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Technology as a Tool for Support: Classroom Teachers and Resource Specialists in Collaboration and Communication Practices

Mackenzie Jones
Dominican University of California

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This thesis, written under the direction of the candidate's thesis advisor and approved by the program chair, has been presented to and accepted by the Department of Education in partial fulfillment of the requirements for the degree of Master of Science in Education.

Mackenzie Jones
Candidate

Jennifer Lucko, PhD
Program Chair

Jennifer Lucko, PhD
First Reader

Rosemarie Micheals, EdD
Second Reader

**Technology as a Tool for Support: Classroom Teachers and Resource Specialists in
Collaboration and Communication Practices**

By

Mackenzie Jones

A culminating thesis submitted to the faculty of Dominican University of California in partial
fulfillment of the requirements for the degree of Masters of Science in Education

Dominican University of California

San Rafael, California

May, 2021

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Abstract

Classroom teachers and resource specialists face hectic schedules that include supporting students and meeting the core curriculum standards. In order to support students with disabilities in the classroom, collaboration between classroom teachers and resource specialists is essential. With busy schedules and increasing demands that teachers face, there is an urgent need to support teachers with effective systems of collaboration. This research focuses on the problem of unorganized and ineffective systems of support, which teachers face when trying to collaborate and communicate with their colleagues. While many prior studies address the significance of providing time for educators to collaborate in the work day, as well as addressing key components of support such as communication and teacher relationships, this study builds on prior research by considering how systems of support such as technology and administrators can be efficient for teacher collaboration when routines are organized. This research utilized a mixed methods approach, including open-ended interviews, survey data, and classroom observations. The results of this study reveal that collaboration is most effective when there is a sense of unity and relationship amongst teachers and when administrators model effective collaborative practices. These systems of collaboration and unity are brought together by the use of technology. Technology is most efficient when all the teachers in the community utilize the same platform. The findings of this study demonstrates the importance of effective collaboration practices between classroom teachers and resource specialists in order to better support students with special needs. Through having professional relationships within the learning community, teachers feel supported and equipped to support all students in their classrooms.

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Chapter 1: Introduction

How often do you feel isolated while being surrounded by people? Teachers face this scenario everyday when going into their classrooms. This phenomenon comes from teachers experiencing a lack of collaboration and support at their school sites. The current Covid-19 pandemic has amplified feelings of isolation between educators drastically. This year, as the school bell rang, students filled the room, eager to start hybrid learning with their teacher and some of their classmates. For the past year, teachers have been working through distance learning, and with hybrid in person learning starting, they are now feeling emotions of both excitement in seeing their students, as well as nerves and frustration because of their long periods of working in isolation. Classroom teachers explained how throughout the first six months of school they were surrounded by their colleagues, but everyone was just trying to stay afloat with distance learning and changing schedules, that everyone was on their own. This sense of isolation is something that many teachers face on a daily basis, because collaboration in school sites is often ineffective. The lack of collaboration in the school community was present before the time of Covid-19, however the pandemic lessened collaboration even more. According to Tichenor and Tichenor (2019) “teachers see professional collaboration as a separate activity, apart from their daily teaching... only 7% of teachers report having strong collaboration models at their schools.”

Teacher collaboration is an essential tool for educators because research shows that when teachers are collaborating together to reach a common goal the result is an improvement in inclusionary practices for students with disabilities (Brownwell et al., 2016). There has been an improvement of inclusionary practices for students with disabilities over the past ten years. Robinson and Buly (2007) highlighted how the increase of accessible learning for students with

disabilities in the educational system has created challenges and feelings of frustration for both general education and special education teachers because “historically they have worked as separate entities who operate from very different paradigms and belief systems” (p. 83). This feeling of disconnection and a lack of relationship between colleagues leaves teachers feeling frustrated and isolated. As a result, teachers often feel overwhelmed by the amount of support they need to provide to students with disabilities to ensure equitable learning, and it leads to teacher burnout. One way to alleviate teacher stress is to provide support systems of collaboration so teachers are able to rely on their colleagues for assistance when teaching students with disabilities. When students with disabilities are supported by educators who are collaborating and communicating together, students are able to perform better academically and socially (McMillan, 2008). In order to make classroom learning more equitable for all students, systems of support for teacher collaboration must be addressed, especially for classrooms that have students with disabilities.

Statement of Purpose

Previous research has focused on the importance of creating opportunities for teachers to collaborate with one another throughout the work day (Fallon, 2011; McMillan, 2008; Sterrett & Richardson, 2020). Kritikos and Birnbaum (2003) found that teachers do not have an understanding of their colleagues’ personal outlook on collaboration and it limits their ability to collaborate with one another. Specific factors that contribute to a successful collaborative session between classroom teachers and resource specialists include understanding one’s personal experiences and perspectives. Through understanding what fellow colleagues have experienced when working with students who have differentiating abilities, it will be easier for teachers to relate and adapt their collaboration style. Perspective is another key factor in understanding

collaboration because, the way a teacher looks at a scenario with a student, can bring significant insight and change to educational instruction for the student. Kritikos and Birnbaum (2003) highlight the importance of understanding team member's personal experiences and perspectives while collaborating because it can lead to more effective and beneficial meetings between classroom teachers and resource specialists. In a second study by Scruggs et al. (2016) another way to create opportunities for collaboration between classroom teachers and resource specialists is by allocating specific time for planning. According to Scruggs et al. (2016), the average amount of time teachers have to collaborate with one another is 40 minutes per week. Through providing an opportunity for collaboration, teacher burnout and feelings of frustration can be avoided. These studies demonstrate that both classroom teachers and resource specialists benefit from having effective time to collaborate with one another, indicating a need to improve collaboration time and culture within a school community.

One strategy aimed at creating opportunities for teacher collaboration is the use of technology. Technology is a tool that increases collaboration and allows for maximum flexibility so teachers and stakeholders can provide input when it is convenient for them (Riggelman & Buchter, 2003). Through using technology, teachers are able to collaborate and communicate with one another more easily when they have the flexibility of when to communicate with one another. This feature of technology allows for teachers to have extra time in the day to collaborate with their colleagues because it gives teachers the opportunity to have constant communication, and share ideas to help their students. Through reviewing the studies above, it is possible to see that collaboration can be improved through systems of support, in order to help classroom teachers and resource specialists in their efforts to collaborate.

While the literature has found a positive relationship between providing classroom teachers and resource specialists with time and opportunities to collaborate with one another, there is limited research available about specific strategies that support teachers in forming relationships with their colleagues, as efficient support systems to promote collaboration and eliminate feelings of isolation in classroom teachers and resource specialists. This research project aimed to understand the barriers general education and special education teachers face when trying to collaborate with one another. By understanding these barriers, it is possible to think about possible solutions to increase collaboration and decrease teacher frustration. This research examined systems of support that are currently available to classroom teachers and resource specialists in collaboration, as well as explored the strategies teachers have identified as essential for communication practices in every school community.

Overview of the Research Design

I am a student teacher who will be starting their first year of teaching in the near future. As an incoming teacher, I wanted to know more about collaboration and communication practices between colleagues, and how educators were currently being supported in these areas. The research that was conducted took place during the Covid-19 pandemic. The first six months of the research was conducted through distance learning, and the remaining time was conducted in person through a hybrid learning format. Teachers started the school year completely virtual, and then were able to move to in-person teaching during the month of February. Classroom teachers and resource specialists were separated physically for these first months of the school year, and had limited communication through online platforms. As classroom teachers and resource specialists started to feel more comfortable with online learning, they were able to reach out to each other for collaboration and communication sessions more often. Although

collaboration was starting to take place in the community, the impact of minimal communication between general education teachers and special education teachers has created feelings of isolation and distrust amongst teachers, as well as unorganized structures of instruction between teachers.

The research conducted took place primarily in person at the researcher's student teaching placement site in Northern California. According to the California Department of Education website, there were 446 students enrolled in the school during the 2020-2021 school year, and two percent of those students have disabilities. The student population is made up of students who are 73% White, 14% Hispanic, 3% Asian, 1% Black, and 9% of students identify as having two or more ethnicities. The teachers at this school typically have about 25 students in each class and all teachers are currently certified. According to Great Schools, (a tool used based on the California Department of Education for parents to understand scores at the school) students with disabilities are currently performing lower than the average student score. Students with disabilities are receiving educational instruction that is 60% less effective than students without disabilities.

All teacher participants were educators who work at the school site and have direct teaching instruction with students who have learning disabilities, grades kindergarten through fifth grade. The participants included one classroom teacher who has been using technology such as SeeSaw and Konestella, for many years in order to collaborate with the special education team as well as other grade level teachers. Other participants include two resource specialists who have been teaching for many years. These specialists are not feeling supported by their administrators, and had great insight to the changes they have seen in support over the years. Finally, the principal of the school site was interviewed in order to gain the point of view from a

leader on campus. The demographics of the participants were all female and include one Hispanic resource specialist, and three white educators.

In order to better understand collaboration practices between classroom teachers and resource specialists, this research project highlighted two central research questions. These two questions included: What common experiences do teachers have when it comes to collaborating with other teachers? How have these common experiences affected their will to collaborate and communicate with colleagues on a regular, ongoing basis? The sub-questions associated with the central research questions follow:

- What are teacher's experiences with technology and how does it affect collaboration?
- What obstacles exist for teachers who are trying to collaborate with each other?
- What support do teachers need to overcome the identified obstacles to collaboration?
- How can technology aid classroom teachers and resource specialists in making collaboration effective and efficient to support students with disabilities?

In order to better understand these research questions, the thoughts, perspectives, and experiences of one classroom teacher, one administrator, and two resource specialists were collected through using a qualitative and quantitative approach to data collection.

To gain perspectives and insights from as many teachers as possible, a survey was sent out to all staff members at the school site via email. The teachers were invited to participate in the research by filling out a survey of their perceptions and ideas about collaboration and communication. In all, there were five educators who responded to the survey. Out of the five survey respondents, three of the educators agreed to continue the dialogue about collaboration through an interview. The interviews focused on open dialogue in order to have teachers be able to reflect on their own practices and views of collaboration. The interviews used a

phenomenological approach (focusing on participants' lived experiences). Through collecting qualitative and quantitative data in this format, this study aimed to capture the experiences and perceptions educators have when collaborating and communicating with their colleagues without the researcher's preconceptions or judgements.

Finally, the data collected included field notes and observations from the researcher's student teaching classroom. The focus of these observations was to understand how collaboration and communication practices are represented on a day to day basis between classroom teachers and resource specialists. Through these observations I was able to understand the current systems of support that are currently available to teachers when they are trying to connect with their fellow colleagues.

Significance of the Study

The results of this study are vital to understanding how classroom teachers and resource specialists can best be supported by systems of organization and unity, in their efforts to collaborate with one another. Previous studies focused on the barriers that are in the way of effective collaboration and communication, and suggest strategies for improvement such as more planning time, and creating relationships between colleagues. While these research studies highlight the importance of removing barriers, this study focused on how to improve the systems that are currently in place to have practical implementation strategies for teachers and administrators. Unlike previous studies, this research looks at the entire school culture around collaboration and communication and suggests strategies that can reduce barriers and improve the effectiveness of teacher collaboration.

A key finding from this study focuses on the barriers classroom teachers are facing when trying to collaborate today. These barriers include, unorganization, a lack of administrative

support, and a lack of trust between teachers in the school community. Even though teachers are collaborating with one another, these barriers are making collaboration difficult and turning teachers away from trying. Although previous research suggests more time for teachers to collaborate, this study suggests that time is only one aspect of change that is needed in order to improve collaboration. Teachers are currently frustrated in their efforts to implement collaboration with their colleagues and receiving insufficient outcomes. Another key finding was that technology and administrative support are key components to improving collaboration between classroom teachers and resource specialists. Since teachers are wanting to collaborate, by providing teachers with support systems such as uniformed technological platforms, and administrators who show leadership by promoting collaboration in the school community, and who are role models by demonstrating effective collaboration routines in every day practice, teachers are better equipped to implement the same strategies into their daily routines with colleagues.

In order to implement these strategies of support into a school community, it is necessary to have clear guidelines from the top for teachers. Administrators are in the best position in the school to unite the teachers together by providing their staff members with adequate technological platforms. By starting with administrators, they are able to be role models for the rest of the staff on campus by practicing collaborative models themselves, and showing skills for effective communication, and creating a school culture that values collaboration. Next, the classroom teachers and resource specialists should be working together to create relationships and feelings of trust within each other. Administrators can support teachers in creating relationships by allocating time for teacher interaction, as well as promoting communication during staff meetings, in the school community, and even outside of school hours. In order to

collaborate, it is important that these feelings of trust are present between each of the educators on campus. These are practical steps that administrators, classroom teachers, and resource specialists can do in order to improve their collaboration and communication practices.

Through this implementation and improvement of collaboration between educators, students with disabilities will have increased access to an academic education. These systems are needed in order to have teachers support all student's learning needs in their classroom. This project suggests that if collaboration and communication between classroom teachers and resource specialists are improved, equitable and equal education can be more accessible to all students; with and without disabilities.

Chapter 2: Literature Review

Since research shows that inclusive classrooms are most effective for supporting students and raising student achievement when teachers collaborate with one another, it is important to understand the process of teacher collaboration (Bates et al., 2019). Teacher collaboration is defined as joint planning, decision making, and problem solving directed towards a common goal of supporting a student (Friend & Cook, 1992). Students with disabilities have specific accommodations both inside and outside of the classroom that can be overwhelming for one teacher to implement and remember. To help educators be successful, classroom teachers and resource specialists are encouraged to work together in order to support students with disabilities. This is because it is known that inclusion of students with disabilities is best supported when classroom teachers and resource specialists collaborate together (Blanck, 2019). However, in order for educators to be successful, it is important to identify and eliminate barriers preventing teacher collaboration.

The following literature review begins with the historical context of inclusion, including the effects collaboration and communication between classroom teachers and resource specialists have on a student's overall performance and access to content. In the second section of the literature review, I focus on the collaborative process that is currently happening in schools today. In this section I discuss the obstacles that are currently hindering the collaborative process between teachers, as well as strategies to foster collaboration between educators. These obstacles include a lack of time, teacher distrust, a lack of administrative support. In the final section of the literature review, I discuss technological platforms that are designed to foster collaboration between classroom teachers and resource specialists.

Historical Background of Inclusion

Before the time of differentiated learning, one curriculum was used to teach all students both with and without disabilities (Blanck, 2019). For many years, people worked to gain equal access to education for children with disabilities within schools and provide individualized learning plans. In 1990, the Individuals with Disabilities Education Act (I.D.E.A.) was passed to provide students with disabilities an individualized education program (IEP) to have better access to education. An IEP is a document that is created for students who are eligible for special education. The document is meant to determine goals, services, and accommodations a student might need in order to be successful and have equitable access to an education. Classrooms have a wide range of students who come from different backgrounds, and have varying levels of abilities. Having an inclusive classroom contributes to a student's achievement, success, and overall social life (Meyer, 2001). An inclusive classroom is where general education and special education students are learning in the same environment and are supported with diverse teaching strategies to support their, social, emotional and communication needs.

Although I.D.E.A. encouraged the idea of inclusion for students, there were challenges to implementing this act in schools. In 2004 I.D.E.A. was reauthorized to provide specific requirements when creating effective learning environments and inclusion (Gordon, 2006). This act opened the doors for students to have appropriate support and specialized services and called for teachers to collaborate with each other in order to fully carry out the individualized education plans. This plan is referred to now as FAPE; free and public education (1997). FAPE calls for individualized plans for all students with unique needs, and for teachers to practice inclusion instead of pulling students out of the normal classroom setting. Stanovich (1998) was one of the first researchers who claimed that to be successful in implementing inclusive practices into the

classroom, teachers need to work collaboratively. Stanovich states, “In order to be effective with students who have special learning needs, general education teachers must be able to build bridges to all the people who either have stake in, or can assist in the education of those pupils. These bridges can be built most effectively through collaboration” (1998).

The idea of collaboration between teachers to support inclusion was reinforced by Milteneine & Venclovaite (2012), who argued that without a teacher’s readiness to learn from one another and focus on joint activities, such as planning, education is not equitable for all students. I.D.E.A. allowed for inclusionary practices and research to start taking place, and it has been a springboard for equitable learning for all students. Researchers Diliberto and Brewer (2014), looked at the IEP process for students with disabilities and achievement rates. They revealed that teachers who adopt inclusive practices and collaborate with their colleagues to implement individualized education plans (IEP), their students had higher achievement rates, better social skills, and a positive self view. This was found through understanding how an IEP helps a student, and the skills and knowledge it takes from teachers to help support students in their educational, social, and emotional journeys. The Individualizes with Disabilities Act works to ensure students are receiving the best possible education, and teachers who collaborate with colleagues to put these practices into play have a large impact on students.

Educational inclusion under I.D.E.A. requires students with disabilities to be involved in a general education classroom, as well as have equal opportunities for success. Successful inclusion support is met through using a least restrictive environment (LRE) and free appropriate public education. LRE is not a specific placement and does not have a single definition for what is beneficial for all students, it can be full inclusion or partial inclusion. Różalski et al. (2010). Some students would not benefit from a full inclusion classroom because they would need

additional support, whereas other students might benefit from full inclusion and thrive with a general education classroom (Rozalski et al., 2010). Establishing a least restrictive environment for a student comes from understanding their individual learning needs, and supporting them with any tools that may be necessary. In order for teachers to understand their students and find a least restrictive environment for their students to be successful, collaboration and communication between classroom teachers and resource specialists must take place.

Student Achievement

There has been extensive research over the years suggesting that inclusive classrooms benefit students in many ways, and teachers should focus on implementing inclusive strategies. One benefit students receive when classroom teachers and resource specialists work together is improved academic performance (Bates et al., 2019). This advance in academic performance happens because there are grade level teams working together to make a plan for specific students. These plans identify and support students' needs, monitor their progress, and develop accommodations based on their performance. Researcher McMillan (2008) explores how inclusive classrooms are a positive environment for students to gain opportunities for social interaction, higher academic achievements, and improved behaviors. These results are possible because teachers will differentiate their styles of instructional strategies and modify tasks to support their student's learning, and be able to increase academic achievements of all students. These studies have shown the benefits of inclusion for students with disabilities in a general education classroom (McMillan, 2008, & Bates et al., 2019).

The Collaborative Process in Schools

According to Tichenor & Tichenor (2019), teaching is an isolated profession, in which teachers work independently behind closed doors. Teaching is seen as an isolated profession

because the doors are closed, and each teacher is in charge of their students' learning. Although this may be the case, teachers are still aware of the benefits that collaboration brings to students. Teachers have gained awareness for the importance of collaboration through understanding the teacher performance expectations. Teacher Performance Expectation #5 (TPE, 2016) calls for teachers to "collaborate with their colleagues to assure that all students are provided curriculum and instruction that effectively merges literacy within each content area" (California Teaching Performance Expectations, 2016, p. 8). Collaboration is defined as "two or more teachers who work interdependently to share information and knowledge, plan, and problem - solve to achieve a common goal" (Tichenor & Tichenor, 2019, p. 54). Collaboration is hard for some teachers because of the school communities they are currently teaching in. Teachers are working in an isolated environment while trying to collaborate with their colleagues in order to have successful inclusion for their students. An option some teachers turn to is to pull the students who have disabilities from the classroom to work with the resource specialists, and have the children come back to the classroom at a later time. However FAPE discourages teachers from removing students from the classroom, but rather supporting their education through adapting the curriculum (U.S. Department of Education, 1997).

Adapting the curriculum and implementing educational inclusion for students takes consistent communication and collaboration between teachers. One of the best ways teachers can gain knowledge is through collaborating with others, especially a specialist (Blask, 2011). Having two or more teachers work to implement and plan a learning strategy for their students allows for more accommodations as well as modifications to be made. Accommodations in the classroom allows students with disabilities to complete the same tasks as other students but be given tools so they are still able to be successful, whereas modifications are changes to the

curriculum and what the students are learning. All students learn differently and have different learning needs. It is possible to have a different point of view, and develop a full sense for the student's needs when more than one teacher is able to observe the student. These modifications and accommodations will benefit the student's learning as well as create a least restrictive environment for the student. Tichenor and Tichenor (2019) acknowledge that collaboration between teachers is essential for student benefit, however there are still obstacles when it comes to implementing collaborative practices between teachers.

Obstacles to Collaboration

According to Cook & Friend (1991) collaboration between classroom teachers and resource specialists requires shared responsibility for decisions as well as parity. Parity is the element of collaboration that allows teachers to believe they have something valuable to contribute to the collaborative activity, and they are valued members. When teachers lack parity they typically limit their participation, and do not search for opportunities to communicate with their colleagues. Cook and Friend (1991) describe how relationships between classroom teachers and resource specialists is one of the driving factors to effective collaboration. Generally, when one partner in the relationship is seen as less or is not valued, collaboration between the two is impacted. Through sharing information and resources, teachers will be able to gain insight from each other and feel as though they are equivalent and be more likely to share ideas. This form of relationship and developing parity between teachers takes time. Kritikos and Birnbaum (2003) offer the suggestion that maintaining a positive attitude and respect for others can be a powerful tool when working to collaborate with colleagues. In order to develop this sense of relationship and understanding between teachers it is important to listen to ideas, and understand viewpoints.

Another potential obstacle to overcome when fostering effective collaboration between classroom teachers and resource specialists is time. Finding time to collaborate with one another is a challenge for teachers because they are consistently being pulled in different directions (Darling-Hammond & Richardson, 2009). With busy schedules, teachers are expected to manage their time in areas that are the most important and beneficial to their students. Taking time out of the day to collaborate with another teacher takes a lot of work and support. Darling-Hammond & Richardson (2009) suggested teachers use professional development days to learn about collaboration and use that time to develop curricula for students. Developing this curriculum would allow teachers to reach all students by supporting and implementing different learning styles. Although this would take more time out of teachers' days to complete the training, in the long view teachers will have the tools necessary to support themselves and be successful in implementing collaborative strategies amongst each other. This is a potential obstacle to overcome and with teachers being occupied doing different tasks to support their students, it is important to look at ways teachers can easily and effectively collaborate together. Efficient collaboration is when teachers are able to use one another as a resource for support in a timely and effective manner. Being able to collaborate efficiently means teachers are communicating, sharing ideas, and respecting each other's contributions. With teachers missing some of these tools to implement efficient collaboration, professional development could be a solution to some obstacles.

Castro et al., (2017) highlight four dimensions of school climate that principals can support to ensure collaboration between classroom teachers and resource specialists can prosper. The first dimension is physical and social-emotional safety. When students and teachers feel supported to experiment and try new ideas, better collaboration has an opportunity to take place.

The second dimension is the quality of teaching and learning. When teachers are dedicated to producing their best work, it inspires others to do the same. A healthy collaborative environment that has been created by a principal can best be identified when teachers are ready and eager to learn from one another. The third dimension focuses on the impact of relationships.

Relationships are important to collaboration because it develops a sense of confidence and support between teachers. In order to collaborate with a colleague there needs to be a mutual feeling of confidence in one another. Finally, the last dimension is the structural environment in a school climate. Students receive the benefits such as increased academic performance, emotional intelligence, and inclusion in the classroom when teachers are confident in diversifying their teaching curriculum and being included in a supportive environment. When a school climate has these dimensions, teachers feel supported through their professional development, as well as in creating relationships with their colleagues (Castro et al., 2017). Classroom teachers and resource specialists are able to learn new skills, diversify learning opportunities for students, and improve student academic performance, when principals are able to create time for educators to collaborate together.

Fostering Collaboration

Collaboration between teachers starts with the relationship between teachers and the positive mentality of working together. Stanovich (1998) describes the relationship between classroom teachers and resource specialists as the most critical for collaboration because it sets the foundation for the rest of the team that supports the student. Teachers who have the best collaborative relationships are ones who connect on an emotional level and are able to ask for help without being afraid to show a weakness (Milteniene & Venclovaite, 2012). Being vulnerable and asking for help can be challenging, especially when teachers are often looked at

as an isolated profession who works on their own. Pentek (2018) encourages teachers to use strategies during meetings in order to obtain the most effective collaboration outcomes. For example, one strategy would be to address a barrier directly. Addressing barriers is about identifying and confronting factors that could be hindering collaboration. Pentek (2018) identifies some of these barriers as being “a lack of communication, insufficient support, unrealistic expectations, and a lack of training.” Identifying these barriers in the community makes it possible for teachers to start having effective collaboration strategies. Another strategy suggested by Pentek (2018) is to understand the roles of the various team members and focus on core values. In an elementary school setting, this could involve listening to one another’s ideas and avoid taking on an “expert or assumed role” (Pentek, 2018). When collaboration and communication are prioritized, teachers are able to create time in order to look over their reports and work better to support the students (Pentek, 2018).

Communication is an art between people, and takes intentional understanding from participants in order to develop ideas and viewpoints from others. Paris and Winn (2013) use a method known as the dialogic circle when talking to other people in hopes of understanding someone else. The dialogic circle is when two people are involved in the same conversation, each other listening to understand instead of to respond (Lane, 2020). This process allows for people to feel heard, and valued for the information they are sharing. Finally, it is important for classroom teachers and resource specialists to understand each other’s roles when it comes to supporting the student so one person’s outlook and skill set is not overlooked or placed with lesser value (Pentek, 2018). Teachers can implement these strategies and gain relationships with each other during their free time, or through planned meetings such as Professional Learning Communities.

Professional Learning Communities (PLC)

PLCs provide teachers the opportunity to gain trust among each other, and can gain insights about their colleagues which can offer sources of insight to their own teaching philosophies (Bayler et al., 2019). Successful professional learning communities often follow five themes of collaborating and communicating. These five themes are emphasized by Ripley (1997) stating, having confidence in partner skills, valuing each person's contribution, developing routines for in depth planning, having programs that include involvement for students and educators, and increasing productivity over time. These five themes are indicators of effective collaboration and communication communities because they rely on trust. The first theme is having confidence in your professional team's abilities. This is an essential theme because it allows each team member to focus on smaller parts of the problem, therefore more work can be accomplished, and teachers are not feeling overwhelmed and burnout. Through this process of confidence, feelings of support from colleagues are starting to emerge. Support allows teachers to feel empowered to try new ideas and implement teaching strategies that are different in hopes of supporting students. This leads to the second theme of collaboration which is validating each other's work. This circle of trust fosters great collaboration and communication with the team of teachers. Once these planning strategies are in place it is important to set a routine. This routine allows teachers to depend on one another, and have a partner that is always there to collaborate with. These feelings of rhythm are about trust and feeling supported by fellow colleagues. Collaborative plans can become misguided or lost in the process because of the different moving parts. Through having each teacher be actively involved, consistent communication will be happening, and each person on the team will be informed. Finally, in order to have a successful collaborative community it is important to strive for increased quality

of instruction. To ensure that teachers are continuing their levels of collaboration, reform and constant checks of the quality of instruction should take place. This system allows teachers to continue to adapt to new ideas and supporting student needs. These five themes allow teachers to gain trust within each other and learn to lean on each other when they need help supporting a student, or when they want to collaborate. Researchers Hallam et al. (2015) point research in the direction of looking to principals to influence trust between teachers and create successful PLC meetings. Administrators can influence trust amongst educators through creating a community that values communication, and constant validation. The path administrators and principals take in developing collaboration among teachers has the potential to foster successful meetings and student outcomes.

Administrators support

According to Bayler et al. (2019), principals play a large role when it comes to developing a professional learning community among teachers. Principals should guide teachers to self governance and let them lead the professional learning process by having open communication. By doing this, teachers are able to learn how to communicate together in a protected environment, and will be able to go off and collaborate without the help and guidance of administrators. In schools today, collaboration is a skill that is seen as a sign of being successful, and transformative. Campo (1993) explains when principals motivate teachers, have a clear school vision, and emphasize the importance of working collaboratively, they produce a stronger school culture focused on inclusion of students. In order to make time for collaboration, it is important to have assistance from school administration (Cook & Friend, 1991). Principals can set aside time for teachers to communicate and collaborate together by talking to the classroom teachers and the resource specialists, and understanding their needs. Silva et al.,

(2017), researched teacher's likeliness to engage in collaborative practices if their administrators are supportive of their efforts. Her findings conclude that when time is set aside for classroom teachers and resource specialists to work together, they are better able to support the inclusion of all students in their classrooms. These opportunities for teachers are important, and can make or break teachers having successful collaboration. Once understanding the benefits of collaboration and support from administrators, it is then important to look into what tools teachers can use to implement collaboration into their daily schedules.

Teachers' roles

With teachers playing a large role in the implementation of inclusive practices it is important to analyze what strategies can help support teachers be successful. Collaboration requires teachers to be on the same page about support for students, and have an understanding of the roles and responsibilities they have to support each other and the students. Scruggs et al. (2016) covers different roles classroom teachers and resource specialists can take on when collaborating together. One teaching role that is discussed is known as "one teach and one assist." Through this approach one teacher has primary responsibility to deliver the whole class instruction while another teacher maintains behaviors of the class and provides extra support to students when needed. This form of teaching requires teachers to collaborate and understand their roles and responsibilities while inside the classroom. Scruggs and colleagues also discuss station teaching as a way for teachers to split students into groups based on ability and work on content areas that need more support. This form of team teaching allows for better student achievement. For this process to work effectively teachers need to collaborate. Alternative teaching is another strategy teachers can use to support students. Through this form of co-teaching, one teacher is responsible for teaching a large group of students content while another

teacher is working with a smaller group of students to review concepts or learn a new lesson at a differentiated pace. This method can also be known as the “push in method.” Resource specialists can go into a classroom to work with students and provide support. In each of these variations of teacher collaboration, teachers are aware of their roles, and they work together to support students in the best way possible.

Weiss and Brigham (2000) observed classroom teachers who collaborated with resource specialists and found that successful collaboration is successful when there is a shared philosophy of instruction. In order for teachers to have a philosophy of instruction that is mutual, meaningful relationships are needed between teachers. Meaningful relationships are created through appreciating skills and ideas each person brings to the table to develop a collaborative environment. During this collaborative process between classroom teachers and resource specialists, each of the team members receive different benefits (Brownwell et al., 2006). Each teacher brings a different skill set and perspective to the table such as knowledge of curriculum, pedagogy, student management and behavior, or student centered learning (Brownwell et al., 2006). With these different skill sets, the teacher’s role in a collaborative process is beneficial to each of the other team members, as well as the students themselves, which leaves lasting implications for improving collaboration.

Paraprofessionals

Resource specialists are able to receive extra practice with collaboration between colleagues, because they often have a paraprofessional working with them as extra support. Paraprofessionals are classroom aides that are there to meet the needs of students with disabilities in a general education classroom. According to Stockhall (2014), paraprofessionals can provide relief for a classroom teacher because they are able to focus all of their attention on

one student. With these professionals working together, there is a line of open communication to better understand their students, and provide them with appropriate learning strategies. This form of collaboration allows for students to be in an inclusive education environment and receive the support they need to be successful. To have the most efficient outcomes for paraprofessionals, schools should involve them in professional development and professional learning communities to further their teaching practices (Stockhall, 2014).

The Use of Technology in Collaboration

In recent years technology has greatly advanced and developed, therefore increasing communication between people. Technology is a tool that can support classroom teachers and resource specialists' efforts to collaborate together by giving them a platform for effective and efficient communication. Kieser & Golden (2009) investigated how technology could be used to improve collaboration and communication between classroom teachers and resource specialists. Their findings show that because of the asynchronous and synchronous features of technology, teachers are able to easily communicate back and forth and be on the same page. When teachers are on the same page of communication, barriers between classroom teachers and resource specialists are broken down; allowing everyone to collectively work together to support students. Teachers have access to the same documents and can access them at any point while working with technology, making their collaborative process much more efficient. For larger files such as Individual Education Plans (IEP) or class projects, teachers have the ability to transfer these files to each other with ease through applications such as email, Google documents, or dropbox (Charles & Dickens, 2012).

Technology is also a tool for classroom teachers and resource specialists because it breaks down barriers of teacher isolation. Teaching is an isolated profession, but technology is a

tool teachers can use to do their work on their own time, while still receiving help and support from their fellow colleagues (Lewis, 2004). Geer and Hamil (2003) explore this idea more fully by examining interprofessional relationships on a school site. When classroom teachers and resource specialists use online calls, discussion boards, self reflections, or even text messages to communicate, their overall collaboration skills were improved. Technology allows for classroom teachers, and resource specialists to gain instant feedback and continuously plan how to support a student (Ching et al., 2020). The use of technology allows for communication to happen from any distance, during the work day, after the work day, before school, or any time that works best for individual teachers. This information keeps all members of a student's support team on the same page and informed.

E-Learning and Learning Environments

Students today are learning in an e-learning environment. E-Learning refers to the ability to learn information through various channels such as videos, CD's, virtual classrooms, and online modules (Logofatu & Visan, 2015). This form of learning helps students be included in the classroom because it helps connect different types of learners to the materials. These devices allow for students to grow their knowledge and have a positive experience with education. Through online learning students are being introduced to new forms of e-learning such as Padlet, Kahoot, flipgrid, and nearpod. Teachers are each other's resources when it comes to finding these devices to help their students stay engaged with their learning. When teachers are able to collaborate with each other they can gain new insights about devices students are enjoying, share documents, resources, presentations, and teaching styles to better differentiate instruction for their students (Francis, 2017).

Messages and Instant Communication

Slaughter (2012) highlights the usage of technology in a workplace by suggesting that these new applications were not designed for people to collaborate without interaction, but rather created to build empathic communities with organized communication. This form of community means going beyond basic patterns of emailing back and forth, but rather to using technology as a way to connect and understand others. For teachers this means collaborating and communicating to understand different points of view, or strategies to use while in the classroom. Using technology can seem like an outlet to continue working alone with a twist of sharing a document. However, by using technology and gaining collaborative skills, we can build flexible cultures, improve relationships among colleagues, and improve student achievement.

For teachers who need to communicate with one another, it is important to also have an outlet that allows for structured communication. Slaughter (2012) suggests using e-mail, instant messaging, phones, and video conferencing to have instant communication with colleagues. This instant form of communication allows teachers to quickly and accurately share information among themselves and work towards a greater student achievement. Present day options for instant communication are Google Hangouts, and Zoom Video Communications. Google hangouts allows users to video call or chat with other users instantaneously. Google applications link together, therefore any teacher who has a Google email account, or Google applications can have access to video conferencing with any other Google user (Bolton, 2013). This easy set up is integral to the collaboration and communication between teachers. Using instant messaging such as Google Hangouts, messaging, or e-mail allows for consistent and information being shared between classroom teachers and resource specialists. Google applications are user friendly and

give teachers a one stop shop to collaboration, communication, and breaking down the barriers of an isolated profession.

Google Applications

While living amongst a pandemic, teachers were required to continue their work in supporting students, and teaching them content material. This new way of teaching called for an E-Learning environment, and specific technologies that were used to improve collaboration between classroom teachers and resource specialists to improve student achievement. Some internet based applications such as Google Groups, Google Drive, and OneDrive can be efficient ways to foster collaboration between classroom teachers and resource specialists (Riggelman & Butcher, 2017). These Google applications allow for practical communication while also providing security and confidentiality of files, conversations and data between teachers. Google applications such as Google docs, Google Appointments, and Google Drive are tools teachers can use to stay in touch and communicate with one another (Moore, 2016). Google docs invites colleagues to the same workspace and takes away the stress and complexity of a collaborative project; colleagues can brainstorm and be included in the development of ideas and concepts (Moore, 2016). Google appointments allows classroom teachers and resource specialists to organize a calendar for meetings in a flexible style that reflects their busy schedules (Moore, 2016). Finally, Google drive is used to facilitate meetings, review colleague's documents, create a team folder, conduct surveys or even store data and other important information (Moore, 2016,). Google drives is a place where teachers can stay organized and allow for the collaboration process to run smoothly and gives all team members the opportunity to contribute materials and ideas to the meeting.

Google Classroom

With technology becoming a prominent part of our lives, educational settings are starting to integrate new technologies. Another Google application that supports teachers with collaboration practices is Google Classroom. Google Classroom is a virtual site where teachers can load homework, classwork, slideshows, comment on student's work, and add information all in one place. Google Classroom is a tool to support effective and long lasting collaboration between teachers because it keeps all information in one place. When teachers are added to the Google Classroom, everyone has the ability to contribute to the work, and stay up to date with differentiated learning, meetings, and student progress. Resource specialists can use this tool in order to check in with the students' work and monitor their progress. Harjanto & Sumarni (2019) suggests teachers use Google classroom to collaborate because it is flexible, easy to use, reliable, and promotes creativity. When working to foster collaboration teachers need a tool that is flexible in order to work with their schedule. Through Google classroom, teachers have access to student information and progress from their computer, smartphone, or any other personal device (Harjanto & Sumarni, 2019). This form of reliability allows teachers to stay informed with their students' needs, and contribute to the changing patterns they see while working with a student. Finally, Google classroom promotes creativity between teachers because they have multiple ways to communicate with one another (Harjanto & Sumarni, 2019). Google Classroom helps teachers be able to have their conversations stay streamlined and organized, and this is a helpful tool to have because communication can be unhelpful when someone misreads or misunderstands the conversation. Through having the tools on Google classroom to present data and share information with other teachers, miscommunications can be avoided, and the focus of collaboration can be on the students.

Conclusion

There are many contributions in academic literature that focus on bettering the practices of collaboration and communication between resource specialists and classroom teachers (Tichenor & Tichenor, 2019; Pentek, 2018; Hallam et al., 2015; Kritikos & Birnbaum, 2003).

There are numerous articles that point to the benefits collaboration brings to the school community and education of a student with disabilities (Rozalski et al., 2010; Russo, 2019; Erwin & Guintini, 2000) . There are also barriers that prohibit effective collaboration from taking place. These barriers stem from having a lack of communication, as well as a system of support like technology, to facilitate effective collaboration. Teachers can improve their collaboration practices and remove potential barriers by prioritizing communication, working to establish connections and relationships with team members, and using technology to make collaboration accessible to all teachers. Teachers are also supported by administrators because they are able to facilitate school cultures, and develop a positive outlook on collaborative technological platforms.

Researchers have studied the importance of teamwork, not only in the classroom but from the community as a whole (Kieser et al., 2009). These scholars focus on the isolation teachers are experiencing from a lack of collaboration and the effects these actions have on a student's education (Bates et al., 2019). These findings demonstrate the importance of having a positive relationship with colleagues and being able to effectively and efficiently communicate and collaborate together. The world of education is constantly changing and adapting, therefore it is crucial that collaboration is accessible to all teachers.

Although there is significant research that demonstrates the importance and barriers to collaboration, there is little qualitative data that examines how technology and administrators can

help teachers implement collaboration practices into their daily schedules. The purpose of this study was to explore the support systems teachers need in order to successfully implement collaborative practices in their classrooms through technology. My goal was to uncover strategies that classroom teachers, resource specialists, and administrators can use in order to develop positive relationships through collaboration and communication.

Chapter 3: Methods

Many experts have researched the connection between teacher collaboration and the effects it has on students (Milteniene & Venclovaite, 2012, Stanovich, 1998, Francis, 2017, Rozalski, Stewart, & Miller, 2010). However, little research has been done to directly study how teachers can be supported when creating a system for efficient collaboration and communication that is long lasting in order to increase student achievement and inclusion practices. Theories about improving collaboration currently suggest giving teachers more time in the work day to collaborate with one another. Although these approaches have their benefits, in order for collaboration to be successful and long lasting, a solution needs to involve the teacher's voice. Therefore, more data is needed to better comprehend classroom teachers and resource specialists everyday schedules and their ability to collaborate with one another to help their students be successful. One possible outlet for teachers gaining a stable and efficient relationship with collaborative practices is through the use of technology.

Research Questions

The aim of this research was to identify sources of technology that can help classroom teachers and resource specialists develop a lasting and effective form of collaboration to improve student achievement and inclusion for students with disabilities. The two central research questions of the study asked: What common experiences do teachers have when it comes to collaborating with other teachers? How have these common experiences affected their will to collaborate and communicate with colleagues on a regular, ongoing basis? The sub-questions associated with the central research question follow:

- What are teachers' experiences with technology and how does it affect collaboration?
- What obstacles exist for teachers who are trying to collaborate with each other
- What support do teachers need to overcome the identified obstacles to collaboration?
- How can technology aid classroom teachers and resource specialists in making collaboration effective and efficient to support students with disabilities?

These questions were used to focus the study around the teacher's voice in order to examine existing types of collaboration, as well as identify what support is needed to create more effective forms of collaboration.

Description and Rationale for Research Approach

In the world of educational studies, there are many different approaches to research. In my own project I will be using a constructivist approach. A constructivist approach is used to interpret and reflect on an individual's viewpoints and experiences to gain an understanding of the participants' world and knowledge (Creswell, 2013). Through this approach to research, experiences from the participants are inspected to gain a better understanding of support that is needed for teachers to have effective collaboration.

My research is focused on understanding classroom teachers and resource specialist's feelings on collaborating with one another, and technologies that help support their efforts. Teachers are expected to carry a wide range of roles to support students in the classroom, without getting much support in return (Stanovich, 1998). Through recognizing this need, teachers will have the opportunity to share their experiences, personal perspectives, preferences, and knowledge during individual interviews. My role in this

research will be to create a space for teachers to reflect on their efforts to collaborate and incorporate technology in order to improve inclusion with students. The participants are teaching in a time that requires consistent communication, so the intention of the interviews was to reflect and make meaning of their experiences (Seidman, 2013).

I have chosen to use a convergent mixed methods approach to gain perspectives from both qualitative and quantitative data. The survey given to teachers provides quantitative data while interviews and observations provide qualitative data. The interview process allows for participants to share feelings, perspectives, and experiences to help give a deeper understanding in research. Through listening and talking to participants, true collaboration is shared and a meaningful understanding of perspectives are formed (Paris & Winn, 2013). The survey provided specific information about teacher's experiences with collaboration and technology such as Google applications. The use of open ended questions in the survey provided data on topics during the interviews as well as information on teacher willingness and readiness to adopt collaboration and collaboration strategies.. The data from both qualitative and quantitative were used together to interpret the data.

The qualitative design of the interviews was based on a phenomenological approach to interviewing (Seidman, 2013). Phenomenological research is focused on understanding a participants lived experiences consciously as it happened without projecting preconceptions or judgements. Through this form of research, open ended questions were asked to the participants in order to understand their experiences from a first person point of view. This form of research differs from other qualitative research approaches because it is concerned with human experiences and perspectives when researchers are working to

understand the world. Other forms of research allowed for observations in qualitative data from a third person perspective. Since phenomenological interviewing allows teachers to share their experiences and explain what systems of support work best for their specific needs, this proved to be the best approach to understanding teacher's experiences with collaboration and exploring how technology can play a role in creating effective working relationships.

Research Design

Research site

The research site was a public school with grades Kindergarten through fifth grade located in a suburban area of the San Francisco Bay Area. The school name is a pseudonym and will be known as Meadow's Academy. This school has 446 students during the 2020-2021 academic school year, creating a ratio of 1 teacher per every 25 students (School Website). The school focuses on the development of their students as a whole person, including academic performance, social emotional wellbeing, and overall well-being. Students with disabilities make up about 2% of the student population (California Department of Education) and are currently performing lower than students without disabilities. The majority of the students in the school are White (73%), 14% of students are Hispanic, 9% of students are two or more races, 3% of students are Asian, and Black, Native American, Filipino, and others comprise 1% of students. Gender at this school is almost even, but slightly leans more towards the majority male, with 54%. All teachers who work at this school are certified, and 75% of teachers have 3 or more years of

experience working. Nine percent of the student population comes from low income families and receives a free or reduced lunch. (California Department of Education).

The school offers both a push-in method where the resource specialists come into the classroom to work with students with special needs, as well as a pull out method, where the student is pulled out of class to work with the resource specialist in a new area. Each student who receives resource support is individually assessed and given an individual education plan that is appropriate for their level of proficiency and understanding. Each year the plans are reviewed and discussed to understand what is working and what is not working for the student. Teachers are involved in this meeting, and data is collected to understand the student's performance while in the classroom.

The principal of the school granted permission to conduct the research study amongst the classroom teachers and resource specialists grades Kindergarten through 5th grade. I was a student teacher at this school site, and I was working closely with many of the classroom teachers and resource specialists during my placement. I coordinated with the school regarding the participant solicitation and consent process as well as the schedule for interviews. The school principal reviewed the interview questions as well as the teacher survey questions prior to research being conducted.

Participants and Sampling Procedures

Classroom teachers and resource specialists of all grades kindergarten through fifth received an email that contained a letter of introduction which included a description of the research study, as well as a link to a survey regarding their perspectives on collaboration and experiences with technology. The letter of introduction explained what this research

project was about and what data I wanted to collect in order to support the teachers' efforts in collaborating with colleagues. The survey was voluntary to complete for all participants and a total of 5 surveys were completed. Teachers who completed the survey and were willing to participate in the interview were sent a letter of consent form to participate in a follow up interview. Interviews were selected based on the teacher's willingness to participate, as well as their varying perspectives on collaboration and technology usage. Teachers were selected in order to gain differentiating perspectives and thoughts on collaboration. The first participant was chosen for an interview because she has experience with using technology in order to collaborate, and relied greatly on support of administrators to be successful. Through her reflection I was able to understand how technology plays a role in supporting collaboration. The second participant was selected for an interview because she is a resource specialist who feels like they are not being supported. Through listening to their ideas and thoughts I would be able to get a better understanding of the true problems hindering collaboration, and discover what supports are necessary. Finally, the last participant was chosen because she is a resource specialist who feels like she is supported through administrator leadership and technology. By listening to different points of views, I was able to understand the various feelings teachers have at the school and explore what changes need to occur in order to support collaborative practices between classroom teachers and resource specialists. Teachers were asked to reflect on their own collaboration habits with their colleagues, as well as specific aspects that made the experience either positive or negative. The teachers gave insights to their daily schedules, and how they can see collaboration being used in long term relationships as well as being an efficient part of their communication routines. The

procedures of the study were approved by the Dominican University of California Institutional Review Board for Protection for Human Participants, and all participants signed informed consent forms prior to participating in the study. All participant names are pseudonyms.

	Gender	Race / Ethnicity	Grade Level	Students with IEP	Technology usage in class
Alicia	F	White	TK teacher	0	SeeSaw, Konestella
Brooke	F	Hispanic	Resource Specialist	8	Zoom, email
Carly	F	White	Resource Specialist	5	Google Class, Coaches Corner, Gmail
Susan	F	White	Administrator	0	SeeSaw, Konestella, Zoom, Gmail, Google Meet, Google Classroom

Table 1 Participants of Interview Questions

Methods for Data Collection

Survey

Classroom teachers and resource specialists answered a 10-20 minute online survey via Google Forms (See Appendix C), which provided data regarding their collaboration and communication practices with other teachers. This provided additional insight into the barriers that exist for teachers who are trying to collaborate and have trouble being effective in their efforts. The purpose of the survey was to provide potential data for the research questions on effective collaboration and their own individual thoughts on collaborating as a whole: *How often are you communicating or collaborating with colleagues to support students with special needs?* The results of the online survey were kept on the

researcher's password protected computer. In addition to the teachers who participated in one on one interviews, two additional teachers returned the survey.

	Gender	Race / Ethnicity	Grade Level	Students with IEP	Technology usage in class
Robbie	F	White	Kindergarten	1	Google Classroom
Luna	F	White	4th Grade	4	Zoom, Google Classroom, Email, Konestella

Table 2 Survey Participants

Observations and Fieldnotes

I observed 6 weeks of classroom teachers and resources specialists; paying close attention to how they talked to one another, and the relationship between them and wrote corresponding field notes on my observations. These observations were important because it provided information about their tasks. The observations also highlighted areas in which teachers need extra support, in order to be successful in collaboration and communication practices between colleagues.

Interviews

The teacher participants were individually interviewed to discuss open ended research questions (see Appendix D). They reflected on their own experiences with collaborative practices and how their work had supported students. For example, in order to get teachers thinking about collaboration, the teachers were asked, "Could you describe a specific time when you needed to communicate effectively with another teacher when discussing a student with special needs? How did you reach out to this colleague?" Teachers were also asked to expand their thoughts and explore different experiences they

had with collaboration and communication. For example, teachers were asked, “Can you describe a time when collaboration worked best between you and your colleagues? What tools were helpful? What made this collaboration successful?” When asking these questions it was possible to explore the tools and support each teacher deemed important, and therefore able to find solutions to maintaining efficient and long lasting collaboration. It was important to learn the participants' viewpoints on collaboration, and what they expected when entering into the collaborative process in order to understand the obstacles teachers face when implementing collaboration between colleagues.

Interview questions were audio recorded on the researcher's password protected iPhone. Pseudonyms were used for all interview participants, and all identifying information excluded from written notes.

Data Analysis

Several methods were used to analyze open-ended interviews with classroom teachers and resource specialists. The interviews were audio recorded and transcribed by the researcher. Throughout the interview I made notes of key phrases that the participants had discussed that had to do with their experiences both in negative and positive perspectives. After each interview, I wrote out analytic memos to understand my participants emotions and feelings and conducted a narrative analysis. The narrative analysis provided a deeper understanding of the lived experiences of each participant because it reflected on the who, what, and why of personal stories. I also made note of the way my participants spoke, as well as how they shared an experience, so that I could better understand how the experience affected them. This process of conducting a narrative analysis was important to this research because it explored an in-depth interpretation of

experiences, while uncovering underlying stories and narratives (Maxwell, 2013). By doing this, I was able to understand my participants better and understand their perspectives on a deeper level.

After the interviews were completed and transcribed I coded the transcripts using open coding. Open coding is done by creating labels of like terms throughout the interviews in order to chunk together ideas. Throughout the coding process I identified both expected codes and unexpected codes, as well as potential themes apparent in the transcripts. Unexpected codes that emerged during this process included trust, unity, documentation, organization, and isolation. In addition, several transcripts were peer coded in order to identify other interpretations of the transcripts. Finally, once the codes had been reviewed by a peer, focused coding was used in order to find additional evidence to support the emerging themes or identify discrepant information that contradicted potential themes.

After gathering codes, and insights from interviews with classroom teachers and resource specialists, I created a concept map in order to track the relationship between ideas. A concept map is a tool to use in order to link ideas together to find a common theme. Through using this form of organized thinking I was able to start to see the correlation between what all of the participants were saying and develop the final themes that become my research findings.

Quantitative data was collected through a teacher survey. The survey was downloaded as a spreadsheet to interpret and compare results. Similar to the interviews, I wrote analytic memos on the perspectives and opinions of the participants and categorized them based on their positive or negative experiences. Through this process I was able to

see a pattern between a teacher's feelings on collaboration and their positive or negative experiences.

Validity

During research, there are two main threats to validity. Maxwell (2013), describes these threats as researcher bias and reactivity. A researcher can be biased during their study by selecting certain information, selecting certain participants, and changing the data to match their view. I acknowledge that I have many personal biases about my project.

One potential bias is that I have grown up in the age of technology, and view it as a helpful tool, where others may see it as another hindrance. In addition I believe in the power of effective collaboration and I am passionate about creating change to help support teachers. I also believe that each person brings a unique understanding and perspectives when collaborating so that the results of collaboration have greater potential than individual efforts developed in isolation.

In addition, participants may have responded differently to my questions because I was a student teacher at the school and unfamiliar with some of their experiences. Prior to the research, the researcher had met the participants working at the school site briefly while working as a student teacher, but did not meet most of the participants.

In order to mitigate the effects of my personal biases, I designed interview questions to support Paris & Winn's (2013) approach to dialogic circles. In this approach conversations are shared between the participants and the researcher in a back and forth format in order to share ideas and have an understanding of each others' perspectives. With an awareness of my personal bias, I strove to make conclusions based on what the participants had said instead of any personal bias.

Reactivity

This research project asked participants to engage with a new experience, which increased the possibility of reactivity. Reactivity occurs when participants act differently or have answers that portray a different perspective than normal because they are being watched. This could have an impact on the data and therefore invalidate the findings. Being a student teacher I was watching classroom teachers and resource specialists, and without familiarity of their normal routine, reactivity had the potential to occur. While teachers are aware of the need for collaboration, it may be a new opportunity for teachers to talk about their experiences and thoughts about working with their colleagues. The teachers being interviewed have common experiences of collaboration either in a positive or negative way, which will contribute to research findings. This research into their perspectives and experience may bring up uneasy feelings, and may have influenced the data collection because it is uncomfortable to express negative perspectives about working with other colleagues. Teachers may feel hopeless with collaboration and do not know what types of support they will need to be successful.

With an understanding of my own research bias and impact on reactivity, I worked to implement strategies to help decrease the threats to the validity of the research. These strategies triangulated information by talking to more teachers in order to increase larger sample sizes and determine patterns and perspectives. In order to have my participants feel comfortable going through their daily routines and schedule as normal while being watched, I had open communication with the classroom teachers and resource specialists and reminders of confidentiality to decrease reactivity.

Chapter 4: Findings

Collaboration and communication are not new ideas in the world of teaching. Teachers have always reached out to their colleagues and communicated in order to support students. However, some practices that are being used today are not effective or efficient, because there are barriers such as a lack of planning time, poor administrative support, and professional development that is unorganized (Charles & Dickens, 2012). Collaboration between classroom teachers and resource specialists is important because it is the key to providing quality education to students with special needs. When classroom teachers and resource specialists are provided with systems of support such as administrative guidance and guidelines on specific technological platforms to use, collaboration and communication practices improve within the school community (Castro et al., 2017).

In the findings presented below I highlight the systems that are currently in place and how they do not support the teachers at one elementary school in Northern California. I will demonstrate that technology has the potential to facilitate communication and collaboration between classroom teachers and resource specialists when teachers are provided appropriate structures and support. This will help to understand how technology can be a system of support for educators. Next, I examined the struggles classroom teachers and resources teachers face with collaboration and communication in order to understand the root causes for a lack of systematic collaboration. Finally, I examine administrator positionality on campus and the principal's role as a school leader to explain how administrators are able to support teachers in their search for technological platforms as well as the importance of developing systems of communication and collaboration. The findings presented in this chapter suggests that

collaboration becomes increasingly less effective when teachers do not feel a sense of unity with each other.

Success! : The Benefits of Technology During Distance Learning

Distance learning has changed the school community because of the additional layer of teacher separation. During this time, teachers were forced to change their normal teaching procedures in order to support and teach their students from a distance. Technology became a great asset for many classroom teachers and resource specialists because it allowed them to have experiences of success individually inside of their own classrooms. The use of technology was able to facilitate learning environments for students through distance learning, and teachers were able to continue teaching students to the best of their ability. Although technology was able to provide benefits to individual teachers, there was still a lack of school wide collaboration. Teachers reported feeling as though they were on a “sink or swim” (classroom teacher Alicia) plan, and many teachers were just focused on staying afloat. This school culture during distance learning had turned my classroom teachers and resource specialist away from collaborating and communicating with other colleagues.

Documenting Student Achievement and Learning Progress

Teachers were feeling isolated experiences of success with their students because collaboration between teachers was minimal. For example, when students are successful in learning a new skill or advancing their knowledge, there was no way for teachers to share this victory with their colleagues. Classroom teacher Alicia felt the negative aspect of not being able to share student’s achievements and progress in the classroom because it takes a lot of work for everyone on a student support team to understand what the student is working on. She described this feeling by saying

I found that if you document everything and then you are FINALLY lucky enough to where you are sitting in a meeting, you can say ‘here is my documentation, here are all the things I have been trying to do.’ It eliminates the need for them to say, “Okay now you need to go back and start documenting, because I have already done that. I have been trying to get in contact, I’ve been trying to share these documents.

Alicia is currently supporting her students' achievement through documentation, but when they are not being seen by any other colleagues, it becomes difficult for students to continue on their educational journey.

At Meadow’s Academy, virtual learning has intensified isolation and existing barriers between classroom teachers and resource specialists. A specific issue is that teachers at this school are currently using different technology platforms that do not connect to one another. With a wide variety of platforms being used between grade levels and teachers, it is difficult for both resource specialists and students to keep up with the information being shared. Each of these platforms have benefits for students but when they are not being utilized between teachers they are not being maximized to their full potential. While talking about the application SeeSaw, Alicia told interviewers,

If they are going into Kindergarten, and their kindergarten teacher also used SeeSaw, then they could link to this year and continue their portfolio. If the resource team has SeeSaw I can add them to their portfolio and keep a record of their progress that way as well. It is pretty fun, but not everyone has SeeSaw, so I mainly keep the documents.

SeeSaw is an application that allows each student in the classroom to have their own portfolio, and all work from the beginning of the year till the end of the year is saved in one space. This application works very well for teachers to be able to understand where students are in their

learning, but without other teachers being able to access the information they are not effectively able to support students. Alicia emphasized how it is frustrating to collect documentation on students, then have it be dismissed by future teachers or the resource team, because they are not able to access it since they are using a different platform. Having teachers on the same platform opens the door for classroom teachers to collaborate not only with the resource team, but also with other classroom teachers for the benefit of the students. Teachers are comfortable with the applications they are using with their students in their own classroom, but currently struggle to balance changing platforms to have effective collaboration and keeping the ease of normalcy with students. As Alicia reflected on both of these experiences it became clear that when teachers use the same technology, teachers are able to have direct communication with their colleagues and share documentation with each other to support their students' academic achievements.

Professional growth and learning from one another

In the professional world of teaching, being a lifelong learner is an important quality and skill. Classroom teacher Alicia and resource specialists Brooke and Carrie reflected on their collaborative habits during a conversation about being a successful teacher. A common theme that ran through all the teacher reflections was that teachers learn the most from fellow teachers because they develop and change their own teaching practices. Collaboration is a large piece of teachers being able to grow and develop in order to continue reaching students who need extra support. In the 21st century, teachers are now able to collaborate beyond the walls of the school community because of technology. There are many technological platforms that allow teachers to share lesson plans outside of school hours. Classroom teacher Alicia uses SeeSaw in her classroom and uses the collaboration tab for her lessons because it connects teachers across the world together and aligns the lessons to the content standards. Each teacher who is collaborating

on this site is able to develop their own teaching strategies for their students, and be able to share ideas together. Alicia reflects on the benefits of this site by saying

It pulls up all these different activity lessons that I can use that are already done. And it's all free. Within our school district, teachers who use SeeSaw can upload or share lessons and activities that they are using so that we can all collaborate together. No one has to recreate the wheel every time they want to do something.

Through using a site like SeeSaw classroom teachers and resource specialists are able to collect ideas from other teachers in order to help their students. This is a great opportunity for teachers who are looking for ways to expand their collaboration practices.

Finally, resource specialist Carrie discusses a program called Coaches Corner that she created in order to provide and collect resources for resource specialists and classroom teachers. This program is for teachers on campus to put the resources they are using in one place for everyone to be able to access. Teachers were able to collaborate with each other because all of the information they needed was organized efficiently. Carrie used Coaches Corner as a way to help teachers locate lesson ideas and focus on core standards. In this application Carrie had links to informational videos guiding teachers how to set up their virtual space and how to use technology. There were also important links to share learning goals, lesson plans, and schedule planning. Sharing ideas with one another and finding lessons to help the students become easier for both classroom teachers and resource specialists. Though using this site, teachers were able to have a one stop shop in finding materials. Teachers are using these sites to facilitate collaboration and communication in their classrooms, as well as becoming more creative in their teaching.

School environments and relationships

Every school has unique teachers with different ideas. This allows each school to have special relationships between teachers and on campus. There are different ways to communicate, but there are certain traits that make communication successful. Resource specialist Carrie shares her insights about what traits make for efficient communication by stating, “being an active listener, respect people’s wisdom, be open, and have the best interest of the student in mind.” By using these strategies teachers are able to create trusting relationships with their colleagues. Alicia reflected on her relationship with her colleagues by saying,

Helping this student be successful requires a team effort with the other kindergarten teachers that I worked with, and them being open to having him come in their room if need be. The line of communication between all of us, had to be constant. It worked seamlessly and it worked really well when we were all on the same page, and we had to trust each other to be on the same page.

Through this experience Alicia understood what it was like to be reliable and organized for her team in order to help the student with special needs.

Working from a distance created a disruption in the way teachers communicate with one another and the relationships that have formed. Being distant and communicating in new ways was very challenging for many teachers. However, technology offered an outlet for organization to occur from a distance and maintain the relationships teachers have built on the school sites. Resource teacher Carrie expressed how the relationships she has with other teachers is built on how often they communicate. Carrie explains “Texting each other opens the door for constant communication.” This form of quick and efficient communication allowed teachers to be in contact regularly with one another and build trusting relationships. Classroom teacher Alicia had

a similar outlook on communicating through technology by saying, “If I have those lines of communication open, if I have those relationships, then I am going to utilize them. Being able to be in contact with others has made a difference for me.” Through using technology to support communication, teachers are able to continue to build relationships of trust between each other in order to support their students. Communication is an important part of collaboration in the teaching profession.

Working With What We Have

Classroom teachers and resource specialists both play a large role when it comes to supporting students with special needs in the classroom, however it is not always an easy role to take on, because it requires patience and support from outside sources. These teachers make up a support team for the students, and have a responsibility to communicate ideas to one another. Collaboration and communication between classroom teachers and resource specialists happen daily, but include significant tensions which lowers their effectiveness for the students (Kieser & Golden, 2009). These challenges and tensions need to be overcome in order to support students with special needs. One resource teachers have to help overcome these challenges is the use of technology. Technology is a resource that is used by all teachers, the benefits of technology are limited given the lack of organizational structure and defined policy procedures for how technology is used for collaboration and communication. Furthermore, teachers are generally not in a position to make a school wide policy change to increase collaboration, and therefore need support from school leadership.

Distrust Causing a Lack of Unity

The tension between classroom teachers and resource specialists is a broad subject that can be identified through simple terms. The term tension is important because it implies a sense

of strain or distrust; and this is exactly what is happening on school sites today. During teacher interviews, themes of distrust, identity, and support were frequently brought up. Teachers spend many hours communicating with other colleagues in the forms of staff meetings, professional learning communities, e-mails, or conversations in the hallways, but without a sense of unity and trust in one another, teachers are ultimately isolated in their own classrooms. During my interview with Alicia, a current transitional kindergarten (TK) teacher at Meadow's Academy, she explained her experience with isolation saying

As a classroom teacher, it leaves me feeling like I want to give up because it takes so much effort to continuously try and get the help. And then when you are not getting help and you are the one who is constantly trying to get the support, then I do just give up. I will tell them, it is taking up too much of my time to try and get everyone on board, and I will just deal with it and figure it out. Continuing to push for communication from people who are not on board just makes it a big mess, and the reality is that sometimes it just does not work.

In a second interview, resource specialist Brooke, reflected on her time trying to reach out to classroom teachers. Her experience was similar to Alicia's. When trying to reach out to colleagues on campus, she is met by unwilling teammates. Being a new teacher and working with seasoned teachers, Brooke did not have the right positionality to change collaboration habits with her team, she explained,

My team was very seasoned, and some were not very interested in collaborating. They definitely wanted to do their own thing and run their show, and they did not want to change their ways... So you know part of moving forward was me leading by example and doing my own thing as well.

In both of these interviews, classroom teachers and resource specialists highlighted that being unable to collaborate and communicate with one another ultimately led them to work alone and work with their students individually. This is happening because many teachers have a preference to stay in their current routine, and do not wish to change their teaching practices. Teacher isolation and independent work time culture is supported through classroom observations that took place at Meadow's Academy. During field observations, classroom teachers and resource specialists had little to no communication because teachers are isolated in their classrooms. For example, it was noted during an observation, that on one occasion, when a resource specialist and classroom teacher were supposed to meet to discuss a student's IEP in depth, a quick email summary and five minute phone call was suggested by the classroom teacher instead, and the resource specialists agreed. The teachers in this example were collaborating with one another because they are sharing ideas and communicating, but it is not effective for the student, because teachers were isolated and not supported with effective tools for collaboration.

One reason effective collaboration is being replaced by quick conversation between teachers is happening because classroom teachers and resource specialists are feeling overwhelmed and confused with having to navigate between different technological platforms in order to find the work. Classroom teachers and resource specialists are currently having to sort through files, emails, and other computer documents in order to locate the work they need; it becomes time consuming and overwhelming. Teachers were feeling the pressure to navigate different teaching platforms and understanding that being unorganized is also not the best practice for supporting students because it often leads to replaced behaviors like quick

conversations or missed information. Resource specialist Brooke described the frustration that occurs daily when using unorganized systems of technology.

Some teachers use Konstella. It is not the most responsive tool... We miss emails and things start to get lost. Especially right now around the holidays and I am getting spam mail mixed in with work emails. I delete it all because I don't need all these emails in my inbox from this shoe store I went to one time, and it really just becomes a mess.

Konestella is not the best platform, but it is the best that we have right now.

Konestella was an application that not all teachers were using. It was a personal choice if teachers wanted to implement the platform into their teaching and daily usage in order to communicate and share information with administrators, colleagues, and parents. Teachers were becoming frustrated with balancing the different technological platforms in order to communicate with each other, and it is putting up a barrier that stops communication from happening. As Brooke is navigating the different sites, and it is mixing with her own personal life, important documents and information to help students are being deleted or missed. This can lead to an overwhelming feeling of stress that is due to a lack of organization in the systems of technology. Resource teacher Brooke also reflects on the hardships teachers face by using different platforms of technology in order to communicate.

In the business world, they have a tool called the CRM. It is followed by clients and everyone can see it. If we had something like that in the education world, it would be a document that is followed by the student. It would let us see what the resource teacher is doing with her session, gen ed could be doing lessons, and it would be so much easier than always going back and forth trying to find information on these different sites.

Through this reflection, Brooke indicates that she wants to collaborate and communicate with her colleagues, but it is almost impossible to navigate the different technological platforms that are being used at once on campus. During my field observations, I noted that classroom teachers and resource specialists are using eight different technological platforms on a daily basis. These platforms include: Gmail, Google Classroom, SeeSaw, Konestella, Zoom, Google Meet, Coaches Corner, and phone messaging / phone calls. With a variety of different applications being used at all times, teachers are losing information, meeting times, and documents that are essential for supporting student development. This constant lack of organization and misunderstandings between classroom teachers and resource specialists causes great frustration between educators. Schools had been completely online and teachers lost parts of their organized communication. Resource teacher Brooke explains that this problem started because,

Every person that works at my school has a different level of competency and ease with communication and technology. I think it takes a while to just get a feel for how everyone is and build those relationships in a new way.

In a survey sent out to all classroom teachers and resource specialists, all participants reported that collaboration is essential while working in the teaching profession. Teachers want to collaborate and have the sense of community with their team, but the lack of unity and organization creates a barrier for teachers. If one tool was selected and used school wide, teachers would be able to access documentation of students and more effectively communicate. This would eliminate feelings of isolation and frustration amongst classroom teachers and resource specialists.

The pandemic has only exacerbated collaboration difficulties. Classroom teacher Alicia reflects on her time collaborating with her colleagues by saying

When we were in person it worked well together. We had schedules... We had to be open, flexible, and accommodating. We had constant and consistent communication, which made us successful... I don't like working online. Phones and zoom are okay but it gets confusing.

Even the best teachers who find collaboration and communication to be an essential part of teaching are retreating away from these practices because they are confusing and overwhelming to keep up with the changes. Teachers who did not effectively collaborate before on-line teaching, did not begin to communicate or collaborate effectively once they started on-line teaching. The times teachers are successfully collaborating and being flexible with each other is when they are able to easily access a document that is shared between everyone. The ease of access has the ability to lower anxiety, and feelings of being overwhelmed while also heightening collaboration and communication practices. One barrier that is restricting educators' ease of access is the Corona virus pandemic. This pandemic has caused teachers to become distant, both physically and systematically while working in the classrooms. This sense of distance between teachers has created feelings of disconnection and isolation in school communities. During a staff meeting on Zoom, teacher connections and feelings of isolation were noted. For example, during a staff meeting while discussing school logistics, many staff members had their cameras turned off or were working on other projects in their classroom. Teachers were overwhelmed with the amount of change that has happened with the school year and are using collaborative sessions to do their own work, and plan lessons for their own students.

One common factor that classroom teachers and resource specialists found to be beneficial to their efforts in collaborating with one another was technology. However, since

teachers were working in isolation, different technological platforms were being used between grade levels and individual teachers which often created obstacles to collaboration. In each of the technological platforms listed above, there are specific features and tools that assist teachers in their day to day teaching. Although these tools can be beneficial in day to day teaching and relaying information to students, the structure between platforms are different and teachers choose their platforms based on their individual preferences. Teachers gravitated towards platforms that they find to work well with their individual classroom instead of as a school community.

During an interview with Brooke she talked about her experience as a resource specialist navigating different technology platforms. The confusion over the different platforms that classroom teachers are using caused her great frustration, and she was forced to switch technological platforms in order to stay organized with documentation. She explained,

I work with three students. Two of them [student's teachers] use Konstella in their classroom as a normal form of communication, and that is nice because it is a one stop shop. I get to know what is going on at the school level, grade level and class level. The other students' teacher doesn't use Konestella, only email, which makes the ease of it all more tricky. We miss emails a lot and things start to get lost... So when I speak to my students I am now only using Zoom and gmail [even though she wanted to use Konstella].

Resource specialist Brooke continued her reflection on having miscommunications with teachers on campus due to the lack of technological organization. Brooke reflected on a time she was working with a student by saying

When working with a student I would think, “Oh, he should be checked for speech.” And then I would forget to talk to my counterpart, or conversations would get lost between school and home. A couple weeks later the teacher asked about him getting looked at for speech and we got the process started. It is good that he is getting the help, but if we had something to keep our communication in a row, it could have happened a lot sooner.

As Brooke reflected on these experiences, it became apparent that teachers have a gap in communication. Classroom teachers and resource specialists want the best for their students and work to support them everyday. However, when teachers are not able to communicate progress in an effective way to their colleagues, the unity between teachers is not able to form. Instead of taking time away from instructional minutes to sort through different students’ classroom platforms, resource teachers have started to use their own platforms. For example, resource specialist Carrie has started to develop her own platform called Coaches Corner. She explained that this platform is “used as a way to collect and provide resources in one place... It was helpful but I found it really hard to keep up with and teachers do not always find the time to use it.” During this portion of the interview, Carrie recognized that there is a gap in communication between teachers, and a large part of that is the collaboration that takes place is not effective. This platform was helpful for Carrie to use, but collaboration was not present because teachers were not on the same site and finding time to navigate back and forth was not accessible for teachers.

In order for students to receive the best instruction from both their classroom teachers and resource support, it is essential that all team members are on the same technological platform. A common platform that is seen within classrooms today is known as Google Classroom. Google Classroom allows teachers to post assignments for students, as well as share

documents and comments with people within the district. In an interview with resource specialist Carrie, Google Classroom was explored as an additional learning platform. Carrie explained her experience with using Google Classroom by saying, “I think it is an effective way to communicate [with other teachers], only as long as you are also communicating through in person discussions.” Carrie expressed how these tools that teachers are using are beneficial and have many great benefits to them, but require efficient communication between colleagues to also be present in order to be effective.

For classroom teachers and resource specialists, communication and collaboration is an essential part of the job when it comes to supporting students with special needs. The physical distance of online learning changed the way teachers were able to implement these skills into their daily routines. Throughout all the interviews, teachers reflected on the benefits of technological platforms such as SeeSaw, Konestella, and Google Classroom. Although it was possible to see benefits to each of these platforms, each teacher found various faults in the different systems because of a lack of organization between the teachers. The push and pull between keeping consistency with students in the classroom and ensuring each teacher is on the same platform to provide supportive educational content to all students creates great tension. These differences in perspectives on technology have the potential to also create interpersonal tensions, not only between classroom teachers and resource specialists, but also with students. Technology is an asset that teachers are able to utilize in order to help students, but for it to be effective, a support system is needed to ensure consistency.

Teacher Identity and Sense of Purpose

In a school community, each teacher plays a specific role in a student’s educational journey. These roles are to ensure that each aspect of support for a student is being covered and

implemented properly. The role of a resource specialist is to create a plan of support for a student and share it with the classroom teacher to ensure everyone is on the same page to help the student be successful. Resource teachers need to be able to communicate with classroom teachers so they are able to be successful in implementing a plan that supports students with special needs. Brooke reflected on the collaboration process within schools. Brooke expressed her feelings of the reality of collaboration today by saying

I could be sending teachers a 1 message text saying, “Hey, I am noticing this.” but it just doesn’t work with what we have now. We are always figuring it out on a dime budget.

This is a big picture, I think it would be nice for an administrator to put into action. But for now we deal with what we have, and we don’t have a lot.

Brooke is explaining her need for a system of communication that will be efficient when reaching out to other resource specialists, or classroom teachers. The systems that are currently in place are not able to be simply solved by adding more collaboration time, but it would rather take planning, thought, and leadership to implement this form of efficient communication for teachers. Brooke highlighted how administrators would be in the perfect position on a school campus to implement these changes, and help the classroom teachers and resource specialists be successful. Although technology is an important aspect of teacher collaboration, teachers are not in the right position to be making systematic school wide policy changes. Resource specialists such as Brooke “have so much on our plates already” that researching and implementing a school wide technological platform is not feasible. As of right now teachers are struggling with collaboration, and need someone with a higher position in the school to be the one to create a system for all. Classroom teachers also play a large role on campus when it comes to supporting students with special needs. The role of a classroom teacher is to teach content to all students in

the classroom and create an environment that makes learning effective. With thirty students in a classroom, classroom teachers are also not in the correct position to implement a new school wide system for technology use between all teachers. Classroom TK teacher Alicia reflected on her experience with trying to implement technology with her students at the start of the pandemic stating

Initially we were told to use Google Classroom to teach virtually, and primary grades said no. Google Classroom will not work for us, because we needed something that was more adaptable to the littles. We were scrambling and everyone started doing their own thing until administrators brought in SeeSaw for us.

A teacher's first instinct and role in the school community is to teach students and create an environment that is effective for learning. Once teachers determined that Google Classroom is not a space that is effective for TK students, teachers started to panic and used any available technological platform that is available to them in order to maintain their role within the community and with their students. Some teachers tried to force Google Classroom to work, while other teachers tried to implement a technological platform called Canvas. Teachers were struggling to find an application that was appropriate for their grade level and students, and administrators were the ones in the correct position on campus to implement this change.

Classroom teachers have an identity on campus that is focused on the students while administrators have an identity to be leaders and role models for staff members. These positions in the school hierarchy are important because it ensures all aspects of efficient and effective learning environments are created for both students and teachers. In order to have resource specialists continue in their role of supporting students, and classroom teachers maintain their role of teaching content in an effective environment, there needs to be a system of support in

place to support teachers. In the survey sent out to all classroom teachers and resource specialists, a question asked teachers to reflect on what systems or specific systems of support were necessary to feel confident in collaboration. Three out of the 5 participants responded that “technology support” is the main factor because when teachers do not know how to navigate a platform, it can come across as unresponsive instead of as a supportive team member.

Administrators are in the correct position to be implementing school wide policy in order to best support teachers in their own teaching identity.

Role Modeling for our Future: Administrative Leadership and Support

Every person on an elementary school site has a role to play in order to ensure students are receiving the best education possible. Above the roles of classroom teachers and resource specialists were described, and the school administrator also has specific roles in the school community. There are many responsibilities administrators have, but since they are located in the highest position in the school hierarchy they also have special responsibilities to be a role model and leader to the rest of the staff. As a leader, administrators must pave the way for others and create systems to implement ideas, all while ensuring everyone in the community is included and successful. Administrators must ask themselves: What can I do to best support classroom teachers and resource specialists with collaboration and communication practices? What guidelines can I set in order to accomplish the tasks that are needed? How can I continue to implement changes on campus that will be innovative and make my teachers be successful in their work? These questions highlight the importance administrators have when it comes to supporting teachers because they are in the correct position to implement policies concerning technology on a school wide level to support collaborative work between teachers.

Teachers identified administrators as a key component to effectively supporting communication and collaboration through technology because of their position of leadership within the school and ability to unite the community. When talking to Susan, the administrator at Meadow's Academy about collaboration between teachers and how she can be a system of support she says

Some teachers want to collaborate but have a fixed mindset. In these situations, I try to break down communication as much as possible. It comes down to developing communication skills between teams and talking to understand each other's views.

When Susan is creating an environment for teachers to be successful in communication, the door for collaboration is now opened. The job of an administrator is not only to foster communication amongst teachers, but it is also to be supportive and assist teachers with their needs.

Administrator Susan reflects on this aspect of being a principal by saying,

No one went into teaching thinking they would be doing it remotely. So there has been a change in ideas and methods, but I think we have wrinkled out the issues now. The younger grades had trouble with Google Classroom, so myself and others brought in new programs... and it has been working great so far.

When teachers were struggling to keep up with the demands of online teaching, it was the job of the administrator to support teachers. This job falls on the administrators because they are best positioned in the school community to implement these changes.

Establishing time for Collaboration

When interviewing teachers about their experiences with collaboration, one common theme between each teacher was needing support in the form of an organized plan for collaboration. Setting guidelines for meetings in order to ensure all classroom teachers and

resource specialists can only be established by administrators. TK teacher Alicia reflected on the impact administrators bring to the table by saying

Having that form of organization for myself, and for the students really does make a difference and gives room for communication. Yes, I had my other team members to help me out, but it was mainly admin. They are a crucial part of collaboration, they can really make or break a deal sometimes.

In the quote above, Alicia reflected on how the administrative staff was an effective system of support in her past years of teaching, because of their power and leadership on campus. When administrators are able to set structure for their staff, it opens the door for success and supports collaboration. When teachers agree on what goals need to be accomplished by the end of a meeting, teachers are able to get work done and have a sense of direction. An additional layer of support administrators bring to the table is when they are able to standardize technology to keep important information organized between all staff members. Finally, administrators can schedule meetings focused on developing school wide procedures for using technology to facilitate communication and collaboration.

Technology is a broad term and trying to implement a system on a school wide level is a large task to take on, however it is crucial for supporting teachers. When asked on the survey, “How do you feel about collaboration, and what makes it successful?” All five teachers responded by saying, “It is crucial to the job, and being consistent is key.” Teachers acknowledge that they work best when they have the opportunity to collaborate and build relationships with their colleagues in a consistent manner. Resource teacher Brooke stated,

It can’t just be from your teammates, or from you, it has to be from the top down. Your administrator needs to encourage that time to collaborate. They can build it into the

schedule with ease and that is important because without that, then it is all on the teacher to carve it out of their own schedule. Our time is already taxed.

Brooke believed that when administrators make time for collaboration and set an organized schedule to follow, teachers are more productive in their work. This reflection from Brooke also highlights that teachers have a taxing schedule that does not always line up with those of their colleagues. Teachers lay in a tough predicament by choosing between collaborating with one another and following their schedules for students and teaching. Brooke captures the sentiment of the school community by saying, “Collaboration is your number one, and if you don’t have time to collaborate then when are you going to do it?” Both classroom teachers and resource specialists understand that teaching their students comes first, and finding time outside of class to collaborate comes second, however with the support of technology implemented by administrators, both are able to happen. Brooke continues her reflection on collaboration by saying

My schedule is back to back. I work with students for 30 minutes and the next student is already coming in... It is important that my team and I are on the same page though. We work different times but we share our lessons with each other at night the day before so we can all look at it when we have free time and know what the other is doing and what particular goals are for the day.

When collaboration is accessible to all and not dependent on the ability to meet and collaborate at certain times, then records have an opportunity to be a living document that is constantly being updated. Yet in order to make this collaboration between classroom teachers and resource specialists successful, administrators are the ones to implement these structures of support.

Administrative Role Modeling

In order for collaboration to be successful, aspects of teamwork, active listening and support need to be incorporated into every teaching team. Teachers on campus represent a diverse population that comes from different backgrounds, beliefs, and cultures. When talking about terms as abstract as “teamwork, active listening and support” it can be challenging to understand the expectations that are set for teachers to follow. Administrators set the tone of the school community by being a role model and displaying skills that are supportive to collaboration and communication. In all three interviews, classroom teachers and resource specialists reflected on how administrators can show aspects of teamwork, active listening and support. Alicia shares an example of her administrator being supporting and changing school culture by saying

The fact that she reached out to me, and I didn’t have to hunt her down to follow up was big in of itself. And that is what true collaboration is. Being there and lending a hand of support.

Through this interaction the administrator was being a role model to the teachers and showing expectations of how collaboration should look. Resource teacher Brooke reflected on administration being a role model through the aspect of teamwork. When reflecting on the troubles teachers have working together, Brooke stated

It is very tricky because each teacher is very different so it takes a while to learn everyone’s kind of nuances. So, every person that works at my school has a different level of competency and ease with communication. I think it takes a while to just get a feel for how everyone is. It is helpful when administration is there and is a mediator between teachers.

Through her reflection, Brooke emphasized the importance of knowing people in order to reach true collaboration. The administration on this campus works as a role model for the rest of the staff by showing what it looks like to get to know your team, and develop a sense of trust and true connection between one another. As Brooke said, when administration is there to be a mediator and show classroom teachers and resource specialists how to learn each other's strengths and weaknesses, there is an opportunity for collaboration to take place.

Active listening is the last aspect needed in order to have a successful team that uses collaboration and communication practices. Administrators play the largest role in being a good listener and modeling effective listening strategies to teachers. Through being part of a team that does not collaborate well in the past, Carrie reflects on how administrators were able to listen and change the team dynamics saying

I think most teachers do try to collaborate. I think if some do not collaborate, it is because they have never had the opportunity to learn from really good leaders. Great leadership in principals is key to building collaborative culture because they truly listen in order to build a rapport. The key to collaboration is true communication.

By having an administrator who is a role model for the entire school community in showing expectations for collaboration, all teachers are able to be on the same page and work together. Through modeling specific skills such as teamwork, support, and active listening, classroom teachers and resource specialists are well equipped in understanding how to implement their own forms of collaboration and communication into their teams.

The final way administrators can be supportive to classroom teachers and resource specialists who are working to implement collaboration and communication into their daily routine is to provide guidance on technology. The platforms that were being used for

communication between teachers were chosen in a moment of panic when the Covid-19 Pandemic started in early March 2020. Teachers and students were uprooted from their classrooms and placed at their individual houses and were expected to make due with what they had. Teachers during this time were “scrambling and everybody was doing their own thing” stated, classroom teacher Alicia. Administrators saw that teachers were struggling to stay afloat during this time and listened to the concerns teachers had about being equipped to teach students in a foreign way. In a moment of crisis classroom teacher Alicia explained how “all teachers were told to start using Google Classroom, and primary grades said no.” This platform was not responsive to student’s abilities in younger grades, and it was not responsive to the needs of teachers to be able to effectively work with students. In a moment of reflection and while working towards supporting different classrooms, TK teacher Alicia explains how administrators made sure teachers were placed on platforms that were “adaptive to the littles.” Primary grade teachers were appreciative of this new technological platform, and TK teacher Alicia captured their feelings by saying, “We really needed that, Thank God they were able to bring in SeeSaw.” Administrators were able to pave the way and support teachers in a time of need.

Conclusion

In the world of education, collaboration and communication are essential practices that are recommended to be implemented into a teacher’s daily routine. However, by collecting data from classroom teachers and resource specialists through interviews, observations, and a survey, it is clear to see that there is a crack in this implementation system. The two guiding research questions for this research study were: What common experiences do teachers have when it comes to collaborating with other teachers? How have these common experiences affected their will to collaborate and communicate with colleagues on a regular basis? Through these research

questions four sub-questions associated with the central theme of teacher collaboration were identified.

The first sub-research question explored “What are teachers’ experiences with technology and how does it affect collaboration?” The findings from this study revealed that classroom teachers and resource specialists share common experiences of struggling to collaborate because of disorganized systems of technology that are inconsistent. Teachers are feeling emotions of frustration trying to navigate the different technological platforms that are being used by different teachers on a daily basis. Teachers in this school community viewed collaboration as an essential part of teaching. However, most participants in the study discovered faults in the strategies and technological platforms that were designed to promote collaboration.

With teachers feeling isolated and developing feelings of frustration with collaboration and communication with colleagues, many teachers are turning away from collaboration with colleagues. The findings indicate that classroom teachers and resource specialists are starting to become more independent and work on their own instead of trying to fix the technological systems at their school sites. Teachers have highlighted how they have brought in their own systems of technology to use, they document student progress alone, and they are working independently while in their classrooms. Although teachers at this school site value collaboration, ineffective systems of technology have made teachers collaborate less often, or inefficiently.

In order to have successful collaboration and communication between classroom teachers and resource specialists, effective systems of support need to be in place. The third sub-research question asks: What systems do teachers need to overcome the identified obstacles to collaboration? The participants of this research highlighted two major structures of support that

are needed: organized and uniformed technological platforms and administrative support. The classroom teachers and resource specialists at this school site reported that administrators were their driving force behind being able to have access to the little collaboration they had. This research demonstrates that administrators are a key support system for improving collaboration because they have the highest positionality on campus to implement successful strategies for teachers. Administrators hold this position of support because they are able to be leaders, and have role modeling skills for classroom teachers and resource specialists to follow while collaborating with one another. The second system of support is having a uniformed technological system within the entire school community. This research suggests that in order for classroom teachers and resource specialists to have an organized system of support, technology is the best tool. The implementation of a school wide technological platform provides teachers the access and ability to communicate with one another in a way that is effective. The success technology brings to teachers is possible because it can connect teachers together outside of school hours, document files, and keep information in one place that is easily accessible by all. Teachers are best supported when they have an organized structure of communication and administrators are able to facilitate and role model effective strategies for collaboration.

The final sub-research question asks: How can technology aid classroom teachers and resource specialists in making collaboration effective and efficient to support students with disabilities? The findings from this research highlight the impact collaboration between classroom teachers and resource specialists can have on the performance of a student with disabilities. With the barriers that were examined in the earlier part of this chapter, collaboration can be difficult for many teachers. Technology is a tool that opens communication for educators and allows consistent teacher relationships to form. Teachers are able to come together and work

as a team in order to support students with disabilities. Technology allows teachers extra time to collaborate outside of school hours, and share documents easily. When teachers are forming relationships and working as a team to help support students, they are building trust and connections that make collaborative sessions easier and more effective. Through the use of technology, teachers are able to form relationships with one another, and have effective communication and collaboration in order to support students with disabilities.

Chapter 5: Conclusion

There were many similarities between my research findings and those found in my literature review. One similarity between the literature review and my findings is in regards to teacher isolation (Charles & Dickens, 2012; Robinson & Bully, 2007; Tichenor & Tichenor, 2019). Tichenor & Tichenor (2019) states, “Teaching is often seen as an isolated profession in which individual teachers work behind closed doors independently from other teachers.” While both the literature review and the data from this study point to teachers feeling isolated by the lack of collaboration, it was also found that teachers want to collaborate. The school community teachers are working in has a direct relationship and effect on the outcome of teacher collaboration and communication.

Another similarity is the recognition of administrators having a significant impact on teachers being able to practice collaboration and communication strategies with their colleagues (Castro et al., 2017; Campo, 1993; Baylor et al., 2015). Campo (1993) states, “Collaborative schools do provide a climate and structure that encourages teachers to work with each other and the principal, which will foster school improvement and professional growth, and benefit all members of the school community.” School culture around collaboration and communication are built by the administrators. This quote highlights the importance of having an administrator that supports teachers and develops a school culture around collaborating together. Administrators are able to use their position and role in the school community to develop a culture of effective collaboration between resource specialists and classroom teachers. In my research, administrators demonstrated qualities such as leadership and role modeling in order to show teachers expectations for collaboration.

My research also supports the literature review by emphasizing the benefits of using technology as part of a support system that teachers can use to have effective communication (Stevenson, 2004; Lewis, 2004; Gerr et al., 2003; Khalaf et al., 2020; Riggleman et al., 2017). Riggleman et al. (2017) stated, “The use of technology, specifically Internet-based applications, can be an option for teachers to address some of the challenges (providing accessible education to students with disabilities) and be used to increase collaboration and communication between providers and families of children with disabilities.” In both the literature and my research, it is stated that technology is a tool, but it comes with potential barriers. Riggleman et al. (2017) explains that there are many barriers teachers encounter when trying to communicate and collaborate, and technology can be an aid to teachers and families of students with disabilities. When overcoming these barriers, classroom teachers and resource specialists will be able to be successful in their efforts to collaborate with one another. My data collection highlights the importance of teachers using specific technological platforms that are uniform throughout the community to ensure teachers are able to collaborate, with modeling and support by the principal.

Implications for the Literature

The literature review revealed the importance of educators having time to collaborate; however there was limited research available on how teachers collaborate or the necessary systems of support to help teachers effectively use technology. This research project aimed to fill the gap through researching the potential barriers that stand in the way of classroom teachers and resource specialists collaborating with one another.

Through researching collaborative practices between classroom teachers and resource specialists, I found that the current literature focuses on only small parts of the overarching

problem (Stockall, 2014; Fallon, 2011; Charles et al., 2012; Vangrieken et al., 2015). Current research is focused on fixing collaboration between classroom teachers and resource specialists by looking at individual pieces of an overarching puzzle. By taking a step back and looking at the puzzle as a whole, it is possible to understand how to help teachers be successful in collaborative practices. For example, many articles suggest that teachers should use any technological platform that is available to them because all platforms support collaboration (Francis, 2017), and the main problem is that teachers do not have enough time in the day to use their given technology in order to collaborate (Charles et al., 2012). Through my research I discovered that although teachers have access to technology, they do not use it because the applications are not user friendly, causing teachers to spend more time in the day finding documents they need to access. Technological systems that are currently in place need to be changed in order to help support teachers have better access to collaboration. Moreover, when teachers use different technological platforms, collaboration and communication between teachers becomes increasingly difficult. The current use of varied platforms by teachers in the same school are making collaboration nearly impossible for teachers, and they are feeling isolated and frustrated. This causes teachers to give up on their efforts to change collaborative practices.

In addition, prior research implies that teachers simply do not collaborate effectively because of a lack of time and the given solution is to simply give teachers an opportunity to talk to one another (Charles et al., 2012). My findings indicate, although having time to collaborate is important, it is only a small factor of collaboration. Technology, systems of trust, and overall community organization plays a larger role in effective collaboration between classroom teachers and resource specialists. Technology allows for collaboration to be successful between classroom

teachers and resource specialists because it has the ability to connect teachers together to share documents and have communication be consistent. Through having a technological system that is uniform throughout the school community, teachers are able to collaborate regarding students more effectively. This also removes barriers such as teacher isolation and feelings of frustration. Another important aspect of collaboration is systems of trust amongst colleagues. Through improving systems of trust, teachers are able to rely on their colleagues and reach out to others when they need support. Finding support in colleagues allows teachers to discover new ideas and implement change for their students. Finally, when the school community is organized and working to a common goal, collaboration and communication are best represented. Administrators have the largest impact for this area, because they are the ones setting the tone for the school community, as well as being a role model for other educators on campus. Through organization by technological platforms that were implemented by administrators, and sharing ideas in a way that is appropriate for collaboration, teachers are best supported to work with their colleagues.

Implications for Practice and Policy

Teachers who are struggling with collaboration are searching for a support system that can assist them in improving their practices. Current researchers point at providing teachers with technology and time in order to promote effective collaboration between resource specialists and classroom teachers. However, the implications of this research study suggests that it is not enough to provide technology to teachers and assume they will use it to communicate effectively. If teachers do not have an effective communication system, or strong relationships between colleagues, simply providing technology will not increase effectiveness in collaboration in communication. The findings demonstrate that collaboration may occur sporadically at a

school site, but this does not mean that collaboration is happening in the school community effectively. Policies at the school level should be examined to see how administrators can create time and the technology for teachers to collaborate.

Through administrators setting time in the day for collaboration, classroom teachers and resource specialists will now have the opportunity to reach out to their colleagues without the feelings of stress and frustration. Additionally, administrators can take on a leadership role and set guidelines for teachers on how to use technology for communication and collaboration. These guidelines will help support teachers in achieving effective collaboration because they are focused on a specific goal, and have frameworks to use together. Through this strategy, teachers are able to break down barriers with the support of their administrators, as well as the use of technology.

When using technology there can be potential barriers that should be considered by administrators in order to successfully set up effective systems of communication and collaboration between general education and special education teachers. One potential barrier is teacher proficiency in technology platforms. My findings indicate, many teachers have a preference to stay in their current routine, and do not wish to change their teaching practices. Teachers who struggle with technology or are not proficient in the different platforms are hesitant to use technology, which can make collaboration between teachers a little more challenging. Another potential barrier too using technology that should be considered is organizational strategies. In my findings, it is seen how teachers are currently using technology, but when there are too many platforms or the documentation is unorganized, it actually makes collaboration more difficult. It is important to find a technological platform that is organized and uniformed across the school community to prevent this potential barrier. By understanding these

barriers, it is possible to find opportunities to provide classroom teachers and resource specialists with effective technological strategies that support collaboration and communication.

The data from this research suggests that if teachers are going to effectively collaborate with technology, effective communication must already be taking place. Effective communication can only occur when teachers are on the same technological platform, and relationships between teachers are positive. These findings indicate that teachers who did not effectively collaborate before on-line teaching did not begin to communicate or collaborate effectively once they started on-line teaching. Once barriers are removed and classroom teachers and resource specialists are able to collaborate with one another, school culture around supportive communication and collaboration can evolve. Implications for educators include reaching out to other colleagues in order to communicate, adapting to a new technological platform, as well as being a team member who is supportive to others.

Limitations of the Study and Future Research

The limitations of this study is represented through my interviewees, the specific school site, and my own researcher bias. The interviewees at the school placement site were females ranging from ages 20-40. These participants' ages played an important role in their suggestions and outlooks on collaboration. The participants are younger teachers who have a good understanding of technology. The research is missing the perspective of older teachers or teachers who do not have as advanced skills with technology. Their insights could determine what a positive support system for collaboration and communication looks like through their eyes. Another limitation of this research is that it only utilized a convenience sample of teachers from one school site. Future research should incorporate teachers from multiple school sites in order to compare collaborative strategies.

The school site where I conducted my research has potential limitations because they are financially secure. The teachers at this school site have the ability to have one to one technology for all staff members, and students. The school is able to provide technology to teachers who need an extra computer or equipment in the classroom. It is accessible to all, and they can easily work with technology. Because I was able to interview teachers at this school, I do not know the perspectives of teachers at schools who do not have as large of a budget for technology. Another reason this school site has potential limitations to the study is because they have a unique school culture. It is in the culture of the school to see every student as their own. From interviewing the principal, it is clear in the findings that it causes teachers to have conflicting ideas on how to support students and tensions can be formed. It is possible that through talking to teachers from a different school site, teachers can have different opinions on support systems for collaboration.

My own personal bias affected my findings because I was at first looking at how classroom teachers and resource specialists were collaborating through using technology. I wanted to see the systems that were already in place and how it affected teacher ability to collaborate with one another. This belief along with the COVID-19 pandemic lead to me to collect data through using an online survey, and conducting online zoom meetings with classroom teachers and resource specialists. My personal bias regarding teacher collaboration may have limited the participants who had access to respond to the survey and interview. Although I invited all teachers and resource specialists to participate in the surveys and interviews, teachers who are not comfortable with technology may not have had access to respond to the research question. My own bias may have limited my interviews because I may have indirectly caused my interviewees to answer in a way they thought I was looking to hear.

The findings could have been different if there were less technology involved in conducting the study.

In future research, it would be helpful to conduct a longitudinal study to see the effectiveness between collaborating in person versus collaborating online and having documentation stored with online documents. It would be interesting to see how many of the classroom teachers and resource specialists prefer in person collaboration opposed to online collaboration with technology. Future research is necessary to determine if the COVID-19 pandemic was a key reason that teachers suggested using technology to collaborate and communicate with one another. While being socially distant and teaching virtually, technology was a main component. Through this longitudinal study, it will be possible to see what changes teachers take on in their collaboration habits when going back to work in person teaching full time. It could also be helpful to include students and parent point of view to highlight the different strengths and challenges they see from their teaching staff when either collaboration in person or online. Through having these different perspectives in the research, it is possible to see how students respond when their teachers are collaborating together. Another way to help future research is by using more qualitative methods of research such as group interviews across school sites would allow future researchers to distinguish specific collaborative activities that are related to higher levels of student achievement. This new research study creates additional gaps in the literature that need to be explored including, how teachers can collaborate in a style that is most successful for them, while also being responsive to the community needs, of a uniformed collaboration system.

Conducting a longitudinal study where teachers are observed while collaborating and communicating, will have tremendous benefits. This study should continue every year in order to

reflect on the prior years' collaboration process. Every year, classroom teachers and resource specialists will be better prepared to collaborate and communicate with each other in order to support their students with disabilities. As teaching and learning evolves, so too teachers.

Additional research needs to be conducted on collaboration styles at elementary school sites. This thesis shows that collaboration between classroom teachers and resource specialists is being implemented by many teachers, but without effective systems of support in place, collaboration is not effective. By conducting research on collaboration styles and how different styles fit together, it is possible to have greater insight to collaboration strategies, organized technological platforms, and implementation styles of collaboration in a school community.

Conclusion

Collaboration between classroom teachers and resource specialists increases academic performance in students with disabilities. It provides students with equitable and equal access to educational resources. In school communities today, educational equity and educational equality are being confused. Equally, students with disabilities are receiving the same education as students without disabilities. Students with disabilities have the opportunity to use the same instruction as other students in the classroom, but they do not receive the same access to educational content. In order for a teacher to balance both; equity and equality for all students in the classroom, teacher collaboration is a main factor that can help teachers support their students.

This research study was conducted to better understand how classroom teachers and resource specialists can be supported when collaborating with one another. Teachers are feeling isolated and disconnected from one another and it has the potential to affect student performance. With the Covid-19 pandemic, these feelings of isolation and frustration have been amplified within school sites. This research study intended to know how teachers can have a positive

system of support in order to help their students with disabilities. I.D.E.A. requires students with disabilities to have equal access to education, and through teachers collaborating with one another, students have a greater chance of achieving this equal and accessible learning in school.

The research outlined in this thesis demonstrates the correlation between an organized system of support for classroom teachers and resource specialists, and the collaboration and communication efforts between teachers. This research has outlined the positive systems technology and administrative support adds to teacher effectiveness when working to support students with disabilities. The data shows that teacher collaboration breaks down when feelings of distrust occur between teachers, and systems that are unorganized are present in the school community. Research participants - Alicia, Brooke, and Carly - struggled with collaborating and communicating with their colleagues during the time of virtual and distance learning.

Throughout the research, they expressed feelings of frustration, and defeat with their current levels of support. This key finding uncovered the need of support systems teachers are looking for throughout their school communities. Through understanding this system of support that teachers are asking for, it has the potential to inspire other administrators, classroom teachers, and resource specialists to change collaborative practices at their own school sites.

This study will continue to help classroom teachers, resource specialists, and administrators support one another by creating a school community that values collaboration and can effectively implement it. When collaboration is effective and efficient for teachers, relationships between educators will improve, and feelings of support throughout the community will start to form. While each school community will be different, the underlying themes in this research can be applied to all teaching and learning communities. This research highlights the importance of collaboration and systems of support that make it more effective. Successful

collaboration is beneficial for teachers because it relieves feelings of isolation and frustration, but it is essential to supporting students with special needs.

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Appendix A

Classroom Teacher and Resource Specialist Survey Questions

Notice of Consent: Thank you for participating in this survey! The purpose of my study is to examine how technology can support classroom teachers and resource specialists with their collaboration practices. Collaborating and communicating with colleagues is an important step in supporting the inclusion and academic success of all students. I would like to know more about the technologies schools use that make collaboration successful between teachers.

This survey is 100% voluntary. The information collected in this survey will remain confidential. You can stop the survey at any time.

Survey Questions

General Information:

Teacher name _____

Gender: Male _____ Female _____

Position Held: (General education and grade level, Resource Specialist)

Open Ended Questions:

1. What forms of communication do you need to facilitate a productive environment between you and your colleagues?
a. _____
2. How often do you collaborate with other teachers?
a. _____
3. Do you feel supported when reaching out to collaborate with other teachers?
a. _____
4. What is your experience with using technology to communicate with colleagues?
a. _____
5. How do you feel about collaboration (in general or with colleagues)?
a. _____

Multiple choice

1. How often are you communicating or collaborating colleagues to support students with special needs?
 - a. Very often, we work as a team to meet the needs of our students
 - b. Somewhat often, but there are some gaps in communication
 - c. When I can
 - d. Hardly ever
 - e. Never

4. How familiar are you with Google classroom?
 - a. Very familiar, I use it on a regular basis
 - b. Somewhat familiar, I use it occasionally
 - c. I struggle with using Google classroom
 - d. I don't know what Google classroom is
5. What are your feelings about using technology to foster collaboration? Explain
 - a. A sliding scale will be used to represent teacher's feelings from 1-10
 - b. A description box will also be provided for teachers to explain their thoughts
6. How important do you think communication and collaboration is for teachers working with children in the inclusion program?
 - a. Very important
 - b. Somewhat important
 - c. Only when it is necessary to do so
 - d. Teachers do not need to communicate with each other
 - e. Other (a description box will be provided for teachers to explain)
7. Do you currently feel supported when working to implement new teaching practices or technologies?
 - a. Yes
 - b. No
8. What support systems help you feel confident in implementing new technologies for collaboration or communication? If you do not feel supported: what support could be helpful to feel more confident?
 - a. Open ended discussion
9. Would you be willing to participate in a followup interview about your experiences with collaboration and communication between you and your colleagues, as well as your involvement with using technology?
 - a. Yes
 - b. No

Appendix B

Classroom Teacher and Resource Specialist Interview Guide

Hi welcome! Thank you for being here today and participating in the study. I will be asking you some questions today to better understand your experiences with collaboration and communication between you and your colleagues, as well as your involvement with using technology. My hope is that by the end of our talk we can have a clear idea how the technology you are currently using is affecting collaboration between teachers. Do you have any questions before we get started?

As a reminder, any information that is shared in this interview is seen as confidential, and I will not be sharing any information that reveals your identity. I will use pseudonyms to replace your name to ensure confidentiality. The recordings of this meeting will be deleted after the research is completed. You have the right to refuse any questions and have the opportunity to leave at any time.

1. How would you describe your experiences communicating and collaborating with other teachers in order to support a student with special needs?
2. Could you describe a specific time when you needed to communicate effectively with another teacher when discussing a student with special needs? How did you reach out to communicate with this colleague?
3. Can you describe a time when collaboration worked best between you and your colleagues? What tools were helpful? What made this collaboration successful?
4. Can you tell me about a time when you worked to create a relationship between yourself and your other colleagues? What helped you to foster this relationship?
5. What forms of technology and communication do you currently use to contact and speak with resource specialists / classroom teachers?
6. Could you describe an example of when you used Google classroom or other Google applications to communicate with other teachers? If no, could you imagine how they could be used?
7. Describe a situation where you have reached out for suggestions or assistance from another teacher. What was effective and ineffective during this process?
8. Could you describe a circumstance when it was difficult for you to collaborate with other teachers to meet the needs of one of your students with special needs?
9. Could you tell me a time when you collaborated with another teacher and it made a difference in how you worked with a student with special needs?

10. Can you tell me about a time when you felt supported when implementing new forms of technology? If not, could you tell me about what you would need to feel supported if you would want to implement technology in the future?
11. Could you describe what your current experience with technology is, and how you are using it for communicating or collaborating with colleagues?

Appendix C
Teacher Consent Form

Dominican University of California
Consent to be a Research Participant

I understand that Mackenzie Jones is a graduate student in the School of Education at Dominican University of California. Mackenzie Jones is conducting a research study designed to better understand how administrators can support teachers through providing outlets of collaboration and communication between general education and special education teachers through the means of technology.

I am being asked to participate in the study because I am a teacher that uses technology to collaborate with other colleagues.

Procedures

If I agree to participate in the study, the following will happen:

1. I will participate in a one-hour interview, which will include questions about collaboration, communication, administration support, technology, teaching, and inclusion of students.
2. All names, personal references, and identifying information will be eliminated in the final thesis and no subject will be identified by name, thereby ensuring confidentiality regarding the subject's responses. Interviews will be recorded on the researcher's iphone that is password protected and interview notes will not include any names or identifying information (e.g., specific grade level taught, address, phone number, personal references). One year after the completion of the research all written materials will be destroyed.
3. Pleasant Valley elementary will be furnished with a written summary of the relevant findings and conclusions of the thesis, but the thesis will not include anyone's name or any identifying information. This thesis will not be available for up to six months.

Risks and/or Discomforts

1. My participation involves no physical or emotional risk during the interview.
2. I have the right to refuse to answer any question that causes discomfort or seems to be an invasion of privacy. I may stop the interview at any time and I may refuse to participate before or after the study without any adverse effects on my standing at Bahia Vista Elementary School.

Benefits

There will be no direct benefit from participating in this study. The anticipated benefit of this study is a better understanding of how teachers can be supported, and collaboration and communication between teachers can be better utilized in a school site to support students.

Questions

I have talked to Mackenzie Jones about this study and have had my questions answered. If I have further questions about the study, I may call her at (661) 670-3988 or her research supervisor, Dr. Jennifer Lucko, Ph.D., Associate Professor of Education, (415) 482-1873. If I have any questions or comments about participation in this study, I should talk first with the researcher and the research supervisor. If for some reason I do not wish to do this, I may contact

the Dominican University of California Institutional Review Board for the Protection of Human Subjects (IRBPHS), which is concerned with the protection of volunteers in research projects. I may research the IRBPHS Office by calling (415) 257-0168 and leaving a voicemail message, by FAX at (415) 458-3755 or by writing to the IRBPHS, Office of the Associate Vice President for Academic Affairs, Dominican University of California, 50 Acacia Avenue, San Rafael, CA 94901.

Consent

I have been given a copy of this consent form, signed and dated, to keep.

PARTICIPATION IN THIS RESEARCH IS VOLUNTARY. I am free to decline to be in this study or withdraw my participation at any time without fear of adverse consequences.

My signature below indicates that I agree to participate in the study.

Signature of the Research Participant

Date

Signature of the Researcher

Date