension had an adverse effect on students, citing that not only did suspension cause students to miss out on learning, but that it caused students to have negative feelings about school. One administrator noted that suspension actually teaches students avoidance.

> I think it does, especially in the cases where it's a kid that is always being suspended…we are teaching our kids how to handle certain situations such as, they don't have to. You don't have to see him (the teacher) again. Yes, I think it's detrimental to the student.

Since students with disabilities are at a much higher risk to be suspended than their non-disabled peers, multiple suspensions place students with special needs in even graver danger. Not only do these students not receive the academic services they so greatly need to meet their learning goals, but they also often fail to receive support services such as speech and physical therapy. We must ask ourselves, "Is removing students with the greatest needs from the learning environment, the most effective way to change their behavior?"

Despite administrators recognizing that suspending students can do more harm than good, they continue to use exclusionary practices. During the 2019-2020 school year, 70% of all ODRs resulted in either ISS or OSS and were assigned by an administrator. So why do administrators choose to suspend? According to one principal, administrators need "options for removing kids, not just ISS or OSS." He further added, "We need something that will fit our school culture. We have to have more interventions."

Discussion

Like many school districts across the nation, Maple Cove School District experiences higher rates of exclusionary practices (suspension) for Black students with disabilities. With a student

demographic of 96% African American, high rates of suspension are not surprising since "…a school's percentage of black student enrollment is consistently a strong predictor of school suspensions," and that schools with "a higher percentage of black students compared to white students…is more likely to have more suspensions," (USCCR, 2019, p. 78). Building level administrators noted that while they did not believe that MCSD's disproportionality was related to student race, it was possible that other factors contribute to the disparity between students with and without disabilities.

Teacher Effectiveness

Over the last 15 years, Maple Cove School District (MCSD) has experienced high teacher turnover and an increase in teachers serving without a traditional license such as waivers, emergency teaching permits (ETPs) or serving out of area under an additional licensure plan (ALP). While this may be in part to the national teaching shortage, it could also be due to MCSD's salary schedule being at the state minimum, the city's population decline of 10,592 from 2010 to 2018 or the city having a 26.8% poverty rate compared to the 16.2% state average. Whatever the reason, 18% of MCSD's teaching staff falls under the category of novice teacher and 23% are without a standard teaching license.

Throughout the course of the interviews, building level administrators reiterated that one major reason students were likely to receive an ODR is due to characteristics of the classroom environment such as lack of established classroom procedures, lack of appropriate planning, and lack of student engagement. Principals noted that while novice teachers required greater administrative support with developing classroom management skills and utilizing effective instructional strategies, significantly older teachers also needed additional support in engaging students. Limited research exists on teacher effectiveness and age; however, it is possible that older teachers' technology skills hinder their ability to connect with students. It is also possible that they were not provided needed support when they first entered the field, and their current struggles are a result of lack of professional development.

Resource Room Factors

If the effectiveness of a teacher can impact student discipline, then data may support why students with disabilities at MCSD are more likely to be suspended than their non-disabled peers. Though most special education teachers have greater than three years' teaching experience, the percentage of ALP teachers, coupled with the percentage of long-term substitutes is alarming. Even more concerning is the high rate of absenteeism for special education teachers. On average, MCSD special education teachers miss between two and four weeks of school, which means students in special education are exposed to substitute teachers who are not trained to meet their diverse learning and behavioral needs. Noted as the second highest reason for students with disabilities to receive ODRs, cutting class may be tied to student avoidance of interacting with substitutes. The lack of training to understand student needs and the practice of allowing substitutes to issue ODRs could explain why 67% of office referrals for students with disabilities originate in the special education classroom.

Multi-tiered Support System

Principals communicated that ODRs were often a result of lack of student engagement. They noted that when students did not understand the work presented, they were more likely to misbehave or skip class. Principals also note that current disciplinary options did not take into consideration the need of the student, and that there was a need for structured interventions.

With high teacher turnover rates, an 18% novice teacher population and 23% of teachers serving without a standard license, a district wide Multi-Tiered Support System (MTSS) could assist in not only proactively targeting the academic and behavioral needs of students, but also serve to provide teachers with clear and concise direction. Principals consistently agreed that a program to address academic and behavioral issues would be beneficial. They further communicated that they believed some form of character education and/or social skills training was also needed.

Policy and Practice of the Principal

Though all principals interviewed agreed that suspension can have an adverse effect on students, they continue to suspend students for minor behavioral infractions. This may be due to their perception that there are few choices available for them within the current policy. Some indicated that suspension occurred in order to demonstrate support of the teacher.

When asked if there were any benefits or barriers to policies, principals noted that the polices found in the student handbook were often too harsh or that the handbook offered few options other than In-School-Suspension (ISS) and Out-of-School Suspension (OSS). Again, principals requested specific levels of interventions that they could choose from when working with students. Aside from the principals' request to more deeply examine policy, two factors related to principal practice were noted during interviews – engaging parents and avoidance.

Parental Involvement

Perhaps some of the greatest insight is gained not from what others say but rather from what they fail to speak of. As part of the interview, principals were asked to provide a typical discipline scenario, that would ultimately result in an office referral. All administrators described a classroom interaction where a student failed to comply, and a teacher failed to deescalate the situation. Throughout their scenarios, principals commented on what factors they took into consideration before deciding to suspend a student. These factors included: the students homelife, if the student's behavior was due to their disability, which teacher made the referral, and if the incident jeopardized the safety of other students. The greatest factor, however, in determining whether to suspend a student was if the student was a repeat offender (having multiple ODRs for the same or similar behavior).

Although all principals provided detailed examples of how they counselled with students, and intentionally attempted to determine the root cause of the behavior once the student was in their office, only one administrator mentioned involving the parent before the student became a repeat offender. Not only did administrators not involve parents, they also did not mention making referrals to school counselors, the School Intervention Team (SIT) or attempting to

mediate the issue with the student and teachers prior to the student returning to the classroom. Principals even indicated that when they did contact parents, it was unlikely that parental input would change the discipline decision which seems to indicate a critical disconnect between what we know about the importance of strong family-school partnerships (Lasater, et al., 2021) and the practice of school administrators.

Conclusion

Many principals mentioned the need for not only policy but district wide program changes. Noting that if teachers were provided additional professional development to become more effective, students would be less likely to misbehave, however it is more often the case that principals don't play an active role in guiding the content of professional development programming (Koonce, et al., 2019). Others contend that by implementing a behavioral system which would explicitly teach desired student behaviors, with a focus of maintaining a positive atmosphere, discipline referrals would decrease, and the overall school culture would improve. If these are the changes principals request to impact their suspension rates, is it possible that suspension rates are not a product of student behavior, but rather a reflection of teacher effectiveness, administrator practices, and school policy?

References

Arkansas Code (2015). Rules. § 6-15-424

Arkansas Code (2015). Academic distress rules regulations. § 6-15-431

Baumrind, D. (1968). Authoritarian vs. authoritative parental control. *Adolescence,* 3, 255-272.

Cagle, J. F. (2017) The cost of color in public education – An examination of disproportionate suspensions. *Journal of Organizational & Educational Leadership*. *(3)*1. https://digitalcommons.gardner-webb.edu/joel/vol3/iss1/3

Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students, *Journal of School Psychology. 36(1)*, 59-82.

Dominus, S. (2016, Sept. 11). An effective but exhausting alternative to high-school suspensions. *New York Times Magazine*, Retrieved from: https://www.nytimes.com/2016/09/11/magazine/an-effective-ut-exhausting-alternative-to-high-school-suspensions.

Dougan, K., Lasater, K., & Pijanowski, J. (2021). Relative Age in Kindergarten: From the Perspective of Teachers. *Journal of Higher Education Theory and Practice*, *21*(9). https://doi.org/10.33423/jhetp.v21i9.4596

Green, A., Cohen, D., & Stormont, M. (2018). Addressing and preventing disproportionality in exclusionary discipline practices for students of color with disabilities. *Intervention in School and Clinic. 54(1)* 241-245. Doi: 10.1177/1053451218782437

Gregory, A., Cornell, D., & Fan, X. (2011). The relationship of school structure and support to suspension rates for black and white high school students. *American Educational Research Journal,* 48, 904-934.

Gregory, A., & Ripski, M. (2008). Adolescence trust in teachers: Implications for behavior in the high school classroom. *School Psychology Review, 37,* 337-353.

Heilbrun, A. (2016). *Racial disproportionality in exclusionary discipline: School factors and disciplinary practices,* (Doctoral dissertation). Retrieved from https://libraetd.lib.virginia.edu/public_view/wp988j841.

Hollingsworth, S. (2019). Multi-tiered system of supports as collective work: a (re)structuring option for middle schools. *Current Issues in Middle Level Education:* Vol. 24(2), 33-44. DOI: 10.20429/cimle.2019.240204

Konold, T., Cornell, D., Shukla, K., & Huang, F. (2017). Racial/ethnic differences in perceptions of school climate and its association with student engagement and peer aggression. *Journal or Youth Adolescence 46(6)* 1289-1303

Krezmien, M., Leone, P., & Achilles, G. (2006). Suspension, race, and disability: analysis of statewide practices and reporting. *Journal of Emotional and Behavioral Disorders 14(4).* 217-226

Koonce, M., Pijanowski, J. C., Bengtson, E., & Lasater, K. (2019). Principal Engagement in the Professional Development Process. *NASSP Bulletin*, *103*(3), 229-252.

Lasater, K., Crowe, T., Pijanowski, J. C. (2021). Developing Family-School Partnerships in the Midst of Demographic Change: An Examination of Educators' Attitudes, Values, and Beliefs. *Leadership and Policy in Schools*. DOI: https://doi.org/10.1080/15700763.2021.1958869

Losen, D., & Gillespie, J. (2012). *Opportunities suspended: The disparate impact of disciplinary exclusion from school.* Center for Civil Rights Remedies at The Civil Rights Project at UCLA. https://www.semanticscholar.org/paper/Opportunities-Suspended%3A-The-Disparate-Impact-of-Losen-Gillespie/4059446619020f023fe0897bdeeb357709f8fa5d

Losen, D., Hodson, C., Ee, J., Martinez, T. (2014). Disturbing Inequities: Exploring the relationship between racial disparities in special education identification and discipline. *Journal of Applied Research on Children: Informing Policy for Children at Risk, 5(2).*

Losen, D., & Martinez, T. (2013). *Out of school and off track. The overuse of suspensions in America middle and high schools.* Los Angeles, CA: University of California, Los Angeles.

Losen, D., & Skiba, R. (2010). *Suspended education: Urban middle schools in crisis*. *UCLA: The Civil Rights Project / Proyecto Derechos Civiles*. https://escholarship.org/uc/item/8fh0s5dv

McKintosh, K., Girvan, E. J., Horner, R. H. & Smolkowski, K. (2014). Education not incarceration: A conceptual model for reducing racial and ethnic disproportionality in school discipline. *Journal of Applied Research on Children, 5(2)*, 1-22. http://digitalcommons.library.tmc.edu/childrenatrisk/vol5/iss2/4

McIntosh, K., Girvan, E. J., Horner, R. H., Smolkowski, K., & Sugai, G. (2014). *Recommendations for addressing discipline disproportionality in education.* OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports. https://www.txbehaviorsupport.org/Assets/recommendations-for-addressing-discipline-disprop.pdf

Osher, D., Bear, G., & Sprague, J. (2010). How can we improve school discipline? *Educational Researcher*, Vol. 39, No. 1, pp. 48–58. DOI: 10.3102/0013189X09357618

Pijanowski, J., & Brady, K. (2020). Defining social justice in education: comparative perspectives from practitioners and scholars. *Handbook of Social Interventions in Education,* 1-24, https://doi.org/10.1007/978-3-030-29553-0_106-1

Shirley, E., & Cornell, D. (2014). The contributions of student perceptions of school climate to understanding the disproportionate punishment of African American students in a middle school. *School Psychology International,* 33, 115-134.

Skiba, R. (2014). The failure of zero tolerance: *Reclaiming Children and Youth,* 22(4), 27-33.

Skiba, R., Albrecht, S., & Losen, D. (2013). CCBD's position summary on federal policy on disproportionality in special education. *Behavioral Disorders. 38(2),* 108-120.

Skiba, R., Eckes, S. & Brown, K. (2009). African American disproportionality in school discipline: The divide between best evidence and legal remedy. *New York School Law Review, 54,* 1071-1112.

Skiba, R. & Sprague, J. (September 2008). Safety without suspensions. *Educational Leadership, 66(1),*38-43.

State of Arkansas (2017). *Act 1059: An act to amend provisions of Title 6 of the Arkansas code concerning discipline of students in public schools and for other purposes.* http://www.arkleg.state.ar.us/assembly/2017/2017R/Acts/Act1059.pdf

Sullivan, A., Van Norman, E., & Klingbeil, D. (2014). Exclusionary discipline of students with disabilities: student and school characteristics predicting suspension. *Remedial and Special Education 35(4)*. 199-210. http://sagepub.com/journalsPermissions.nav.DOI:101177/0741932513519825

Taylor, L. C., Hinton, I. D., & Wilson, M.N. (1995). Parental influences on academic performance in African American students. *Journal of Child and Family Studies, 4,* 293-302.

U.S. Commission on Civil Rights (2019). *Beyond Suspensions: Examining school discipline policies and connections to the school-to-prison pipeline for students of Color with disabilities.* https://www.usccr.gov/pubs/2019/07-23-Beyond-Suspensions.pdf

U.S. Department of Education, Office of Civil Rights. (2014). *Civil rights data collection: Data snapshot: School discipline* (Issue Brief No. 1). Washington. DC. Retrieved from http://www2.ed.gov/about/offices/list/ocr/docs/crdc-discipline-snapshot.pdf

Vincent, C., Sprague, J., & Tobin, T. (2012). Exclusionary discipline practices across students' racial/ethnic backgrounds and disability status: findings from the pacific northwest. *Education and Treatment of Children* 35(4).585-601. DOI: https://doi.org/10.1353/etc.2012.0025

Wagner, M., Newan, L., & Cameto, R. (2004). *Changes over time in secondary school experiences of students with disabilities: A special topic report of findings from the national longitudinal transition study-2 (NLTS2*). Menlo Park, CA: SRI International

Williams, A. (2016). A longitudinal analysis of disproportionality in statewide exclusionary discipline of students with disabilities. Dissertation. University of Maryland. ProQuest LLC: 10128643

Williams, J., Pazey, B., Shelby, L., & Yates, J. (2013). The enemy among us: Do school administrators perceive students with disabilities a threat? *NASSP Bulletin, 97*, 139-165. Doi: 10.1177/0192636512473507