

JAASEP

JOURNAL OF THE AMERICAN ACADEMY *of* SPECIAL EDUCATION PROFESSIONALS



WINTER 2024

ISSN 2325-7466 (Online)



**JOURNAL of the
AMERICAN ACADEMY
of
SPECIAL EDUCATION PROFESSIONALS
(JAASEP)
Winter, 2024**

Volume 19, Issue 1

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An Overview of the Challenges and Resources Special Education Professionals Reported During the Early COVID-19 Pandemic

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Abstract

With the onset of COVID-19, school districts were forced to rapidly engage in planning and development of resources for remote instruction during spring of the 2020 school year, and many special education professionals reported difficulties meeting student needs. In order to portrait the initial challenges and concerns related to remote instruction faced by these professionals, data were collected from a Council for Exceptional Children (CEC) public forum from March 7 to April 21 of 2020. Content analysis method was used to determine themes related to challenges with meeting the needs of students with special needs and resources utilized to overcome these challenges. From 638 entries, five major issues were identified: (a) challenges with using instructional technologies appropriately, (b) students' engagement, (c) collaboration with families, (d) exacerbated inequity, and (e) needs for clear guidance during a crisis. Areas of improvement and future implications for remote learning for special education are discussed.

Keywords: COVID-19, remote instruction, remote learning, special education, challenges, resources

An Overview of the Challenges and Resources Special Education Professionals Reported During the Early COVID-19 Pandemic

In mid-March of 2020, schools in the United States were forced to an almost total shutdown of in-person learning due to the COVID-19 outbreak which affected at least 55.1 million students in 124,000 public and private schools (Education Week, 2020). To maintain educational progress, many school districts rapidly moved to online learning through emergency development of resources for remote instruction (Li & Lalani, 2020). This scale of nation-wide school closures and implementation of remote learning has never occurred before, and people in all levels of education were forced to implement new ways of teaching and learning, often without having appropriate training or preparation time. The superintendent of Los Angeles schools, Austin Beutner, described that launching a comprehensive online learning program would be like a landing on the moon, in that, it would take years of careful planning, investment, training and engagement with the entire school community (Blume, 2020). In essence, educational professionals were put in a position where they were asked to build a spaceship that was already en route to the moon.

This rapid shift to remote learning caused a wide range of challenges, particularly for students who have special needs and their educators (Jenkins & Walker, 2021). Even prior to COVID-19, challenges in meeting the needs of students with disabilities in an online environment were reported due to a lack of established standards for special education services in virtual learning, problems with the curriculum accessibility, difficulty with meeting unique needs of students with severe disabilities, insufficient numbers of related service providers, and lack of adequate funding (Müller, 2009).

Remote learning poses challenges for many students with special needs. Some specially designed instruction (SDI) and services cannot be replicated remotely (Jenkins & Walker, 2021), especially when those interventions require intensive one-on-one guidance or physical contact with students to support their learning (e.g., hand-over-hand prompting). To provide adequate special education services remotely, support from adults at home became crucial (Garbe et al., 2020). However, not all students have equal access to support from adults at home, and families with more than one child with special needs struggle even more in providing support for multiple children simultaneously (Garbe et al., 2020; Kaden, 2020).

To add to these challenges, there was substantial uncertainty related to the legal mandates under the Individuals with Disabilities Education Improvement Act (IDEA, 2004) and what schools were required to provide at the beginning of the crisis (Jameson et al., 2020). On March 12, 2020, the U.S. Department of Education Office of Special Education Programs (USDOE-OSEP) released a document to affirm the importance of meeting the mandates of IDEA in this new learning context. This document stated that students with disabilities must have equal levels of instruction with general education students during school closings; some State and local education agencies (LEAs) interpreted this to mean that if they could not meet the requirements of the IDEA, schools should not offer any remote learning opportunities for any students (Jameson et al., 2020). As a result, many students with and without disabilities were left without any educational services (USDOE, 2020). Less than two weeks after the first statement was released, the USDOE addressed the “serious misunderstanding” (USDOE, 2020, p.1) and stated that all LEAs were obligated to provide free and appropriate public education (FAPE) as described in a student’s Individualized Education Program (IEP).

However, meeting some of the IDEA requirements, such as timelines for evaluations and reviews of IEPs, was extremely difficult during the COVID-19 pandemic as some data for evaluation and assessment could not be collected on a virtual level, and some flexibility became necessary (Jenkins & Walker, 2021). The U.S. Education Secretary reiterated, however, that flexibility was called for, but the accountability to provide FAPE in the least restrictive environment was not waived (USDOE, 2020).

During this chaotic time, two court cases were filed related to the impact of COVID-19 and FAPE: *Brennan and James v. Wolf, Rivera, and the Pennsylvania Department of Education* and *Chicago Teachers Union v. Betsy DeVos; United States Department of Education; the Board of Education of the City of Chicago*. The first case was a class action lawsuit asserting that the governor and State DOE failed to provide FAPE by failing to provide the required services, supports, and accommodations outlined in students’ IEPs during the school closures. The second case asserts that the Secretary of the USDOE, USDOE, and Chicago Board of Education failed

to waive requirements to review and revise IEPs. The case argues that the teachers would fail to provide FAPE for their students with disabilities due to their obligations to review and revise the large number of IEPs to reflect the changes caused by the pandemic. These two court cases highlighted the very real challenges faced by LEAs in meeting the substantive and procedural components of FAPE in an unprecedented national emergency (Jameson et al., 2020).

Teachers and school professionals were not immune to the effects of this crisis, yet they were asked to provide their students with a sense of stability by providing educational support while there may be no stability in their own lives. As circumstances change almost daily, special education professionals lean on each other to find resources, understand software, and boost morale across the country (Tugend, 2020). To support this need for collaboration, the Council for Exceptional Children (CEC), “the largest international professional organization dedicated to improving the success of children and youth with disabilities and/or gifts and talents” (n.d., para. 1), waived its annual membership fee to join the organization in March of 2020, leading about 20,000 new educational professionals to sign in the first couple of weeks to access information and share questions and fears through member forums (Tugend, 2020).

The aim of the present study was to create a portrait of the experiences of special education professionals by determining the most frequently occurring concerns/challenges facing special education professionals and the resources they used to navigate this unprecedented time of remote learning by analyzing CEC member forums. The research questions addressed were:

1. What are the most frequently occurring concerns/challenges facing special education professionals during this unprecedented time of remote learning?
2. What resources are special education professionals using to meet the needs of their students during remote/virtual learning?

Method

Context of the Study and Participants

We designed this qualitative study to analyze CEC member forums and discover the immediate concerns of special education professionals during the COVID-19 pandemic. CEC provides an online member-only forum for member discussions on pertinent topics. In the forums, members are able to communicate with each other about special education matters and/or engage in interactive dialogue at the discretion of the member. During the pandemic, and the timeframe of this study, CEC opened its member-only forum to a public forum, allowing individuals to join without a membership fee or other requirements during this extenuating time (TED-Announce-L, Personal Communication, March 19, 2020).

Purposeful sampling was used to target the CEC public forums from March 7 through April 21, 2020 (Merriam & Tisdell, 2016). March 7th was the first time that any topic related to remote teaching appeared on the platform. The data collection closed on April 21st, as that date was about six weeks into remote teaching. This timeline was chosen to best determine special educators' initial needs, concerns, and resources utilized. During that time frame, 426 individuals voluntarily participated in the CEC public forum. Because of the nature of a public forum, only

voluntary information was provided. In many cases, this information did not include demographic details necessary for accurately describing the participants, thus, it was not included. Some of the information gathered revealed that individuals were from the United States and various international locations (e.g., Canada, China) and represented a range of professions. The involvement of the participants varied; some posted in multiple forums and others only responded once.

Data Collection and Analysis

This study utilized content analysis method to determine the patterns emerging from the CEC public forums from March 7 through April 21, 2020, as there is a limited research or existing theory on this particular phenomenon (Hsieh & Shannon, 2005). During the period, we collected data from 109 forums. Within the 109 forums, 91 forums consisting of 638 entries focused on the concerns of special education professionals about remote teaching or COVID-19. We excluded eighteen forums from the data set because the topic was not related to the research question (e.g., requesting support about how to find a research article or requesting support about how to file an assurance). Eighty-three percent of the total threads during the period discussed remote teaching or COVID-19 situations. The 91 forums and threads were then downloaded, and individually saved as PDFs on April 21, 2020, to avoid data alternation from new correspondences added after that time. Including responses to the original threads, 638 entries were coded to identify the most commonly expressed concepts related to meeting the needs of students with special needs during this time of remote learning.

Data Analysis. We used conventional content analysis approach to describe experiences of special educators in the early pandemic era by deriving coding categories directly from the text data to allow new insights to emerge (Hsieh & Shannon, 2005; Patton, 2001). Three researchers individually studied and analyzed each forum through ongoing and recursive analysis methods (Merriam & Tisdell, 2016) to identify the concerns participants stated regarding the provision of special education during school closures. In this process, each summarized the main points of the findings in relation to the research question. After that, they each identified the exact words from the text that seemed to capture key concepts related to the concerns of special education professionals and coded the data using an open coding strategy (Glesne, 2016) by looking for keywords. After the individual analyses, the researchers collaboratively compared their findings. Validity and credibility were determined by cross-checking the results among three researchers (Yin, 2009). If there were any differences, consensus was reached through data review and discussion.

Then, to identify the most frequently occurring concerns/challenges faced by special educators, the researchers condensed recurring statements into categories (e.g., assessment, environmental issues, instructional technology). After reviewing the categories, the first and second researchers used a thematic analysis approach to synthesize the findings (Braun & Clarke, 2006) of ten percent of the data (65 entries across 9 threads; Lacy & Riffe, 1996) and then met to check the reliability of the coding. Reliability was more than 87%. We created definitions for each coding category, rules for coding, and provided specific key words as inclusion indicators under each category. The first researcher coded the rest of the data and the second researcher re-coded other ten percent of the data to check for reliability. Reliability was more than 95%, and the fourth

researcher verified confirmability by checking both the raw data and the analysis of the data (Patton, 2001).

Results

This study analyzed a total of 638 entries from the CEC all-member forum. Within this total, 213 entries shared concerns and/or challenges with regard to remote teaching and learning, while 395 entries responded to these concerns or challenges and shared their advice and/or how they addressed similar situations in their class or school district. The most frequently discussed concerns and/or challenges focused on seventeen identified themes (Figure 1) with definitions of each theme within Table 1. In response to the entries that shared concerns and/or challenges, special education professionals provided support and resources by sharing their advice. In the following sections, the nine most frequently discussed themes, which appeared in more than 10% of entries, are described.

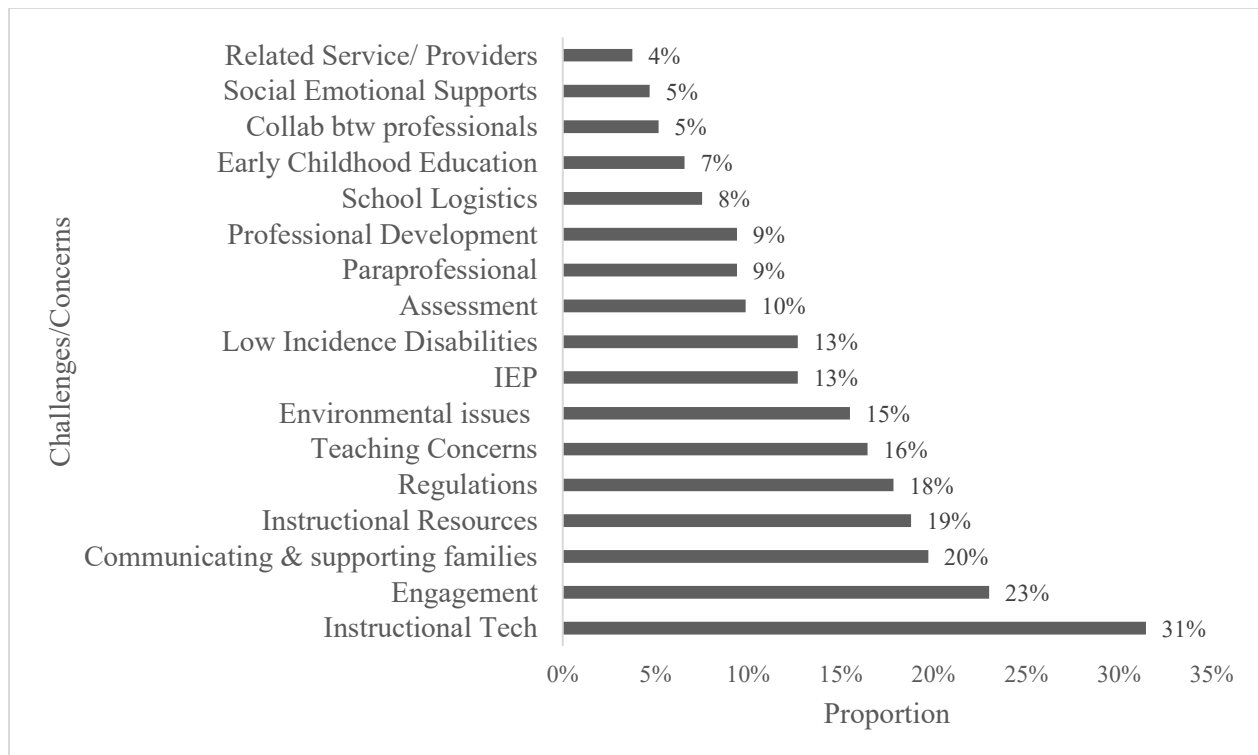


Figure 1: *Challenges and concerns expressed as proportion of total challenge/concern entries examined.*

Table 1

Themes and data examples

Themes	Thematic Description	Data Examples
Instructional technologies	Distance learning platforms and technology to enhance teaching	“I am technologically deficit and was apprehensive.” “If it feels any better, I have been teaching for 26 years and now I am a ‘Beginning’ teacher as well

		[due to unfamiliarity with technologies]!!! We're all in this together!"
Engagement	Student's and parent's engagement, student's motivation and participation in remote education	"I'm a special education teacher and I'm so frustrated and upset that my students are not engaging in my Zoom meetings,...or even attempting to do work assigned to them... Does anyone have suggestions on how to get parents or students motivated to do the work online? ..."
Communicating and supporting families	Communication with and supports for families to provide support for their child's learning	"A bunch of students on my caseload involve parents that are 'off the grid.' ...Some parents have expressed that they're on information overload and simply can't keep up with the emails... I can definitely relate to that!"
Instructional resources	Identified content-specific or curriculum resources for remote learning	"Does anyone have any recommendations for online sound cards that students could manipulate to work on encoding? Or any other games that could be used online for phonics rules or phonemic awareness?"
Regulations	Federal, State, district, or school guidelines, requirements, and policies related to remote education and the COVID-19 pandemic	"As we move into the potential for more student to staff communication, what guidance are you providing to staff? For example – appropriate v. inappropriate ways to connect, maintaining confidentiality with Zoom, etc.?"
Teaching concerns	"Craft" of teaching, accessibility to learning	"I'm just not sure how to move forward with teaching new words. I've thought about trying to do it over video chat but I think I will need to type up the entire lesson and I'm not sure if my student will be motivated to chat in that way."
Environmental issues	Any environmental factors such as access to the internet, tech devices, or adults who can support their learning at home	"I am interested in what rural communities may be doing. We do not have the option of internet services for the vast majority of our students." "I teach in an urban high school. Some kids have internet, some not and some have it but have limited computer access due to needing to share."
IEP	IEP-related requirements and logistics (e.g., how to run virtual IEP meeting)	"Our state has shut down for nearly a month. State Ed is claiming that after 10 days, this constitutes a change of placement and is creating a waiver for parents to sign. My question is, if a parent were to refuse, "stay-put" would go into effect, thereby violating the governor's order. Is it a change of placement or no?"

Teaching students with low incidence disabilities	How to support students with low incidence disabilities in remote learning	“I was curious to know how other schools are providing meaningful support at this time for Low Incidence learners. Is it possible to provide individualized, direct, explicit instruction with shaping and reinforcement virtually?”
Assessment	General assessment (e.g., formative assessment or grading) and Special Education assessment	“I would like to know what you would recommend in terms of assessments and the identification of students for special education services... We are trying to work as a team to determine what would be the best way to proceed with the identification of students since we don't want to start school with so many students going under-identified.”

Instructional Technologies (IT)

Concerns and Challenges. The most frequently discussed concern and challenge special education professionals experienced during the COVID-19 pandemic related to Instructional Technology (IT). They ranged from the basic use of IT (e.g., which platform to use, how to use each platform, how to transition from in-person to online with the remote software already in limited use, or what are available programs for students who had access to the internet only through their phones) to more special education specific concerns related to IT (e.g., how to set up Google Classroom for SDI or differentiated instruction or how to provide SDI during a synchronous video lesson). Not only transitioning to the online format, but also providing SDI to meet each student’s needs remotely brought unique challenges to special education professionals. Additionally, professionals had concerns and confusion about confidentiality and Family Educational Rights and Privacy Act (FERPA) violations when using online video conference platforms until clear guidelines were provided by the State’s education office.

Supports and Resources. In response to these threads, professionals shared their preferred or district recommended online platforms, which varied across school districts (e.g., Nearpod, Flipgrid, Screencastify, Schoology, Quizlet, Seesaw, Marco Polo). Information shared included which platforms or programs were free for school professionals, how to use them with the links to tutorial videos, how to provide differentiated assignments on them, and how to facilitate online lessons (e.g., you must be the last one to log out of the meeting, or accessibility features in platforms). To meet students’ needs, many participants recommended using Zoom’s video recording function, which would allow students to access the lesson on their own time and watch multiple times, which would be helpful for students who needed repetition to develop a new skill. Some professionals discussed how they used a combination of both online platforms and paper instructional packets of hands-on activities for each student who had difficulty learning solely through online mediums.

Engagement

Concerns and Challenges. Repeatedly discussed themes relating to engagement involved concerns about adequately reaching students and families, and their participation in an online class. Students and families were often not responding to their emails or phone calls, and their voice mailboxes were full. Students also did not access Google classroom, participate in Zoom classes, and failed to complete assignments in both electronic and hard copy format. One reason

behind these struggles was that students and families were getting overwhelmed with transitioning from in-person to remote learning and the uncertainty about expectations in this new “school setting” (e.g., how the class would be run via video or how they would be expected to participate in the lessons). Especially students with autism and their families had a difficult time adjusting to the new schedule and structure. Some participants discussed that it was not just simple procrastination but related to students’ executive functioning difficulties in a new learning experience.

Although balancing between making themselves available and maintaining professional distance with students and families was challenging, special education professionals tried to make every attempt to connect with students and families through various means as represented in the following quote:

I have utilized Facebook Messenger too with my parents and I call them once a week. I didn't want to give out my personal number, however, I have some students/families that do not have internet access and that was the only way to contact them.

They set up office hours outside of class hours to provide extra support or to answer any questions students and families had. Some used Google Voice numbers for families and students to contact them without sharing their private numbers. Some professionals made a “We miss you” video highlighting each student.

Even when students participated in their online class, engaging students appropriately with their work could be challenging, especially for students with severe/profound disabilities, emotional disturbance, or very young students with special needs. It was apparent that professionals were very frustrated with how to get students to attend, be more motivated, and engage in online lessons. Some also mentioned that even those students who were completing assignments expressed they were getting tired of completing the online work.

Supports and Resources. The most frequently shared advice on how to get students engaged and motivated in remote learning was to communicate and collaborate with families. Families became a key factor in providing special education services remotely. Participants suggested encouraging students’ families to support students in remote learning and offer them support however they need it while showing compassion about their struggles. In fact, one of the repeatedly discussed themes involved being supportive of families since they were also trying their best at balancing multiple responsibilities at home, as discussed in more detail in a later section. A participant stated:

Many parents may not feel capable of acting as their student's Learning Coach especially if their student has special learning or behavior needs. You may need to spend time encouraging parents and developing their capacity to support their students. Phone calls need to be about more than technology needs or learning websites... If parents are overwhelmed, find out if their need is something you or the school district can address.

The second most frequently shared advice on this topic was to alter teachers’ expectations during remote teaching. Many participants advised their fellow professionals to be supportive of

students with special needs since this change in routine could be very challenging. Addressing their emotional needs may need to take higher priority over academic work. One participant wrote:

Drop the academic time right now and try to get them to engage through an online game or conversation about something they would be interested in. It takes a different kind of rapport to work in this online community.

For younger children with special needs and students with severe disabilities, participants also suggested using “routine-based intervention” that incorporated house chores into the lesson, so students could learn new skills by helping with their family’s routines. For students who were experiencing difficulties due to their executive function challenges, participants suggested creating individualized checklists online and offering explicit instruction in executive function skills (e.g., time management, organization) to help students function in online settings.

Communicating and Supporting Families

Concerns and Challenges. As discussed in the previous section, families became a vital part of remote education for students with special needs. Remote learning requires students to use new skill sets such as manipulating the screen, navigating through the platform, and focusing on what the speaker says rather than your own face or peers’ faces on the screen. Students with severe/profound disabilities or who were young often lacked these skills and could not use the technology independently and efficiently. Therefore, special educators had to rely on families for everything from manipulating the screen to facilitating their children’s learning.

Special education professionals were uncertain about how to create a new collaborative partnership with families and how much they should expect from families during remote education. An early childhood educator explained her concern:

My students are ages 3-6, most are completely nonverbal with severe/profound disabilities. Most of their instruction has been hands-on activities and for the most part they are not independent..., how can I help them and their parents during this shutdown period? ... I am trying to figure out what I can do with them in a videochat format to be productive since most of their goals are imitating what I do and many of them need physical prompts and hand over hand prompting. Any ideas?

Supports and Resources. Special education professionals shared a lesson plan template for students’ families to follow at home, or a survey for parents to fill out regarding their preferred form of special education services during the COVID-19 pandemic and what platforms they prefer to use to communicate.

One of the most frequently discussed concepts under this topic was to make sure that families were feeling supported. Many families were on information overload and simply could not keep up with emails, yet they were being really hard on themselves. Some participants recommended weekly check-ins and set up office hours for one-on-one consulting to answer questions and discuss issues at home. Many participants also shared links to resource banks for families of

students with special needs in regard to how to work through remote education and the COVID-19 pandemic (See Table 2).

Table 2

Resource banks for families of students with special needs during remote/virtual learning

Resource banks	Description
Distance Learning Centre (DLC): Learning at home	https://resourcebank.ca/hubs/LearnHome Resource bank for educators and parents to use for distance learning in all content areas.
Schoolvirtually	https://schoolvirtually.org/ Provides information for educators and families on designing online instruction, using technology tools, and supporting students with disabilities.
Florida Inclusion Network	http://www.floridainclusionnetwork.com/wp-content/uploads/2020/03/Parent-Virtual-Tips-SWD-Final-03.24.20.pdf Tips for families to support their children with disabilities in virtual formats.
Education Modified	http://educationmodified-4381533.hs-sites.com/at-home-learning-resources Research-based resource toolkits for families who have children with special needs to support their child to complete school work.
Stop Learning Loss	https://www.stoplearningloss.org/ A database of educational resources, materials, and activities for parents and teachers collaboratively built out by teachers and parents.
Sun West Resource Bank	https://resourcebank.ca/ A dynamic digital library and network resource bank to access education resources for educators and parents.
Technical Assistance & Training System (TATS)	https://tats.ucf.edu/family-involvement/ Resource bank created by the University of Central Florida for collaborating with families of children with disabilities.
OT/PT Resource bank	https://docs.google.com/document/d/1qDQxA6U0ITm24r1-f1X3zbbULiTJbUYkO917sKSviNU/edit Occupational Therapy & Physical Therapy activity ideas and resources for COVID-19 time at home.
King County Play Equity Coalition	https://docs.google.com/document/d/1BpR03CTq3SfrhRCyhOr_MxIW38WvXUnE2ceml_yxeJ8/edit Physical activity resources for school closure.

Instructional Resources

Concerns and Challenges. Special education professionals were eager to find effective online programs to teach academic and social skills for their students during the school closures. Some professionals were specifically looking for online curriculum resources, while others wanted to transition the programs they were already using in face-to-face classes to online lessons. Participants were also asking for fellow professionals to share their pre-recorded video lessons and one-on-one teaching activity ideas.

Supports and Resources. Participants shared a variety of instructional resources and tips for using them in the forum (See Table 3). Special educators shared personally created resources such as printable materials and animated videos. Professionals also worked together with related service providers and/or paraprofessionals to create bags of learning and therapy supplies and materials to physically drop off at the families' doors weekly, which included puzzles, weatherboards, colored pencils, crayons, treats, worksheets, and any type of manipulatives.

Table 3

Instructional resources special education professionals used to meet the needs of their students during remote/virtual learning

Instructional resources	Description
Unique Learning System	Helps educators to create lesson plans and monitor progress, designed for students with special needs to access the general education curriculum.
IXL	Provides personalized learning in a comprehensive K-12 curriculum through individualized guidance and real time feedback.
Teachtown	Instructional resources to improve the academic, behavioral, and adaptive functioning of students with disabilities.
Seesaw	Student driven digital portfolios to record and share their learning.
Class Dojo	A school communication platform using photos, videos, and messages.
Mobymax	Instructional resources for all subject areas to provide differentiated learning, quick checker, interactive class, and rewards.
Reading A-Z	Downloadable, projectable, or printable reading instruction materials.
Epic!	Digital library for children with audio and video book selections.
Edmark	Printed or digital reading programs.
Readworks	Reading program that provides teacher guidance and integrated tools.
Schoology	Learning management system that allows users to create, manage, and share academic content.
Emotional ABCs	Social-emotional learning program.
Everyday speech	Social-emotional learning platform with interactive curriculums.
Prodigy	Math game program where students learn math through gaming.
Lalilo	Online phonics program for distance learning.
Letterland	Teaching phonics using a story-based approach.

Regulations

Concerns and Challenges. Special education professionals reported confusion, especially at the beginning of the transition to remote education, due to the absence of clear guidance. For instance, many professionals explained their challenges relating to restrictions prohibiting teaching new content during the school closure. As one quote depicted, the school closure was considered to be a temporary procedure: "my division is not providing direct instruction and introducing new material. I relate it to an extended snow day. ...activities and opportunities are given, but work cannot be graded." Some professionals stated that they did not even know what their roles were during the school closure.

Requirements and guidelines on remote education varied from district to district. Some districts told educators to not use Zoom with students for safety reasons, or not to provide direct instruction, while others required them to provide SDI through available means. Educators were also concerned about appropriate student to staff communication in online settings, as existing guidelines could not apply for this unique situation:

I'm in search of information related to protocols for using a virtual platform with children. For many of us, our interactions with our students are in a whole new space. Can anyone share info related to safe boundaries and guidelines for teachers working with students on virtual platforms?

One of the frequently discussed topics in this category was privacy concerns, including regulations such as FERPA, Health Insurance Portability and Accountability Act (HIPAA), and Children's Online Privacy Protection Act (COPPA) violations related to the use of IT, particularly regarding video platforms that may display the faces of children and family members on camera.

Supports and Resources. Participants shared their video conference guidelines and stated they were constantly adding to or changing their guidance as they needed to; “We are using ‘fluid’ as our mantra right now.” Information from the USDOE and resources for schools were shared as soon as it became available among participants. Lastly, as it got closer to mid-April, there was a thread titled "Retention due to school closures" that asked how schools were handling parents who were considering retaining students with IEPs due to the school closures. One participant posted:

Retention is really the last thing that should be on our minds right now... From a legal standpoint, I think a district is opening a Pandora's Box, given most, if not all of an entire quarter of school was done online and that alone is unprecedented and not something IDEA was designed for.

Teaching Concerns

Concerns and Challenges. The sudden shift to online schooling forced special education professionals to reconstruct the 'craft' of teaching. When designing a lesson for online educators needed to consider access to technology, students' abilities to type or speak, level of adult support students need or can receive, duration of engagement online, accessibility to the materials (e.g., closed captioning, text to speech function), and accommodations/modifications students need to receive. Additionally, they were struggling to create individualized lesson plans based on a student's IEP goals. Special educators asked for advice on a lesson plan template, organizing and creating content, sequencing posts, creating daily playlists, and caption videos.

Supports and Resources. Suggested strategies and resources for teaching concerns included making online instruction simple and fun (e.g., use music, incorporate movement, or use project-based learning) and making video lessons short and targeted (e.g., 15 to 20 minutes). They also shared information on creating differentiated instruction on Google Classroom or using Google Read and Write to make content accessible for students with special needs. In fact, accessibility to the learning platform was one of the biggest concerns for many professionals, and information

shared included some assistive technologies such as text-to-speech reader and instructional programs for students who are deaf and/or blind. Another recommended practice discussed was to allow student interaction since that was often missing during online instruction. For instance, letting students interview each other, have a conversation, give feedback to each other, and be collaborative. Participants also discussed focusing on maintaining previously mastered skills and using words at students' functional levels.

Environmental Issues

Concerns and Challenges. Issues with students not having access to the internet or technology devices were another frequently discussed topic in the forum. Many expressed that the vast majority of their students did not have access to the internet and were accessing remote learning only via their phones. Even when students had access to the internet and a technology device, they sometimes needed to share one computer with their siblings who were also involved in remote learning. Rural communities seemed to suffer from the problem of limited internet access more than non-rural school communities.

Supports and Resources. Some school districts provided necessary technology devices and Wi-Fi hot spot (e.g., school busses) access to students, but many responded that their schools could not afford to provide technology devices to all students. Some school districts provided paper packets for students without internet or technology devices. Once nationwide remote teaching became a new normal, many internet service companies offered free Wi-Fi services to families. Yet, some rural areas still did not have any broadband internet service, and professionals used telephone and/or postal service to reach out to their students.

Environmental issues were causing inequity in students' educational services. Students who did not have access to the internet or technology devices, or students whose parents worked and could not support their children's remote learning were experiencing disadvantages during this remote education. A participant stated: "There's a rather large issue with equity. Students without internet, without printers at home and special needs students who would require much more support were not receiving the same quality of education" as other students with internet, technology devices, and family support at home.

IEP

Concerns and Challenges. Before the federal guidelines became available, there was uncertainty related to IEP requirements during the school closure, and questions like the following were posted in the forum: How can we provide direct service minutes in a child's IEP? How can we provide related services? How are you conducting IEP meetings? How do I create distance learning plans? Should remote learning be considered a change of placement? Similarly, many participants discussed concerns about logistics related to virtual IEP meetings.

Supports and Resources. Several participants replied and posted detailed suggestions on how to develop contingency plans for this situation and shared templates they developed. Once the federal guidelines were out, professionals shared them immediately in the forum. Some shared successful experiences with holding online IEP meetings. Tips like using the Adobe signature feature to sign the IEP document online, using a screenshot of attendee names on Zoom, or sending the finalized documents as an email attachment were shared.

Supporting Students with Low Incidence Disabilities

Concerns and Challenges. As discussed in previous sections, providing direct instruction remotely that was aligned with IEP goals for students with low incidence disabilities was challenging as they might not have the functional skills to use technologies independently. Professionals questioned how to educate this population online adequately.

Supports and Resources. Participants shared their strategies and resources. For instance, some created activities for sensory, fine motor, and gross motor skills to do at home. Some made schedules for their students using objects and photographs along with work tasks that would be easy for families to implement. One participant advised:

Show yourself some grace...You are being asked to fit a square peg into a round hole... Your students are NOT best served in this way and your EFFECTIVE teaching practices require you physically BE with your students. If we weren't in an unprecedented global pandemic, you would NEVER recommend your students get services in this manner.

Assessment

Concerns and Challenges. Forum participants posted their concerns about how to administer accurate evaluations remotely. Some were concerned about unidentified students who were not receiving appropriate education services due to COVID-19. Also, how to appropriately meet Child Find screening responsibilities remotely was another topic discussed.

Supports and Resources. Suggestions in response to these concerns included using only pre-existing data, questionnaires, and interviews with parents, then re-evaluating them once the school reopened, as no one initially expected the school to be closed for such an extended period. Some tried to conduct evaluations remotely using a document camera via Zoom since formal evaluation booklets could not be mailed home to students due to test security. Although they could somewhat collect verbal comprehension and fluid reasoning scores, processing speed data were impossible to collect accurately via Zoom. For Child Find, some participants shared self-made checklists or the Ages & Stages Questionnaire-3 (ASQ-3).

For progress monitoring IEP goals, participants used online platforms such as Easycbm, IXL, Avenue PM, or Vizzle. Some collected data for IEP and Multi-Tiered System of Supports (MTSS) during the video interactions, however, they encountered challenges such as families providing verbal prompts to encourage correct answers. Some suggested that right now might not be the time to focus on assessment:

IDEA, Response to Intervention (RtI), Progress Monitoring...none of those were written with a nationwide shutdown in mind. While we can bring in some of our tried & true methodologies and best-practices from our previous standard ways, at the end of the day, when we FINALLY get our kiddos back, we are going to have to do some assessing, evaluating and down-right formal reevaluating to determine what this time has caused so that we can have a true baseline of where our kiddos are performing...

Discussion

The purpose of this study was to understand the experiences of special education professionals during the COVID-19 pandemic by recording a snapshot of what was going on during this unprecedented time in history and to help prepare future generations for unpredicted circumstances they might face. Living with the possibility of worldwide pandemics may become our new normal (World Health Organization, 2020), and preparing for such a societal crisis in more responsive ways, rather than in a reactive manner, is key to avoiding chaos and transitioning to planned remote instruction smoothly (LaPrairie & Hinson, 2007).

As predicted by previous studies (Burdette et al., 2013; Müller, 2009), analysis of the CEC member forums revealed that meeting the needs of students with disabilities remotely was challenging. This research revealed a multitude of challenges and concerns experienced by special education professionals during the initial six weeks of school closures. Within this diverse array of issues, five overarching themes emerged as significant, serving as the common underpinnings that connected and contextualized the individual concerns voiced by each professional. These themes included: (a) challenges with using IT appropriately to meet students' needs, (b) challenges with engaging students with special needs remotely, (c) importance of collaboration with families, (d) aggravated structural inequity, and (e) needs for clear guidance for emergency situations.

Challenges with using instructional technologies

Discussions on the CEC forum showed how difficult the transition to online education was, especially for professionals who did not have basic experiences with IT prior to the crisis, consistent with previous research (König et al., 2020). A lack of information on evidence-based practices regarding effective remote special education services made their experience more difficult (Cheng & Lai, 2020). Teachers struggled with finding where to start with accommodations and modifications in online formats, and how to monitor students' progress accurately. The importance of preparing special education professionals to implement technology through technology integration into teacher education curriculum and programs has been pointed out for years (Allsopp et al., 2009; Siyam, 2019) and is supported by these findings. Providing preservice teachers ample opportunities to use IT firsthand through both synchronous and asynchronous online lesson formats would help them to be better prepared.

Challenges with engaging students with special needs remotely

Students' engagement can be a challenge for any teacher's classroom; however, engaging students in a meaningful manner in remote classrooms poses another level of challenge for educators (Trinidad, 2021). CEC forum entries showed that professionals put forth extra efforts to make remote learning more successful. Yet, some types of SDI do not translate well to distance learning; particularly for students with low incidence disabilities or young students with special needs who cannot functionally use or navigate the technology devices independently (Chadwick et al., 2013; Kennedy et al., 2011). The rapid change in school routine and environment was also very stressful for students with special needs with changes in routine and structure particularly influencing learning performance and emotional well-being of students with ASD (Ashburner et al., 2010). Participants in this study reminded each other of the importance of addressing students' social and emotional needs first in order to support their

learning. Virtual learning demands students practice a different skill set, such as self-regulation to navigate online learning, sharing physical space with family during class, limited opportunities for social engagement, and increased potential for isolation (Education Elements, n.d.). Educators must provide opportunities for students to rebuild trust with each other and with teachers in this new learning environment and explicit instruction for skills needed for remote learning and online classroom procedures.

Collaboration with families

Families became a crucial part of special education during this crisis with significant instructional responsibilities falling to families (Garbe et al., 2020). Some instructional strategies that they were asked to implement required skills that special educators receive years of training and practice to master (Lake, 2020). In the CEC forums, special education professionals were very aware of the burden they were imposing on families and frequently discussed how supportive and compassionate they should be to support them. Participants suggested using frequent and proactive communication via the most familiar modality for families while avoiding information overload. Collaboration between professionals is also key to providing successful comprehensive special education and services (Friend & Cook, 2017), and in remote education strong collaboration among professionals is a must. It is important to point out that even when school personnel have face to face access with one another on a regular basis, it is difficult to execute effective collaboration (Williams-Diehm et al., 2014). School administrators must intentionally provide dedicated time for professionals to collaborate when working remotely.

Aggravated structural inequity

The COVID-19 pandemic unevenly impacted the health of Black, Latinx, and indigenous communities as well as communities in poverty as they are disproportionately affected by chronic medical conditions and have lower access to healthcare as well as serving as essential workers (Centers for Disease Control, 2020; Mozes, 2020; Tai et al., 2020). The COVID-19 pandemic has also exacerbated structural inequities in education systems (Berger et al., 2020). Although no State and LEAs were prepared for this crisis, the challenge seemed to be greater for districts and schools serving large numbers of traditionally underserved students such as students in poverty, students of color, English language learners, students with disabilities, or students in rural communities (DeMatthews et al., 2020; Jameson et al., 2020). Additionally, students from diverse backgrounds often have inadequate access to a reliable internet connection and technology (Lancker et al., 2020). Analysis of the CEC forums confirmed this concern as special education professionals were worried about the increasing inequity in education for students who did not have access to the internet, tech devices, or adults who could support their learning at home.

The nation's deep economic divide was particularly evident as less affluent districts struggled to provide technology devices and internet access to students while more affluent districts could focus on supporting their teachers' transition to remote instruction (DeMatthews et al., 2020; Jameson et al., 2020). Indeed, it has been shown that children from lower income households are ten times more likely to be doing little to no remote learning compared with their peers from higher-income households during the school closures in 2020, and 40% of children who have an IEP or are entitled to other special services were reported to not receiving any services at all (ParentsTogether, 2020).

Need for clear guidance

When schools were forced to close in mid-March, there was extensive uncertainty relating to the legal mandates under IDEA among special education professionals. Affirming previous research from the Hurricane Katrina and Hurricane Rita crisis (LaPrairie & Hinson, 2007), analysis of CEC forums also suggested that the emergency closure of schools without clear guidance could lead to chaos in school communities. Federal laws were not in place for addressing the education of students with disabilities in the event that schools were closed for an extended period of time (Wright & Wright, 2020). There were many questions about how to provide special education and related services that met the requirements of the IDEA.

As a previous study predicted, when implementing online learning for students with disabilities, access to online learning might become a civil rights issue that would require federal guidance and safeguards to ensure FAPE in the least restrictive environment (Burdette et al., 2013). Clear and realistic federal and state guidelines considering the necessary flexibility for such an emergency situation should be prepared to avoid chaos and anxiety.

Limitations and Implications

We acknowledge that a limitation of this data is that we only examined the forum for a limited time during the beginning stages of remote learning. Also, the themes summarized are only those that were expressed by professionals who use the CEC forum. Other forums used by special education professionals may reveal additional challenges and resources. If this study were replicated at the end of 2021, we may find different challenges and resources/supports posted.

During the COVID-19 pandemic, while each district managed the switch to online and distance learning for students with disabilities differently, districts that had prior experience with using computer-based programs or online platforms had an easier transition to a remote setting, as they could continue using a familiar platform in a broader way (König et al., 2020). Integrating computer-based programs into in-person classrooms was already reported as being effective at enhancing learning for students with special needs (Liu et al., 2013). Organizing the infrastructure for the integration of evidence-based IT into schools and providing training and technical assistance for educators and families, such that they could adequately navigate the technology in both in-person and virtual settings is critical (CEC, 2020). As CEC (2020) recommended, a meaningful investment in access to internet and technology devices, including assistive technology for children with special needs and their families, in order to access their virtual education and services is urgent.

Further, evidence-based instruction for students with severe disabilities involves different types of systematic instruction, that usually require physical prompting and reinforcement (Browder et al., 2014), which remote teaching cannot replicate. More research is needed on how to effectively support students with severe disabilities who cannot functionally engage in remote learning independently. In addition, it is important to teach all learners strategies for remote learning, such as self-regulation, time management, and how to self-monitor progress on various assignments. Further, teachers and schools must work intentionally to support families who are

engaged at home during remote learning. Providing better support and training for the families will help students who need home support for remote learning.

We have seen that the CEC forum serves as a hub for professionals to share challenges and solutions as well as a morale booster where professionals support each other. During a societal crisis like the COVID-19 pandemic, this type of supportive community is vital for frontline K-12 educators. Administrators should ensure that educators know about available resources to support their instruction and provide the training and time to access those needed supports to enhance remote teaching and learning.

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An Exploration of Pre-Service Teachers' Attitudes Toward Including Students with Autism Spectrum Disorder (ASD) in General Education

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Abstract

This study explored pre-service teachers' attitudes toward including students with ASD in general education. Ten participants from a mid-size teacher preparation program at a northeastern university participated in a focus group inquiry. The exploratory questions used during the focus group were derived from The Attitude Toward Inclusive Education Scale (ATIES) (Wilczenski, 1992). The Braun and Clarke's (2006) Model of Analysis was used to identify themes. Results indicated pre-service teachers' attitudes included both benefits and challenges associated with inclusion. Suggestions for improving pre-service teachers' attitudes toward including students with ASD were provided.

An Exploration of Pre-Service Teachers' Attitudes Toward Including Students with Autism Spectrum Disorder (ASD) in General Education

Autism spectrum disorder (ASD) is a neuro-developmental disorder that involves significant deficits in the areas of social communication, social interaction, and restricted, repetitive patterns of behaviors (CDC, 2021). In the past several years, there has been a notable surge in students being identified as having an ASD (CDC, 2020; Sholtis, 2015). This increased prevalence is partly due to the change in the Diagnostic Statistical Manual's (DSM-5) definition of autism (2013) which now includes all types of autism (Healthline, 2005-2021) as opposed to in the past when several types of autism were individually recognized (e.g., Asperger's syndrome). Other reasons for this increase include the development of better analytic tools, better screening methods, and increased awareness about the disorder among doctors and parents (Rice, Rosanoff, Dawson, Durkin, Croen, Singer & Yeargin-Allsopp, 2015). It is important to note that ASD is now considered the fastest growing developmental disability (National Autism Society, 2019), as the number of students being diagnosed with ASD has continually increased in the U.S. since 2000. As of 2021, 1 in 44 students is being diagnosed with an ASD (Centers for Disease Control and Prevention, 2022) resulting in more than a million school-age children with this disorder.

Beginning with the passing of P.L. 94-142 (1975), the Education for All Handicapped Children Act, and continuing to present day legislation, there has been a mandate to educate all children with disabilities in their least restrictive environment (LRE). This includes students with ASD. The LRE provision states that children with disabilities must be educated in a setting that is as close to general education, as possible, with supports and services, as needed. Since 1990, there

has been a significant increase in students with disabilities being educated alongside their neurotypical peers (i.e., those with typical intellectual and cognitive development) in general education settings (Francisco, Hartman, & Wang, 2020). Currently, most K-12 students with ASD spend 80% or more of their school day in a general education classroom (NCES, 2021).

Studies suggest that teachers' attitudes toward including students with disabilities is one of the best predictors of their successful inclusion in general education (Li, Wong, Sum, & Yu, 2019). Further, teachers who have positive attitudes toward inclusion have demonstrated a more positive approach toward teaching their students with disabilities (Salvoita, 2019). While pre-service teachers are not yet practicing teachers, their perceptions toward the inclusion of those with ASD will likely have implications on their attitudes while teaching. Preparing teachers to have a positive attitude toward including students with ASD in general education has been a focus of research due to the significant impact it has on the teachers' attitudes toward developing and maintaining successful inclusive classrooms (AlMahdi & Bukamal, 2019). Currently, there are few existing studies specifically targeting pre-service teachers' attitudes toward including students with ASD and much of it has been conducted internationally, limiting its application to U.S. educators and their respective classrooms.

Since research suggests that pre-service teachers are significantly impacted by those who mentor them (Stites, Alter, & Krikorian, 2020), better understanding their attitudes toward the inclusion of students with ASD in the general education classroom could inform teacher preparation programs about how they could help to prepare pre-service teachers to help to develop and/or reinforce a positive attitude.

Due to the increasing number of students being diagnosed with ASD, educators are giving careful consideration to the types of educational placements that best meet the needs of this student population. Realizing the impact teachers' attitudes have on successful inclusion, in addition to increased ASD prevalence, these researchers investigated pre-service teachers' attitudes toward including students with ASD in general education. The purpose of this qualitative study was to answer the question: *What are pre-service teachers' attitudes toward including students with ASD in general education?* This research is particularly critical because pre-service teachers will be completing their teacher preparation programs and going on to become classroom teachers who work with a diverse population with a variety of needs.

Background

Although there are limited studies targeting pre-service teachers' attitudes toward inclusion of students with ASD, some research does exist. In a study conducted by D'Agostino and Douglas (2021), general education teacher candidates demonstrated positive attitudes toward including students with ASD throughout their teacher preparation program and this positivity increased, in some cases, as they advanced through their programs. However, some general education teacher candidates considered aggression (e.g., screaming, crying, tantrums) to be highly disruptive in an educational setting. Further, noncompliance to teacher authority by students with ASD was another area of concern indicated. Some studies highlighted pre-service teachers' attitudes toward students with ASD being bullied during their school years and how the effects of bullying can worsen the existing social and behavior challenges students with ASD can experience (Link,

2014; Winchell, Sreckovic, & Schultz, 2018). Looking at pre-service teacher attitude from a general perspective, Yu and Park (2020) ascertained most pre-service teachers felt inclusion was beneficial to both students with and without disabilities. However, attitudes may vary across pre-service teachers as Low, Lee, and Ahmad (2018) found special education pre-service teachers were less in favor of full inclusion of students with ASD, when compared to non-special education pre-service teachers. Yu and Park (2020) determined pre-service teachers' college courses and their families influenced their attitudes toward inclusion, emphasizing the importance of teacher preparation programs.

While current research on pre-service teachers' attitudes toward students with ASD is limited, there is considerable research available that examines practicing teachers' attitudes toward inclusion. According to Perrin, Jury, and Desombre (2021), there are three factors that affect teachers' attitudes toward inclusive education: cultural and historical context influences; the type of disability; and teachers' characteristics such as gender, age and teaching experience. Of particular interest to this study, these researchers revealed practicing teachers view students with ASD and intellectual disabilities as more difficult to include in general education than those with a motor disability. It is possible this perceived increased difficulty could impact teachers' level of positivity. Since the percentage of students with ASD being educated in a general education setting is so high, it is critical that teachers establish and maintain a positive attitude to ensure success for these students as research indicates that teachers' attitudes toward inclusion have been the strongest predictor of successful learning environments (Avramidis & Norwich, 2002; Vlachou & Barton, 2007; Van Laarhoven et al., 2007). Further, teachers with positive attitudes toward inclusive education are more likely to implement the necessary strategies to meet the diverse needs of their learners (Saloviita, 2019; Daly et. al, 2016.).

Several studies have also determined that attention must be given to the importance of pre-service teacher training programs in shaping these attitudes as teachers' beliefs are significantly influenced by their own experiences (D'Agostino & Douglas, 2020; Sharman & Nuttal, 2016; Taylor & Ringlaben, 2012). Therefore, further research that examines the specific attitudes of pre-service teachers toward the inclusion of those with ASD may help to provide insight into why teachers perceive this population to be more difficult to include and thus provide a clearer direction for teacher preparation that ultimately will help to increase positivity amongst teachers.

Methodology

This study aimed to examine pre-service teachers' attitudes toward including students with ASD in general education. To gain better insight into including students with ASD in general education, the researchers conducted a focus group inquiry to gather data. Conducting a focus group appeared the best method to answering this research question as it afforded the participants the opportunity to fully share their thoughts on this topic. Focus groups are also highly appropriate when gathering data in a social setting (Bryman, 2004). Furthermore, they afford participants to openly discuss topics in a group, allowing the researchers to obtain rich data in a relatively short space of time (Gibbs, 2012). Researcher positionality is important in research and may be particularly important in small scale, qualitative research. An interpretivist position was adopted in this project and used to attach meaning to the students' views (O'Donoghue, 2007). Interpretivism, as a qualitative paradigm, acknowledges that knowledge and reality are

subjectively constructed by the researcher, whose objective it is to make sense of others' views and to extract meaning from conversations (Goodley, 2011). Interpretivists hold the view that multiple realities exist and that there is no such thing as a single, objective reality (Corcoran & Billington, 2015). This was certainly the case in this research where the students' perspectives were deemed authentic and worthy of exploration.

Participants

Ten students participated in the focus group. Nine females and one male participated. The participants were special education and regular education undergraduate first-year students and fourth-year students from a mid-size northeastern university's teacher preparation program. The focus group inquiry was part of larger study that involved a quantitative analysis of pre-service teachers' attitudes toward including students with ASD. Participants were recruited from both foundation-level special education courses and upper-level special education communication courses. Posters were hung throughout the college's education building advertising the study and inviting students to participate. All participants completed a waiver of informed consent and were notified that their participation in the focus group was completely voluntary. The focus group was conducted in one of the college's academic classrooms. No identifying information about the participants was gathered so that their participation remained strictly anonymous. Additionally, students were informed that they could withdraw from the focus group at any point without any consequences, thereby reducing any pressure to take part in the study.

Instrument and Data Collection

The exploratory questions that were used for the focus group were derived from questions that were posed in the Attitudes Toward Inclusive Education Scale (ATIES). For purposes of this focus group inquiry, the researchers decided to focus on the following 3 items from the ATIES:

1. How do students with ASD benefit *socially* from being included in general education classrooms?
2. How do students with ASD benefit *academically* from being included in general education classrooms?
3. How do students with ASD benefit *behaviorally* from being included in general education classrooms?

Participants responded orally to these items, and the focus group inquiry lasted one hour. Participant responses were audio-recorded on the lead researcher's laptop and later transcribed.

The ATIES is a measure of academic, behavioral, social, and physical attitudes toward including students with ASD in general education. The researchers opted not to examine attitudes toward the physical aspect of inclusion which was part of the instrument's design. The ATIES instrument was validated on a representative sample of 301 in-service teachers and 144 pre-service teachers in New Hampshire. A principal component analysis was used to determine the construct validity of the instrument (Wilczenski, 1992), which then resulted in the 16-item instrument. Each of the hypothesized items loaded on each of the factors, as expected. The internal consistency reliabilities (coefficient alpha) of each of the four factors were adequate, ranging from .82 to .92.

Data Analysis

To identify themes which emerged from the research, an inductive approach was adopted using Braun and Clarke's (2006) Model of Analysis (see Table 1). While it may be difficult to negate bias in qualitative research, an independent researcher was involved in the analysis and this helped to reduce any bias, as this person was not known to the students and did not conduct the research.

Table 1
Model of Analysis

	Phase	Description of the process
1	Familiarisation with data	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
2	Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3	Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4	Reviewing themes	Checking if the themes work in relation to the coded extracts, (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5	Defining and naming themes	Ongoing analysis to refine the specifics of each theme and the overall story the analysis tells, generating clear definitions and names for each theme.
6	Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

(Braun & Clarke, 2006)

Limitations

This study revealed several relevant insights about pre-service teachers' attitudes toward including students with ASD; however, some limitations do exist. First, this focus group inquiry was conducted at only one university. It would be advantageous to broaden the scope of the study to include more participants from additional teacher preparation programs in other U.S geographic locations. Second, this study examined only pre-service service teachers who were either at the beginning or at the end of their teacher preparation program. It appears valuable to

examine pre-service teachers' attitudes as they progress throughout their program. Third, this focus group was comprised largely of female participants. Perhaps including more male perspectives would yield different attitudes toward including students with ASD. Also, a small sample was used, and results might not be indicative of all pre-service teacher candidates. Fourth, the focus group session was one-hour in length, and it is possible a longer session would have been advantageous. Last, one disadvantage of focus group interviews is that they may promote group consensus.

Findings

Having manually coded the data and subsequently placed the codes in categories, these categories were further collapsed into four main themes as follows.

1. Teacher understanding of students with ASD
2. Well-being of students with ASD
3. Sense of belonging for students with ASD
4. Students with ASD's preparation for later life

It should be noted when referring to *inclusion/inclusive education* in their responses, participants were referring to the "educational practice of educating children with disabilities in classrooms with children without disabilities (Webster, 2018, para. 1)."

Teacher understanding of students with ASD

One of the main themes to emerge from the data was the overwhelming sense that students fare well in the general classroom given the teacher understood the importance of acknowledging differences and challenges which students encountered. One student remarked that the teacher needs to "check in" with students to make sure all is ok, stating "I think it (inclusion) would be good for them socially, I think that's a wonderful thing, but... if I were a teacher then I would maybe have little check-ins with them, you know, are you comfortable in this classroom?" The same student noted that teachers should ask children if anyone is treating them differently. Some students also referred to the imperative of teachers differentiating the curriculum as a means of meaningfully including children with ASD. One student stated "I mean, it would depend, but I think he would benefit if the subject was modified down to the grade level" while another said "a really big part is how comfortable the general ed teachers feel about using those modifications and things like that. I have been in a couple field placements and some teachers are scared to use them. One teacher was really good at it, and he was really comfortable using them."

The teachers' understanding of ASD and the associated challenges were highlighted throughout and students acknowledged that all children with ASD, while sharing commonalities, are all different individuals. This was captured by one participant who mentioned "just because you met one person with autism means you've only met one person with autism."

The participants were eager to "accommodate" students with ASD and "have them get something out of my class." Some participants mentioned specific strategies such as having response boards to write answers on and putting assignments on-line. While such strategies would certainly benefit children with ASD, these could be used with all students if a Universal Design for Learning (UDL) approach were adopted. Students referred to the teacher acting as a

“role model” in the class, which also has implications for teacher understanding of the potential benefits and challenges of inclusion. While the students were in favor of inclusion and acknowledged the social benefits, there was concern regarding maladaptive behavior and how this would impact the neuro-typical children. One participant cited

I would have an issue in my classroom if a student with ASD becomes physically aggressive or verbally aggressive, making distractions such as flapping or making noises might be distracting for gen ed kids.

This further emphasizes the criticality of teacher training for all teachers when aiming to successfully include children with ASD in their classrooms.

Well-being of students with ASD

The participants demonstrated a considerable amount of concern for students with ASD in the general classroom, especially in relation to how those students would “feel” because of their differences. They discussed social events associated with middle and high school such as going to parties and dances. While there was agreement that this would be a positive experience for them, there was also an awareness that children with ASD may experience rejection because of their differences. One student’s carefully considered response included

They might be invited because people genuinely want to get to know them, or they also might get rejected because people may not necessarily want to be with them because they have autism. If they are accepted that would be a big self-esteem boost but if they get rejected that could be off-putting.

Other participants acknowledged that students’ (with ASD) differences could negatively impact well-being and self-esteem. There was a continual reference to students in middle school, which may be considered a stage when students are establishing their own identities. One student referred to children comparing themselves to others and how being included in a regular classroom may impact “self-esteem and confidence.” It was unclear whether he thought this would result in a positive or negative experience. Others noted how being included in the general education classroom could positively affect children’s well-being with comments such as “just having that social interaction, I think, gave him one less thing to worry about essentially” and “Yeah, and I think it could be a great learning opportunity for them socially as well as academically.”

Some participants discussed how students with ASD would feel “self-conscious” because of their differences and noted the challenging behaviors associated with the disability. While the participants spoke about the positive aspects of inclusion for students with ASD, they were also mindful of how this could negatively impact the neurotypical students in the class. One participant remarked “I would have to draw the line there, because my wanting to help students with disabilities doesn’t outweigh me wanting to protect *all* of my students” Some of the participants recalled personal experiences of school where a student with ASD demonstrated behavior that was considered different to other students. This could be construed in some instances to impact the well-being of neurotypical peers, though one student noted “so, my point is, he’s not doing anything disruptive, he’s just being overly loud, and he has no control over

that.” There was an appreciation in the focus group of how students with ASD’s challenges could result in feelings of difference and alienation but also how important it is for teachers to be able to deal with this. One student remarked “I think everyone said it would be an advantage to witness these things first-hand and know what to expect.”

Sense of belonging for students with ASD

The relationships formed in the general education classroom and the sense of belonging to a group was a point which many participants identified as being a positive aspect of inclusion. This attitude was the consensus, particularly in the case of children with high-functioning ASD. While there are differences associated with ASD (and other disabilities), it may be interpreted that when children are exposed to all sorts of difference at an early age, these differences may be understood more fully. One student asserted

Well, one of my best friends was high functioning, like Asperger’s, and it (inclusion) helped him a lot. Just in the sense that everybody treated him just as if he were just like anyone else...no one really cared that he had Asperger’s. So, just from a social perspective... he grew up, I think, part of the classroom and he felt like he belonged a lot more.

The participants acknowledged the differences between students in determining whether the general education classroom would be the most appropriate place for individuals but that, when included, it fostered a feeling of belonging. It also reduced the stigma, sometimes associated with ASD. One participant said, “it depends on the actual child” and made the point that if a student attends regular education and is pulled out for resource room instruction, then “they’re not going to gain anything at the end of the day.” This might raise the question of whether the child being placed in the regular class is truly being included and require revisiting the principles of inclusion which places the child’s unique needs at the center. The same participant noted that if a student has language needs and is unable to respond to questions, then “they’ll have a tough time,” which may impact their sense of belonging (and well-being).

It was determined that when the general education class is indeed the most appropriate place for the student that there is “a definite benefit, kind of like a group mindset, that a classroom provides.” It was opined on a few occasions that the student’s level of functioning was a key determinant of successful inclusion. An example of how non-academic activities could promote a group’s identity was provided by a participant who said “My high school had a special needs’ athletic team. Half of the athletes were kids with special needs ...” The concept of school culture was identified by a student who recounted a positive experience in their school where “everybody just kind of had this mutual understanding of like, hey, let’s help him, kind of encourage him.” They went on to say that “every student that was a part of that was put in the class, and they were always very eager to learn and were very happy to be there.” Although the participants appreciated the benefits of inclusion and noted the positive social aspects in terms of belonging to the group, they were also mindful of the way students with ASD are sometimes bullied because of their differences. One participant said that “it could possibly be a double-edged sword...I know, some people who were bullied *a lot* in elementary school and middle school and, I would fear that they might get bullied for their disability.” Finally, another student, referring to a family member with ASD, noted “my brother is mildly autistic and so when he was

younger would not realize that he was getting bullied....and so that was difficult. It wasn't until late middle school/early high school that he realized, and it was *really* hard, really, really hard."

Students with ASD's preparation for later life

The participants noted that inclusion in regular education was important when it came to generalizing and maintaining skills for later life. They discussed the important social skills which students develop in school and how these skills could be transferred when the students have left school. One participant maintained that

I feel like it would be a benefit because when the students get past school- aged they must go into the world, ...hopefully that is the goal, that they would be able to go to work or interact with others, and it would be beneficial for them to gain those social skills with people outside of the spectrum. So, I feel like they would gain that just from being in some regular ed classes.

This sentiment was echoed by other participants who also referred to activities and skills which may be important later in life with another participant saying, "I think then it would be really good for them to be able to go into some of these classes like economics, or a civics' class, where you learn about voting and things like that."

The participants referred to the importance of learning in a real-life environment with typically developing peers when preparing for later life. One student mentioned that in life "you need to roll with the punches," indicating that students with ASD may have certain challenges in the regular classroom but these may be beneficial when it comes to skill development for adulthood. It was interesting to note that the participants maintained that there were also clear benefits for typically developing children when it came to the inclusion of children with ASD in the inclusive classroom. One student reported that it "created a tolerance" for all, with another stating "I feel like it would be beneficial to the regular ed student, because in the world for them they're going to go out and encounter diverse experiences."

Discussion

Pre-service teacher attitudes in this study revealed some benefits and challenges regarding including students with ASD in general education. It became apparent through this investigation that pre-service teachers (special education and general education) would significantly benefit from having increased training on ASD characteristics from an academic, social, and behavioral perspective. The first theme that emerged, *teacher understanding of students with ASD*, emphasized the importance of having a firm foundation about the characteristics of students with ASD and methods for instructing them. To illustrate, both existing research (Brock & Beaman-Diglia, 2018; McGuire & Meadan, 2020) and the results of this focus group inquiry highlight concerns about challenging behaviors students with ASD might demonstrate while in the classroom. Therefore, moving forward it appears prudent that all pre-service teachers are well-prepared in classroom management techniques as they apply to inclusive settings.

The second theme, *well-being of students with ASD*, is another area where additional instruction might be helpful to pre-service teachers in developing positive attitudes toward inclusion. Pre-

service teachers shared their concerns about students with ASD being socially accepted by their neurotypical peers in inclusive classrooms, and the impact that social acceptance could have on self-esteem. While the reality of students with ASD having social deficits is emphasized in most teacher preparation programs, ways to foster student-to-student relationships typically is not. To create a greater sense of inclusivity, and thus help to increase self-esteem and confidence, pre-service teachers could be instructed on how to cultivate improved relationships between the neurotypical students and the students with ASD. It would also be beneficial for teachers to work with those with ASD to help them to develop more positive self-perceptions and improve self-esteem.

The third theme, *sense of belonging for students with ASD*, indicated a positive attitude and benefits toward having students with ASD in general education. Most agreed inclusive classrooms are beneficial to creating a sense of belonging for students with ASD and considered this to be important to their overall development. However, existing research (Link, 2014) as well as this focus group data, indicated a concern that students with ASD might be bullied in a general education setting due to their differences. Providing pre-service teachers with effective strategies that they could use in their classroom on how to combat these unwanted experiences may help to lessen the problem.

While some participants also expressed concern that some students with ASD might be at a lower academic level than their typically developing peers, and not benefit to the extent that they could, students with disabilities tend to have better academic outcomes because of being included. Educating pre-service students about academic impacts of inclusion could help to minimize this concern.

The fourth theme, *ASD student's preparation for later life*, also revealed that pre-service teachers believe that inclusive classrooms help to prepare students with ASD for life after high school by helping to provide the necessary skills that they need as an adult in a more authentic setting with a variety of people and experiences. Reinforcing the value of teaching students with ASD these skills is critical in the preparation pre-service teachers. Further, teaching both general and special education pre-service teachers how to successfully work with their students in obtaining these skills is also paramount.

While the four themes that emerged spanned the academic, social, and behavioral domains, students primarily focused on the positive social aspect of including students with ASD in general education. Emphasizing the possible benefits of inclusion on the academic and behavioral domains would provide for a more well-rounded understanding of the pre-service teachers' attitudes toward the inclusion of students with ASD.

Future Implications and Conclusion

Examining pre-service teachers' attitudes regarding including students with ASD is key to helping future teachers develop positive attitudes toward inclusion. Research indicates that a positive attitude towards inclusion is the most important variable for successful integration of students with disabilities in inclusive settings (Li et al., 2019). Ensuring teacher preparation programs provide comprehensive coursework and field experiences on the characteristics of

students with ASD, providing daily living skills, facilitating improved self-esteem and confidence, strengthening peer-to-peer interactions, and developing anti-bullying techniques will be essential to their success.

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Supporting Student Engagement Through the Use of Various Discussion Formats in a Graduate Teacher Education Course

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Abstract

Discussion boards are a common component of asynchronous online courses. While many teacher preparation courses utilize traditional text-based discussion boards, university faculty are increasingly designing innovative approaches to asynchronous online discussions. There is significant research regarding the effectiveness of varied discussion formats for traditional in-person courses, but there is limited research on their use in online courses, particularly for asynchronous discussions. This manuscript presents the results of a study that investigated student participation and engagement in three different discussion formats within the same special education teacher preparation course: (a) traditional text-based, (b) jigsaw, and (c) choice-based. The researchers found that student engagement was similar in all three discussion types. Implications for practice and suggestions for future research are offered.

Supporting Student Engagement Through the Use of Various Discussion Formats in a Graduate Teacher Education Course

Online learning has become an increasingly common avenue for university students to access courses. The National Center for Education Statistics (2019) reported that over a third of college students took at least some of their coursework in an online classroom. This number has increased due to the COVID-19 pandemic and almost three-fourths of college students report wanting to take at least some of their coursework online (Seaman & Johnson, 2021). Previous research has indicated that online instruction is an effective way to prepare teachers (Peterson & Bond, 2014; Peterson-Ahmad et al., 2018) and, in some cases, can be more effective than traditional face-to-face coursework (Chiero & Beare, 2010).

Discussion boards are a common component of many online teacher preparation courses (Covelli, 2017; Lohmann & Boothe, 2020; Stoten et al., 2018) and the research indicates a variety of academic benefits from their use. University faculty can use discussions as a way to informally evaluate student mastery of course learning, thus allowing them to reteach content that students do not understand (Weems-Landingham & Paternite, 2021). Discussion boards increase student engagement with both the learning content and other students in the course (Al Jeraisy et al., 2015; Massey et al., 2019; Scott & Turrise, 2021). Additionally, the use of discussion boards can enhance students' critical thinking (Aloni & Harrington, 2018; Osborne et al., 2018; Theoret & Luna, 2009) and writing (Aloni & Harrington, 2018) skills, as well as their comprehension of course learning content (Krentler & Willis-Flurry, 2005; Sheen et al., 2019). Carr (2020) found that online discussions can also increase student voice and creativity.

In addition, the use of university faculty-facilitated asynchronous discussion boards increase students' social presence and perceptions of group cohesion (Cho & Tobias, 2016), as well as their sense of community (Saade & Huang, 2009). Previous research indicates that online learners may feel lonely and disconnected from their learning experience. However, when faculty work to build community and relationships among learners, these feelings may be diminished or disappear (Kaufmann & Vallade, 2020) and student learning is increased when they feel a sense of community in learning (Yamada, 2009). Finally, students report that engagement with classmates is important to their online learning experience (Martin & Bolliger, 2018) and this sense of community increases their satisfaction with learning (Bickle et al., 2019). It should be noted, however, that a recent study found that some online students report selecting this learning format to avoid interactions with others (Mays & Ross, 2022), indicating that a sense of community is not considered important to all online learners.

In many cases, a traditional text-based discussion board is used for asynchronous online courses (Girasoli & Hannafin, 2008; Trespalacios & Uribe-Florez, 2020). Asynchronous online courses are those in which students do not have required class times and can complete their coursework during times that meet their individual needs, while still meeting required assignment due dates (Carr, 2012). In asynchronous text-based discussions, all students are provided the same topic to discuss and answer the question(s) about the topic by writing their answers in text. The students then respond to one another using text-based responses. Previous research has indicated that ongoing student learning and engagement in text-based discussions can be challenging to sustain (Delaney et al. 2019; Xu et al. 2020).

While many courses utilize traditional text-based discussion boards, university faculty are increasingly designing innovative approaches to asynchronous online discussions (Ding et al., 2020; Lohmann & Boothe, 2020). One approach to designing discussion boards is to adapt traditional face-to-face discussion methods for use in the online environment. One commonly used discussion format in the face-to-face classroom is the jigsaw discussion, which is a teaching tool in which students in a class are responsible for teaching one another course concepts (Amador & Mederer, 2013; Aronson & Patnoe, 2011). This type of discussion can be especially valuable when a course instructor aims to cover additional content without increasing student workload (Lohmann & Boothe, 2020). After a jigsaw discussion is used, student learning is increased and students know the most about the topic they presented to their classmates (Nolan et al., 2018). In addition, students report enjoying this approach to learning (Carroll, 1986). While there is significant research regarding the effectiveness of jigsaw discussions for traditional in-person courses, there is limited research on its use in online courses, particularly for asynchronous discussions. Preliminary research indicates that the jigsaw approach may be effective for enhancing student learning in online courses (Chang & Benson, 2020; Weidman & Bishop, 2009).

In addition, there is research to support the academic and motivational benefits of student choice in assignment formats (Boothe et al., 2020; Pinchot & Pullet, 2021; Rosenzweig et al., 2019). Choices can be offered in various ways, including having the option to choose the assessment tool or choices within a set assessments (Boothe et al., 2018). University students report satisfaction with learning when they are provided with choices (Rosenzweig et al, 2019; Vu & Faddle, 2013). When students are offered choice in how they demonstrate their mastery of

content, it can lead to more critical thinking on the learning topic (Pretorius et al., 2017), as well as increased engagement and academic achievement in the course (Hanewicz et al., 2017).

In the current study, three different discussion formats were used to evaluate student engagement in learning. During the five-week intensive course, students participated in traditional text-based discussions, a jigsaw discussion, and a choice-based discussion format. The study was designed to investigate student participation and engagement in various discussion formats

Methodology

This qualitative research study was conducted to investigate the impact of various discussion methods in a special education teacher preparation course. The first author designed and taught one section of the course in which the research was conducted.

Participants

The participants in this study were graduate students in a special education teaching methods course, which is part of a fully asynchronous online master's degree program. Students in the course fell into three categories: (a) those pursuing initial teacher licensure while gaining a graduate degree, (b) state certified special educators pursuing a master's degree, and (c) candidates pursuing special education alternative certification. All students had taken at least two previous courses in the degree program.

Study Design

The course in which the research was conducted is a five-week intensive course and data was collected in the last three weeks of the course. Two sections of the course were included in the study. The section taught by the first author had twelve students and the other section, taught by an adjunct faculty member, had eight students. Both sections of the course included the same content, including course materials, assignments, discussions, and grading rubrics.

Each week of the course included an asynchronous discussion to aid students in learning the course material. During the third week of the course, students engaged in a traditional text-based discussion on effective lesson planning and the use of explicit instruction in the inclusive classroom. Students selected an online video of a teacher presenting a lesson and analyzed the instruction with a specific focus on how the lesson aligned with effective lesson planning components and the extent to which explicit instruction was used. Explicit instruction is a systematic approach to classroom instruction that leads to student academic achievement (Archer & Hughes, 2010). After viewing the video they selected, each student posted a one-to-two paragraph explanation of how the lesson aligned with best practices, as well as how they suggest improving the lesson to be more effective.

For the discussion in Week Four, a modified jigsaw discussion was used to aid students in learning the special education High Leverage Practices (HLPs), which are the skills that all special educators must master and use in their classrooms and which should guide special education teacher preparation (McLeskey et al., 2017; McLeskey et al., 2019). There are 22 HLPs that fall into four broad categories: assessment, collaboration, instructional, and social/emotional/behavioral (McLeskey et al., 2017). For this course discussion, each student

was required to choose one HLP and create a short video-based presentation to teach their classmates about the topic. These videos were posted as initial discussion posts and students responded to one another using text-based discussion posts.

During the final week of the course, Week 5, students participated in a choice-based discussion, in which they could post their initial discussion format in a format of their choice. Options selected by students included (a) traditional text-based posts, (b) audio recordings, (c) video recordings, (d) powerpoint presentations, (e) drawings, and (f) hand-drawn comic strips. In this discussion, students were asked to share their personal experiences, learning, and questions related to the weekly course readings, which integrated faith and learning.

Each week, students were instructed to respond to classmates by asking questions, connecting classmates' statements to course materials, and sharing personal experiences related to the topic being discussed. In addition, they were required to include a reflection post at the end of each week in which they shared what they learned through the discussion and how they will translate that learning into practice in their own classrooms. The same rubric was used to evaluate the discussions each week. The rubric assessed students on (a) their total number of posts, (b) the quality of their initial discussion post, (c) the quality of their responses to classmates, with clear instructions that simple affirmations of classmates' statements would result in no points, and (d) their reflection post.

Data Analysis

At the conclusion of the course, the researchers used qualitative analysis methods to understand student engagement and learning in the final three discussions in the course. To understand the survey data, the researchers looked for themes, as well as individual student statements that aided in better understanding the students' experiences with the three discussion methods included in the course. Student discussion posts from the final three weeks of the course were examined. Specifically, the researchers looked at (a) the number of posts from each student during each discussion, (b) the average number of words in student posts each week, and (c) the types of posts. The researchers coded the posts according to the following themes and a single post may have been coded for multiple themes: (a) statements of affirmation to classmates, (b) responses to classmate questions or statements made by classmates, (c) responses to instructor questions, (d) furthering the discussion by asking questions of classmates, (e) connecting discussion topics and statements made by classmates to course content and research, (f) sharing personal experiences in their roles as teachers, students, or parents related to the topic being discussed, and (g) reflection posts.

Results

The data indicated that there is little difference in student engagement among the three discussion board formats. During the traditional text-based discussion, there were a total of 153 posts in the course discussion, 174 posts in the jigsaw discussion, and the choice-based discussion had 140 total posts. Over the course of the three weeks, there was a mean number of 155.67 distinct discussion posts each week with a mean of 7.78 posts per student. Figure 1 shows how each of the three weekly discussions compare in terms of the mean number of posts that each student made during the discussions, as well as the mean number of words in the discussion

posts for each week. Initial discussion posts are counted towards the mean number of posts, but the words in those posts are not included in the mean discussion post length.

As can be seen in Figure 1, the mean number of student posts was similar for each of the three discussions, with posts ranging from 7 to 8.7 per student in a given week. However, the number of words in the posts differed significantly, with Week 3 having the shortest posts and Week 5 having the longest. The mean post length in Week 5 was 31 words longer than the mean post length of Week 3 and 13 words longer than the mean post length of Week 4.

Figure 1: *Mean number and length of student discussion posts*

	Mean Number of Posts per Student	Mean Discussion Post Length (in words)
Week 3 (Traditional Discussion)	7.65	88.95625
Week 4 (Jigsaw Discussion)	8.7	107.3181
Week 5 (Choice-Based Discussion)	7	120.02175

Figure 1: *Mean number and length of student discussion posts*

In addition to looking at the extent of student engagement, we also analyzed the ways in which students engaged in the discussion by coding the types of discussion posts into the six categories outlined in the Methods section. Because students may include different types of information in one discussion post a single discussion post could be coded under more than one category (ex. affirmation and asking questions). Initial discussion posts were not included in the thematic coding. Figure 2 shows the number of times each theme was represented in each of the weekly discussions.

	Week 3 (Traditional Discussion)	Week 4 (Jigsaw Discussion)	Week 5 (Choice-Based Discussion)
Affirmation	51 (33%)	71 (41%)	70 (50%)
Responding to Classmate Question/Statement	38 (25%)	43 (25%)	23 (16%)
Responding to Professor Question	7 (5%)	10 (6%)	4 (3%)

Ask questions of classmate	27 (18%)	29 (17%)	26 (19%)
Connection to course materials	26 (17%)	1 (0.5%)	3 (2%)
Personal experiences	19 (12%)	34 (20%)	35 (25%)
Reflection Post	14 (9%)	15 (9%)	13 (9%)

Figure 2: *Discussion Post Themes: Number of Posts and Percentage of Posts*

As seen in Figure 2, the most frequent theme for each of the three weeks was affirmation of other students, with between one-third and one-half of all discussion posts including affirmation statements. Students were least likely to respond to a question from their professor in Week 3 and make a connection to course materials during Weeks 4 and 5. It is also important to note that some students did not complete the required reflection post each week, which explains why the number of reflection posts indicated in the table does not equal the total number of students enrolled in the course.

Discussion

Based on the data, the use of various discussion formats appears to be effective for asynchronous online class discussions and leads to student engagement that is similar to traditional discussion methods. Across all discussions included in the study, the highest type of student discussion post was affirmation, which may reflect the importance of building community and connections in online courses (Lohmann et al., 2018). The data also seems to indicate that the topic of the asynchronous discussion may impact the ways in which students participate in the discussion.

During Week 3, 17% of the student discussion posts included a direct connection to course content, which was higher than the other weeks. This may be due to the fact that the discussion during that week asked students to connect with course materials. The Week 5 discussion, which was a discussion of how Christian faith impacts being a teacher, had the highest percentage of discussion posts that included affirmation and personal connections. This may be due to the discussion topic as students were specifically asked to share personal connections and applications to the discussion topic.

Implications for University Faculty

While the results of this research are limited, we believe there are critical implications for online university courses. The data indicate that student engagement in course discussions may be similar, regardless of the discussion format and that discussion topic may impact the types of posts that students submit during an asynchronous discussion. Based on this data, we recommend that university faculty consider the use of discussion board formats that differ from traditional text-based discussions. However, because the impact on student learning is still unclear, it is vital that faculty monitor student engagement and learning in all asynchronous discussions and adjust the discussion expectations to meet the needs of the course learning objectives and the students enrolled in the course.

Limitations and Future Research

Several limitations exist that restrict the applicability of this study. First, this study was conducted with a small number ($n=20$) of participants. While common in the field of education, small sample sizes may result in data that is not generalizable beyond the study population (Ravid, 2020). Secondly, the participants were a convenience sample, comprised of students at the first author's university. The results of convenience samples are often not generalizable to the larger population because the sample does not adequately represent the population of interest (Andrade, 2021; Ravid, 2020). Thirdly, no data was collected to examine personal factors that may have impacted student involvement in the discussion board on any given week. The participants were nontraditional students, so other priorities may have impacted specific students' ability to engage in the discussion. Additionally, the research was conducted in January and February 2021, which was a time of high rates of COVID-19 illness (Feuer & Rattner, 2021). Student engagement during specific weeks (or for the duration of the course) may have been reduced due to COVID illnesses by the students or their family members.

The results of this investigation highlight the need for future research on asynchronous discussion formats in online university courses. Future research should include the following: (a) a replication of the study in a different course and university, (b) a replication of the study during a different semester in which COVID-19 is not impacting student learning, (c) a comparison of student engagement in asynchronous discussions for the same cohort of students in a different semester, (d) student engagement in other asynchronous discussion formats, and (e) student mastery of course content taught with various discussion formats. In addition, teacher educators should investigate the impact of asynchronous online discussions on teacher candidates' teaching practices, with a specific focus on how teacher candidates use these discussion formats in their own classrooms.

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Ramping Up 504 Professional Development for All Types of Educators: Going Beyond Section 504 Being a Special Education Responsibility

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Abstract

Section 504 has recently been gaining more traction among parents, educators, and government officials as more Individuals with Disabilities Education Act (IDEA) ineligible students become eligible for Section 504. To alleviate Section 504 being a special education responsibility and ramp up the lack of 504 professional development efforts for educators, this study investigated the impact that a free credit-based online 504 course had on the growth of educators and their students eligible for Section 504. An adapted interconnected 504 professional development model is also introduced. A concurrent mixed method design was used for this study. Paired samples t-tests indicated that participants' posttest scores were statistically higher than pretest scores in both actual 504 knowledge and perceived knowledge, confidence, and usefulness of Section 504 concepts. The results also revealed that the course positively impacted participants' instructional practices and helped to boost the learning of their students eligible for 504.

Ramping Up 504 Professional Development for All Types of Educators: Going Beyond Section 504 Being a Special Education Responsibility

Section 504 of the Rehabilitation Act of 1973 is a civil rights act that mandates schools to provide students with disabilities (SWDs) equal access to extracurricular activities and a Free and Appropriate Public Education (FAPE; U.S. Department of Education, n.d.). Section 504 applies to any federal funded entity and provides accountability for schools receiving federal funding to ensure that they are not discriminating against individuals with disabilities, affording them the same educational benefit as those without disabilities (U.S. Department of Education, n.d.). Unlike the Individual with Disabilities Education Act (IDEA), schools are not provided with federal funding to carry out the responsibilities of 504 and the American with Disabilities Act (ADA, 1990); providing an impetus for schools to view 504 and ADA as less important than carrying out the requirements set forth by IDEA (Smith et al., 2001) even with the increasing rates of students becoming 504 eligible (Zirkel & Weathers, 2016).

As more students become 504 eligible and cases about not providing these students with FAPE are brought to light, 504 has been gaining more traction among school officials, the government, and parents. The COVID-19 pandemic has recently put 504 in the spotlight as the United States Department of Education Office of Civil Rights (OCR) reached an agreement, in April of 2022, to settle a lawsuit with the Los Angeles Unified School District to provide compensatory services to SWDs; a direct result of the school district's failure to provide students with the necessary services during remote instruction as outlined in their Individualized Education Programs (IEPs)

and 504 plans (U.S. Department of Education, 2022a). In light of the four plus decades that OCR has worked to curb the discrimination of SWDs and the insurmountable world changes since the passing of the Section 504 Rehabilitation Act of 1973, OCR has recently decided to explore public input on the possibility of amending Section 504 in order to safeguard and improve the protection and rights of SWDs (U.S. Department of Education, 2022b).

Further illuminating Section 504 are the differences in eligibility requirements that exist between 504 and IDEA, as students who do not qualify under IDEA are likely to be protected by 504 (Smith, 2001); therefore, many parents are requesting services and programs for their IDEA ineligible children (Brady, 2004). Additionally, Brady (2004) indicated that educators fail to properly evaluate and identify students eligible for 504, as they are stuck on the incorrect belief that 504 evaluation and eligibility procedures rest upon the need for special education (SPED) services as outlined in IDEA.

Demystifying the Differences Between Section 504 and IDEA

All students who are IDEA eligible are eligible under 504, yet students eligible under 504 may not be eligible under IDEA (Brady, 2004). Some key differences that exist in the eligibility requirements of IDEA and 504 include: (a) Section 504 does not have specific eligibility categories and is not restrictively bound by these categories; (b) Section 504 is not age restricted like IDEA, and affords individuals rights to be protected by 504 from birth to death; (c) Section 504 is based on the definition of disability and the functional impact of a physical or mental impairment that substantially limits a major life activity; (d) Section 504 eligibility does not hinge on the need for specially designed instruction as does IDEA; and (e) Section 504 does not require parent consent to implement a plan for an eligible student (Brady et al., 2020; Smith, 2001). Section 504 and IDEA include evaluation, eligibility, and the development of appropriate plans for eligible students. However, 504 does not specifically address timelines for carrying out evaluation procedures nor who should be on the team to make evaluation, eligibility, and 504 planning decisions. Additionally, it does it include the contents or written agreements that should be included in the plan as IDEA does for IEPs (Brady et al., 2020; Wenkart, 2000), thus leaving the process vague and open for interpretation, for educators and parents alike, on proper evaluation and eligibility procedures in addition to what content constitutes an appropriate plan for students eligible for 504. The vague language in 504 regarding procedures for evaluation, eligibility, and what contents should be included in a 504 plan leaves many educators unclear about how to approach the process when collaborating with others to carry out evaluation and eligibility requirements and develop a FAPE by way of the 504 plan. The broad requirements and lack of clarity provided by 504 (Brady et al., 2020; Smith, 2001) coupled with sparse literature on effective 504 professional development (PD) for educators highlights the need for effective 504 PD activities. These PD activities must provide educators with a sound guide on how to approach evaluation and eligibility procedures and the development and implementation of 504 plans, while still adhering to 504 law. All too often, educators are not properly trained on understanding and implementing the legal requirements set forth by Section 504 (Brady, 2004).

Lack of 504 Professional Development for All Types of Educators

Although there are approximately 898,000 students nationally that have a 504 plan (U.S. Department of Education, Office for Civil Rights, 2018), the lack of federal financial assistance to provide for students eligible for 504 has led many school officials and teacher preparation programs (TPPs) in higher education to remain negligent in providing educators with adequate training on the evaluation, eligibility, and development and implementation of 504 plans (Brady, 2004). Additionally, schools perform a de minimis job at supporting and monitoring 504 due to less federal government compliance regulations associated with 504 (deBettencourt, 2002). In two-thirds of districts nationwide, SPED directors coordinated 504 compliance, showcasing how 504 has become a special education responsibility when it is not intended to be (Madaus & Shaw, 2006b; Madaus et al., 2005). To appropriately serve the diverse needs of students, school officials and TPPs are urged to comprehensively train all educators on the provisions of both Section 504 and IDEA, as they often leave their TPPs with a minimal understanding of IDEA and even less knowledge about 504 (deBettencourt, 2002).

Traditionally, only SPED teachers have been appropriately trained on how to identify SWDs (Brady, 2004) even if the oversight and management of 504 plans often fell more greatly on the shoulders of school counselors, general education teachers, and school psychologists (Madaus & Shaw, 2006a). The American School Counselor Association (ASCA) recommends that in order to implement a comprehensive counseling program at the school level, school counselors should support students eligible for 504, through both direct and indirect services (ASCA, 2019). In addition to training SPED teachers, general education teachers and other school personnel (e.g., counselors, related service providers, administrators) should also be equipped with knowing which applicable laws to refer students to when students struggle academically or behaviorally (deBettencourt, 2002; Shaw & Madaus, 2008). Furthermore, there is a critical need for general education teachers to be trained in both 504 and IDEA as inclusion rates rise where more SWDs are educated alongside their non-disabled peers in the general education setting (deBettencourt, 2002). “By not equipping educators with comprehensive pre- and in-service training in Section 504...schools are doing a considerable disservice to the full range of SWDs in today’s classrooms” (Brady, 2004, p. 319).

Developing and implementing quality 504 plans rests heavily upon the educators involved in the development and implementation processes, yet both teachers and parents reported not clearly understanding 504 and often felt frustrated with the development, implementation, and review process of 504 plans (Chiasson, 2004). Spanning beyond parents and teachers, Goodman-Scott and Boulden (2019) reported that school counselors who coordinate 504 plans expressed the following challenges with their roles in the 504 process: relationship issues with colleagues and families, time consumption, lack of knowledge in 504 (with hesitancy stemming from lack of training, isolation, and fear of litigation), and the ambiguous nature of the 504 process. Similarly, school counselors in a study conducted by Romana et al. (2009) believed that: (a) they should not be coordinators of multidisciplinary 504 teams, (b) they were ill-prepared and filled with anxiety when preparing accommodations for students eligible for 504, and (c) teachers they worked with were resistant to implementing accommodations for students eligible for 504. Education and training on 504 is key in helping school counselors fulfill their duties to serve students eligible for 504 (Goodman-Scott & Boulden, 2019).

Only 26 percent of schools in a district reported having 504 PD, yet less than a quarter of school personnel always demonstrated sufficient knowledge on adhering to 504 (Madaus & Shaw, 2006b; Madaus et al., 2005). Twenty-eight percent of participants rated their 504 training as having limited effectiveness (Maudas & Shaw, 2006a). The 504 plans and IEPs reviewed in a study conducted by Hustus et al. (2020) unveiled grave concerns about the misalignment between student deficits, goals, and evidence-based interventions documented in many of the plans. Supports that lacked empirical evidence (e.g., prompting, small group testing, extended time) were among the most common documented in IEPs and 504 plans, with only a quarter of the 183 plans reviewed documenting evidence-based interventions (Hustus et al., 2020). Too often, educators vary in their abilities to implement evidence-based interventions with fidelity, a factor that indicates a critical need for educators to be trained and supported by trusted professionals in implementing evidence-based interventions (Hustus et al., 2020). The lack of evidence-based interventions coupled with vague statements on the implementation of supports and services leave much room for misunderstanding and miscommunication among educators and related services personnel on the fidelity of how these supports should be carried out with students (Hustus et al., 2020). Hustus et al., also found that there was an overreliance on educators making modifications or reducing the expectations of SWDs, thus robbing these students of opportunities to build the necessary skills that the real world may demand of them. Online PD that encapsulates aligning the needs of SWDs with relevant goals and evidence-based interventions via 504 plans and IEPs can pave the way for improved outcomes for SWDs.

A Virtual Learning Environment Interconnected PD Model to Support Teacher Growth

Online learning in higher education is on the rise with increased enrollment for online courses becoming commonplace (Allen & Seaman, 2016; Mohr & Shelton, 2017; Simonson et al., 2014), as many studies indicate that adult learners are satisfied with learning in a Virtual Learning Environment (VLE; Cowan & Menchaca, 2014; Hung & Chou, 2015; Menchaca & Bekele, 2008). VLE satisfaction has also been correlated to student achievement in the course (Abel, 2005), making VLEs a viable means to deliver 504 PD to educators.

When facilitating PD activities (in a VLE associated with 504 content) with educators, Clarke and Hollingsworth (2002) emphasized the importance of understanding the conditions, processes, and continuous learning cycle rooted in professional growth. To understand teacher PD, it is imperative to operationalize teacher change. Six perspectives on teacher change that may not operate exclusively include training, adaptation, personal development, local reform, systemic restructuring, and learning or growth (Clarke & Hollingsworth, 2002). Clarke and Hollingsworth recommended that PD of educators align most closely with the learning or growth component of teacher change. They discussed how there has been a paradigm shift in PD, from change as an event where teachers are passive participants, to change as a complex process through active participation and reflection. Changes in beliefs and attitudes among educators will happen after teachers implement their learning in the field and experience the student outcomes that follow (Guskey, 1986). Creating cognitive conflict or challenging teachers' propositions prior to implementation can motivate change in their teaching practices (Cobb et al., 1990).

Because teacher learning or growth is not a linear process, an interconnected model grounded in the research of Guskey (1986) and Cobb et al. (1990) that embodies four domains was introduced by Clarke and Hollingsworth (2002). The four domains include: a) personal (knowledge, beliefs, attitudes), b) practice (professional experimentation), c) consequence (outcomes), and d) external (sources of information). The interconnected model for PD embodies multiple pathways to growth that are not necessarily sequential in nature, and promotes ongoing learning (Clarke & Hollingsworth, 2002). To impact growth in the realm of servicing students eligible for 504, a free credit based 504 VLE PD course was created for public school educators and service providers in Hawai'i using an adapted version of the interconnected model by Clarke and Hollingsworth; a promising way to iteratively combine educators' preexisting knowledge, attitudes, and beliefs about 504 with external sources of information from the 504 PD course in order for educators to practice different approaches through professional experimentation and positively impact learning outcomes of students eligible for 504.

Embedding the Interconnected Model with 504 PD to Meet the Needs of Rural Hawai'i Educators

A 504 PD course delivered in a VLE and grounded in the interconnected model for PD (Clarke & Hollingsworth, 2002), was developed for educators in Hawai'i by an assistant professor at a local Hawai'i university and a local Hawai'i public school administrator. The two course developers collaborated with a local district administrator in Hawai'i to sponsor the course through the Hawai'i Department of Education (HIDOE) PD system, and to ensure that the course met the needs of HIDOE and the targeted participants in a rural area on Hawai'i island.

During the time the 504 PD course was being developed there was a high concentration of students eligible for 504 in the targeted rural complex area on Hawai'i island, with nearly 300 students being provided with 504 supports (Hawai'i Department of Education, 2021). The support these 504 eligible students were receiving were ill-reflected in the academic achievement statewide testing results. Eighty-eight percent of SWDs in Hawai'i did not meet proficiency in English Language Arts, and 89% of SWDs in Hawai'i did not meet proficiency in math (State of Hawai'i, 2020). The nearly 300 students needing effective 504 support in the targeted area of Hawai'i island coupled with the dire outlook of test scores demonstrated by SWDs in Hawai'i during the 2018-2019 school year demonstrates a need for all Hawai'i educators to ramp up the services they provide to SWDs. Based on the continued under-achievement of SWDs, a HIDOE task force recommended increasing the pool of qualified teachers by designing and implementing quality PD through expanded partnerships with Institutions of Higher Education and the online HIDOE PD system (Hawai'i Department of Education, 2018).

It is particularly important to build professional learning communities (online) in rural areas where educators are often isolated, resistant to change, lacking in professional knowledge and stretched thin in their instructional roles (Burton et al., 2013) as they serve SWDs. By way of the 504 PD course offered in a VLE, participants will be provided with the opportunity to build an online network of support and site-based capacity where course ideas, insights and outcomes can be exchanged and shared during PD sessions in professional learning communities; a means to provide participants with cognitive conflict (challenging preexisting approaches in the personal domain) as they plan to utilize the external resources from the 504 PD course to apply to their

practice and reflect on the outcomes of their students eligible for 504, iteratively taking them through the four domains of the interconnected model for PD (Clarke & Hollingsworth, 2002). See Figure 1 for the adapted interconnected model of 504 PD for educators.

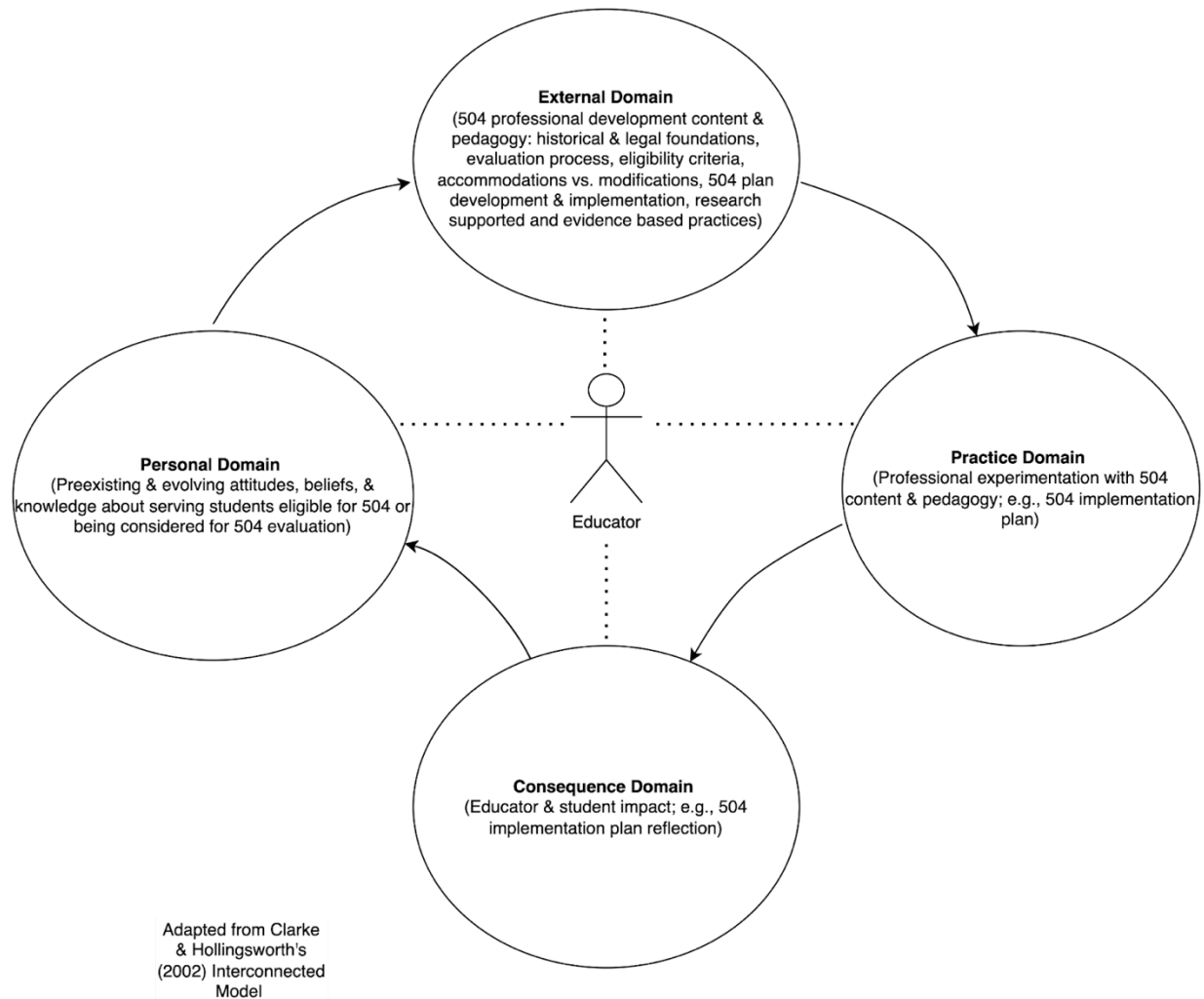


Figure 1: *Interconnected Model of 504 PD for Educators*

Purpose of Study and Research Questions

Section 504 PD in a VLE for all types of educators that follows an interconnected model of PD for educator growth (Clarke & Hollingsworth, 2002) is a viable solution to filling in the gaps of research that showcased the misalignment of student deficits to goals and evidence-based interventions in 504 plans (Hustus et al. 2020), the ineffectiveness of 504 PD opportunities (Maudas & Shaw, 2006a), and educators' feelings of ill-preparedness in serving students eligible for Section 504 (Chiasson, 2004; deBettencourt, 2002; Romano et al., 2009). To curb the disservice of not providing quality PD for educators who serve a range of SWDs, it is imperative to provide ongoing 504 PD in a VLE to educators of all kinds, as many types of educators support SWDs with inclusion rates on the rise (Brady, 2004). Without impacting positive

educator change through an interconnected model of Section 504 PD as adapted from Clarke and Hollingsworth (2002), arguably one of the most vulnerable populations of students (SWDs) will likely suffer the unintended consequences of reaping instruction from ill-prepared educators, leaving a stagnant or wide academic gap between SWDs and their non-disabled peers.

Ongoing PD in a VLE grounded in 504 law, research supported strategies, evidence based practices, data-based decision making, and an interconnected PD model for educator growth adapted from Clarke and Hollingsworth (2002) can help to demystify the evaluation, eligibility, and development and implementation of 504 plans for educators (Brady, 2004); while building a professional online learning community in a rural area on Hawai'i island where educators may be isolated, resistant to change, and lacking in professional knowledge (Burton et al., 2013) as they serve SWDs.

The purpose of this concurrent mixed method study is to analyze the impact that a free credit-based Section 504 PD course has on the growth of educators and the students eligible for 504 that they serve. This study was designed to answer the following questions:

1. What impact does a free credit-based 504 PD course offered in a VLE have on the perceived knowledge, confidence, and usefulness of educators in the following areas: (a) the historical and legal foundations (e.g., civil rights law) that make up 504, (b) 504 eligibility criteria, (c) the process of evaluating a student for 504 when there is suspicion of a disability, (d) developing a 504 plan, (e) implementing a 504 plan, (f) the difference between accommodations and modifications, and (g) evidence-based practices?
2. What impact did the instruction in a free credit-based 504 course offered in a VLE have on the instructional practices and overall learning of course participants and their 504 eligible students?
3. What impact does a free credit-based PD course offered in a VLE have on the actual knowledge of educators in the areas of: (a) the historical and legal foundations (e.g., civil rights law) that make up 504, (b) 504 eligibility criteria, (c) the process of evaluating a student for 504 when there is suspicion of a disability, (d) developing a 504 plan, (e) implementing a 504 plan, (f) the difference between accommodations and modifications, and (g) evidence-based practices?
4. How satisfied were participants with their overall learning in the free credit-based 504 PD course offered in a VLE?
- 5.

Method

Participants

Participants included general and special education teachers, counselors, and a student service coordinator.

Participant Characteristics

Although the course started with 40 participants enrolled, only nine remained in the course from start to finish affording them the opportunity to earn three PD credits through the HIDOE PD system. Of the nine participants who completed the course, five were general education elementary teachers, and other roles included a SPED teacher, middle school counselor, elementary school counselor, and high school student services coordinator. Participants ranged from 30 to 47 years of age, with two of the nine participants preferring not to answer. Eight of the participants identified as female and one of the participants identified as a male. Seven participants were of Asian ethnicity, one person was Caucasian, and one identified as both Asian and Hawaiian.

Sampling Procedures

Purposeful sampling was used to select participants for the 504 PD course. Various types of educators serving SWDs (either directly or indirectly) were selected for this study in order to break free of traditionally training solely SPED teachers on identifying and working with SWDs (Brady, 2004), and to provide ongoing 504 PD in a VLE to include other role groups (e.g., counselors, general education teachers, other service providers) who often have oversight and management of 504 plans (Madaus & Shaw, 2006a). Participants' principals had to approve their enrollment in the course. Additionally, participants had to have access to a principal approved student who was eligible for 504 in order to implement a 504 plan. Once participants' principals approved access to a student eligible for 504, participants were required to obtain consent from the student's parent or guardian to review their educational records and implement the student's 504 plan.

Principals and parents or guardians could revoke their consent at any time without penalties. Participants enrolled in the course could voluntarily drop out at any point during the 504 PD course with the understanding that if they dropped out, they would not earn the PD credits. Upon fulfilling the 504 PD course requirements, participants would earn three PD credits that they could use towards teacher reclassification to earn a higher salary in HIDOE. There were no required monetary costs for participants to take the course and fulfill the necessary activities to earn the three PD credits. All procedures were approved through the Institutional Review Board.

Setting

In response to the research on ineffective 504 PD opportunities for in-service educators (Maudas & Shaw, 2006a), and educators' feelings of being underprepared to serve students eligible for Section 504 (Chiasson, 2004; deBettencourt, 2002; Romano et al., 2009), in-service public educators in a rural area of Hawai'i island were given the opportunity to sign up for a 504 PD course in a VLE free of charge and earn three PD credits through the HIDOE PD system. Participants could opt to apply the PD credits earned towards earning a higher salary in HIDOE, a way to incentivize participating in the 504 PD course. The 504 PD course was open to 40 public school educators wanting to learn more about 504 and how it applies to students eligible for 504. Educators invited to enroll in the 504 PD course included general educators, special educators, district support personnel, student service coordinators, and counselors. A course flier was sent out via email to building and district level administrators in the targeted rural area of Hawai'i island to distribute to teachers, counselors, student support coordinators, and district support personnel. Interested participants signed up via the HIDOE PD system. Initially, there

was a wait list generated by the two course instructors as there were more than 40 interested participants. The course started out with 40 participants and as attrition occurred throughout the sign-up process, the course instructors were left with nine active participants.

The duration of the course was three months, from March to June of 2021. The course was offered online in a VLE due to the research that showcases the high satisfaction levels that adult learners have with learning in a VLE (Abel, 2005; Cowan & Menchaca, 2014; Hung & Chou, 2015; Menchaca & Bekele, 2008) and how this VLE satisfaction has been correlated to student achievement in the course (Abel, 2005). Participants engaged in a total of 24 hours of PD through both synchronous and asynchronous means, with 10.5 total synchronous Zoom sessions with peers and two course instructors. Each synchronous Zoom session was scheduled for 90 minutes from 5:00p.m. to 6:30p.m. The course materials and resources were housed in a google classroom site where participants could engage in their weekly asynchronous self-directed activities.

Instructors

The course was taught by two instructors. One instructor worked at a local teacher preparation program and had a doctorate degree in SPED, and the other instructor was a HIDOE level state administrator who had a master's degree in SPED. The course was developed in collaboration with the instructors and HIDOE district personnel serving the targeted rural area of Hawai'i island. Both instructors taught students with mild to moderate and severe disabilities for five or more years in the Hawai'i public school system where they also served as school and district level administrators.

Course Objectives, Learning Activities, and Curriculum Map

The 504 PD course outlined the following five course objectives: (1) define what 504 is and understand the historical and legal foundations (e.g., civil rights law) that make up 504, (2) demonstrate understanding of 504 eligibility criteria and the process of evaluating a student for 504 when there is suspicion of a disability, (3) display knowledge of how to develop a 504 plan, (4) show competencies in being able to read and understand the components of a 504 plan, and (5) showcase how to effectively implement a 504 plan using research-supported strategies or evidence-based practices in determining the degree of effectiveness that the accommodations have on the academic achievement of SWDs.

To align with the objectives, the google classroom site was divided into the following five modules: overview of 504 laws and regulations, 504 evaluation process and eligibility criteria, developing a 504 plan, implementing 504 plans, and research supported strategies and evidence-based practices. An additional module was added during the implementation of the course for extra resources that course instructors and participants could add to and share among their peers. Activities and materials spanned from interactive PowerPoints, course readings, e-learning games (e.g., Kahootz, Quiziz), videos, structured discussions, and live online teaming to collaborate on 504 case studies. The activities and materials in each of the modules were grounded in civil rights laws (e.g., Section 504), IDEA, case law, historical perspectives on working with SWDs, accommodations, modifications, research-supported strategies and evidence-based interventions for SWDs in academics (e.g., progress monitoring, mnemonic devices, schema instruction, metacognitive strategies, self-regulated strategy development,

collaborative strategic reading, peer assisted learning, repeated reading, explicit instruction, Frayer Model, and wait time) and behaviors (e.g., self-monitoring, high-probability requests, behavior-specific praise, behavior contracts, opportunities to respond, and pre-correction).

To carry out the course objectives, participants had to develop an electronic portfolio throughout the duration of the course. The electronic portfolio had to encompass the four domains (personal, external, practice, consequence) of the interconnected PD model adapted from Clarke and Hollingsworth (2002), showcasing both their professional growth and reflecting on the impact their learning has on the growth of their students eligible for 504. Included in the electronic portfolio were their course evaluation survey, the results of their pre and post 504 perceptual (knowledge, confidence, and usefulness) survey data, the results of their pre- and post-actual 504 knowledge assessment with an accompanying culminating reflection that critically analyzed their overall learning from the course and how the course experiences impacted change in teacher instructional practice and improvement in student learning. Additionally, participants had to reflect on their 504 implementation plans discussing the impact it had on their learning as well as their students who were 504 eligible. See Table 1 for the 504 PD curriculum map.

Table 1
504 PD Curriculum Map

Week	Topics	Synchronous Hours	Asynchronous Hours	Assessment Products
1	- Course overview and introduction - Defining 504	1.5	1	- Pre-test: Actual 504 knowledge - Pre-survey: Perceived knowledge, confidence, usefulness of 504 concepts
2	- Educators' responsibilities in serving students eligible for Section 504 - Evidence-based practices defined - Resources for finding and selecting evidence-based practices		2	Essay & pledge: Defining 504 and pledge for educator role in servicing students eligible for 504
3	- Historical and legal foundations of Section 504 504 Rehabilitation Act of 1973	1.5		

	○ American with Disabilities Act			
4	• 504 case law		2	• T-Chart: Compare and contrast landmark 504 case law with implications for serving students eligible for 504 in modern day
5	• 504 vs. Individuals with Disabilities Education Act • 504 Evaluation Process Overview	1.5		
6	• Putting the 504 Evaluation Process into Action		2	• 504 evaluation process: flow chart, brochure, infographic or recorded presentation explaining the steps of the 504 evaluation process
7	• 504 Eligibility Criteria	1.5	1	• 504 eligibility case studies: applying eligibility criteria to determine 504 eligibility
8	• 504 plan development & implementation • Accommodations vs. modifications	1.5	1	• Develop 504 plan using mock student profile • 504 implementation plan
9	• Research supported and evidence-based practices for serving students with disabilities	1.5		
10			1.5	

	• Data-based individualization • Implementation fidelity		
11	• Progress monitoring & data collection	1.5	
12	• Data analysis		• Post-test: Actual 504 Knowledge • Post-survey: Perceived knowledge, confidence, usefulness of 504 concepts • Culminating course reflection • 504 implementation plan reflection • Course evaluation

3

Outcome Measures

Data were collected using a pre- and post-perceptual data (knowledge, confidence, and usefulness of course content) survey, a pre- and post-actual knowledge assessment, a course evaluation survey, culminating course reflections, and 504 implementation plan reflections. The pre- and post-perceptual data survey, pre- and post-actual knowledge assessment, and course evaluation survey were all given to course participants online using google forms. The culminating course reflections and 504 implementation plan reflections were typed out by participants and submitted to instructors via the google classroom platform. Perceptual data survey questions, actual knowledge assessment questions, culminating reflection prompt, 504 implementation plan reflection prompts, and course evaluation questions were drawn from course objectives and materials; grounded in publicly available research on the historical and legal foundations (e.g., civil rights law) of 504, 504 case law, and evidence-based practices and research supported strategies for working with SWDs.

Pre- and Post-Perceived Knowledge, Confidence, Usefulness Survey

The perceptual data survey was made up of 21 questions that gauged participants' perceptions on their knowledge, confidence, and usefulness of 504 concepts. On a four-point Likert scale, participants were asked to rate the 504 concepts in terms of how knowledgeable they thought they were, how confident they believed they were in their ability to use or implement each concept, and lastly how useful each concept was for them in their line of work. Questions in the perceptual data survey were developed to ensure alignment to course objectives and included the following topics: the historical and legal foundations of Section 504, 504 evaluation process to follow when a student is suspected of having a disability, 504 eligibility criteria, 504 plan development and implementation, accommodations and modifications, and evidence-based practices for working with SWDs. Participants were asked to take the pre-perceptual data survey

during their first day of instruction online via Zoom. Upon conclusion of the course, participants took the post perceptual data survey that mirrored the pre perceptual data survey to assess any changes in their perceptual knowledge, confidence, and usefulness of 504 concepts covered in the course.

Pre- and Post-Actual Knowledge Assessment

The knowledge assessment consisted of seven open-ended questions designed to assess participants' current knowledge aligned to course objectives. Questions covered topics including what they knew about Section 504 historical and legal foundations, the 504 evaluation process, 504 eligibility criteria, 504 plan development, 504 plan implementation, distinguishing between accommodations and modifications, and evidence-based practices for working with SWDs. On the first day of instruction during an online synchronous Zoom session, participants took the knowledge assessment pre-test to assess their ability levels prior to learning the course content. At the end of the course, participants took the knowledge assessment posttest that consisted of the same questions that were on the pretest to measure knowledge gained from course content and activities.

504 Implementation Plan Reflections

Participants obtained consent from their school principal and a parent of a student who was eligible for 504 to create and carry out a 504 implementation plan for the purposes of this course. In the 504 implementation plan, participants were tasked with identifying goals that they were to target with the student, evidence-based practices and/or research supported strategies that were going to be used to help the student meet those goals, accommodations to be implemented, a measurement tool to assess the effectiveness of the strategies and accommodations implemented, the location or setting the plan was going to be implemented in, and the frequency of implementation. Upon the conclusion of implementing these plans, participants had to reflect on their 504 implementation plan process including how the plan impacted student learning as well as their own learning.

Culminating Reflection

Participants analyzed their learning experience throughout the course by reflecting on their overall learning of the course objectives using pre and post perceptual (knowledge, confidence, usefulness) survey data, pre- and post-test actual knowledge assessment data, 504 implementation plan reflections, and feedback from instructors. Participants used these artifacts to synthesize their learning upon conclusion of the course. Participants were prompted to critically analyze how the course impacted change in their instructional practices as educators serving students eligible for 504 and how that impact might improve student learning. Additionally, participants were expected to write about how the course content and activities they engaged in throughout the course helped them to serve students eligible for 504, thus showcasing their perceived knowledge gained.

Course Evaluation Surveys

To analyze the social validity of the PD to their practice of serving students eligible for 504, participants filled out a course evaluation survey after completing the course. The survey consisted of 16 questions, nine five-point (one being the least and five being the most) Likert scale questions and seven open-ended questions. The Likert scale questions asked participants to

rate their satisfaction with the course, confidence in developing and implementing a 504 plan, usefulness of course materials, productiveness of synchronous Zoom sessions, usefulness of the course structure in regards to being able to collaborate with peers, usefulness of google classroom platform, likeliness of them continuing to apply the 504 concepts gleaned from the course, and usefulness of instructor feedback. The seven open-ended questions addressed the impact of receiving and giving peer feedback on their learning, useful components of the course, knowledge gained from the course in terms of developing and implementing 504 plans, opportunities for networking with peers in the same district, and availability of 504 resources for them to access within their schools and or district.

Study Design and Analysis

A concurrent mixed method design was used for this study “...for the broad purpose of breadth and depth of understanding and corroboration” (Johnson et al., 2007, p. 123) of the phenomena being studied. A concurrent mixed method design boded well in casting a wide net deep into the phenomena under study to seek answers to the questions posed by the researchers, as Rossman and Wilson (1985) purported it to be a method that provides for richer data. Qualitative and quantitative data were collected simultaneously and concurrently triangulated, a strategy that serves as a means for researchers to use both qualitative and quantitative methods to confirm and corroborate the findings and potentially expound a powerful explanation of the data (Creswell, 2007; Rossman & Wilson, 1985).

Quantitative data was represented by pre- and post-perceived knowledge, confidence, and usefulness surveys and pre and posttest actual knowledge assessments; data that was analyzed using paired-samples t-tests to determine whether there was significant growth in participants’ perceptual knowledge, confidence, and usefulness, and in the actual knowledge of participants from pre-test (before starting the course) to post-test (after course completion). Descriptive statistics were also used to analyze the pre- and post-actual knowledge tests, and the pre- and post-perceived knowledge, confidence, and usefulness surveys to drill down further to the specific 504 concepts that participants had actual knowledge in and perceived to be knowledgeable in, confident in, and found useful. The quantitative data derived from participants’ responses to the Likert scale questions in the course evaluation survey were also analyzed using descriptive statistics.

The qualitative data was representative of the participants' responses to the open-ended questions in the course evaluation survey, their 504 implementation plan reflections, and overall culminating course reflections. Inductive coding was used to examine the qualitative data, a process that involves extracting codes directly from the data or words and phrases that the participants use rather than using terminology from the researcher; a means to preserve how the participants’ experienced the phenomena under study (Skjott Linneberg & Korsgaard, 2019). The researchers used a first and second cycle of inductive coding as described by Skjott Linneberg and Korsgaard (2019). During the first cycle of coding, researchers read through the qualitative data several times, making notes using the comment feature in a word processing program where segments of the data are described and summarized with a label. These descriptive codes from the first cycle of coding were then analyzed and as Skjott Linneberg and Korsgaard depicted “clustered together according to similarity and regularity, patterns are born, and you can begin to analyze the connections between them” (p. 266). Categories that begin to

answer the research questions begin to emerge during this second phase of coding. The categories were then visually displayed in a horizontal tree structure (using a word processing program) that demonstrates how the initial codes were developed into categories and concepts that begin to answer the research questions (Skjott Linneberg & Korsgaard, 2019). Through this visual display, several specific themes were identified that occurred from the most frequent to the least frequent.

Reliability and Validity of Qualitative Data

Creswell's (2007) standard for engaging in two out of the eight qualitative standards of validation was exceeded as the researchers engaged in three out of the eight validation standards including prolonged engagement, triangulation, and peer debriefing. The first author engaged in prolonged engagement with the participants over the course of three months to learn their ways and develop rapport, a way for the researcher and participants to co-construct the phenomena under study and prevent data distortion (Creswell, 2007). To validate the findings of the qualitative data, a variety of sources were triangulated including the participants' responses to the open-ended questions on the course evaluation survey, their 504 implementation plan reflections, and overall course reflections. Finally, peer debriefing occurred, where three peers knowledgeable about qualitative research methods analyzed and discussed the initial interpretations of the qualitative data where intercoder agreement was reached, described by Creswell (2007) as a qualitative reliability check.

An Argument Based Approach to Survey and Pre and Posttest Validation

The argument-based approach (Harrison & Azama, 2020) evidence-based content review, and expert review (Dilman et al., 2014; Harrison & Azama, 2020) are used to clarify the validation of the blueprints of our survey and pre and posttest instruments used in this study. When examining the standards for educational and psychological testing validity is thought to be "the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests" (American Educational Research Association et al., 2014, p. 11). When looking at test and test scores in this definition of validity, Harrison and Azama (2020) viewed the term test as being equivalent to survey instrument and test scores aligning to the data derived from the survey instrument. Furthermore, Harrison and Azama echoed the validity sentiments of many other measurement scholars as they explained the concept of validity in surveys (a) validity is not a property of the instrument but of the inferences drawn from the instrument (i.e., the interpretations), (b) there are no separate types of validity but rather separate types of evidence, (c) validity is a question of strength rather than a yes-or-no property, and (d) validation can be an ongoing endeavor as scientific scholarship reveals new understandings (p. 88)

The argument-based approach to validation, which aligns to the standards for educational and psychological testing, is a two-step process that involves a preparation stage where the intended uses and interpretations of the instrument are clarified and the evaluation stage where the results gleaned from the instrument are "appraised for coherence and completeness" (Harrison & Azama, 2020, p. 88). The types of evidence that can be used to help validate the survey and pre and posttest instruments in this study are evidence based content and subject matter expert reviews (Harrison & Azama, 2020). The evidence used to validate the content are gleaned from the 504 PD course objectives that are grounded in the literature on effective PD for educators and 504 content that educators lack and need to know to provide students eligible for 504 with a FAPE. Furthermore,

two subject matter experts in Section 504 who are familiar with the target population of educators and students with disabilities served reviewed the content of the survey and pre and posttest instruments. As proposed by Harrison and Azama (2020) the expert review focused on the importance and appropriateness of the components on proposed interpretations, the accuracy of the components, and item alignment with the components of the blueprint (e.g., 504 course objectives, literature on effective PD for educators, literature on 504 content that educators lack and need to know; Harrison & Azama, 2020). The experts reviewed the instruments and provided feedback on these components. Both expert reviewers had over 20 years of experience working with the target population of educators and extensive experience on both 504 law and content and working with students with disabilities. Rather than solely validating the survey and pre and posttest instruments, we also validate the findings derived from the survey and pre and posttest instruments, as we agree with Harrison and Azama and other measurement scholars that validation is an ongoing process as new understandings are explored.

Results

Impact of 504 PD Course on Perceived Knowledge, Confidence, and Usefulness of Educators

Across the board, the 504 PD course had a statistically significant positive effect on participants' perceived knowledge, confidence, and usefulness of Section 504 concepts (historical and legal foundations, 504 evaluation process, 504 eligibility criteria, 504 plan development, 504 plan implementation, accommodations and modifications, evidence-based practices) covered in the course. To compare the participants' perceived knowledge, confidence, and usefulness of Section 504 concepts before the course and after the course, paired samples t-tests were conducted. There was a significant difference in the perceived knowledge scores from presurvey ($M = 7.4$, $SD = 2.6$) to postsurvey ($M = 15.8$, $SD = 2.8$); $t(8) = -7.1$, $p = .001$. There was also a significant difference in their perceived confidence scores from presurvey ($M = 6.7$, $SD = 1.9$) to postsurvey ($M = 15.5$, $SD = 2.8$); $t(8) = -9.3$, $p = .001$. Another significant difference is shown in participants' perceived usefulness scores from presurvey ($M = 8.7$, $SD = 4.1$) to postsurvey ($M = 17$, $SD = 3$); $t(8) = -6.2$, $p = .001$.

At presurvey, prior to the course, participants perceived their 504 knowledge to be lowest in the areas of evidence-based practices for SWDs ($M = 0.6$, $SD = 0.7$) and historical and legal foundations ($M = 0.7$, $SD = 0.83$). Their responses on the pre survey indicated that they perceived to have the most knowledge in 504 plan implementation ($M = 1.4$, $SD = 0.5$), and accommodations and modifications ($M = 1.4$, $SD = 0.5$). Upon completion of the course, participants increased their perceptual knowledge the most in evidence-based practices from presurvey ($M = 0.6$, $SD = 0.7$) to postsurvey ($M = 2.1$, $SD = 0.6$), historical and legal foundations from presurvey ($M = 0.7$, $SD = 0.83$) to postsurvey ($M = 2.1$, $SD = 0.3$), and the 504 evaluation process from presurvey ($M = 1$, $SD = 0.7$) to postsurvey ($M = 2.4$, $SD = 0.5$).

According to pre survey results, similar to perceived knowledge, participants were least confident in evidence-based practices for SWDs ($M = 0.6$, $SD = 0.7$) and the historical and legal foundations of Section 504 ($M = 0.7$, $SD = 0.6$). Presurvey results showed that participants were most confident in accommodations and modifications ($M = 1.3$, $SD = 0.5$) and 504 plan implementation ($M = 1.2$, $SD = 0.4$). The highest increases in perceived confidence levels were in

the areas of 504 evaluation process from presurvey ($M=0.8$, $SD = 0.6$) to postsurvey ($M=2.4$, $SD = 0.5$), and 504 plan development from presurvey ($M=0.8$, $SD = 0.3$) to postsurvey ($M=2.2$, $SD = 0.4$).

Presurvey results showed that the participants found the least useful 504 concepts to be historical and legal foundations ($M=1$, $SD = 0.8$) and the 504 evaluation process ($M=1$, $SD = 0.7$). Presurvey results indicated that participants found the most useful 504 concepts to be 504 plan implementation ($M=1.5$, $SD = 0.7$) and accommodations and modifications ($M=1.5$, $SD = 0.5$). Although they perceived the 504 evaluation process as being one of the least useful 504 concepts prior to the start of the course, it was an area that received the biggest boost in perceived usefulness from presurvey ($M=1$, $SD = 0.7$) to postsurvey ($M=2.5$, $SD = 0.5$). See Table 2 for the results of participants' pre and post survey perceptual knowledge, confidence, and usefulness of each overarching 504 concept covered in the course.

Table 2

Disaggregated Pre and Postsurvey Results of Participants' 504 Perceptual Knowledge, Confidence, and Usefulness

504 Concepts	Pre and Post Survey Perceived Knowledge	Pre and Post Survey Perceived Confidence	Pre and Post Survey Perceived Usefulness
Historical and Legal Foundations	Presurvey ($M=0.7$, $SD = 0.83$) to Postsurvey ($M=2.1$, $SD = 0.3$)	Presurvey ($M=0.7$, $SD = 0.6$) to Postsurvey ($M=2$, $SD = 0.5$)	Presurvey ($M=1$, $SD = 0.8$) to Postsurvey ($M=2.2$, $SD = 0.4$)
504 Evaluation Process	Presurvey ($M=1$, $SD = 0.7$) to Postsurvey ($M=2.4$, $SD = 0.5$)	Presurvey ($M=0.8$, $SD = 0.6$) to Postsurvey ($M=2.4$, $SD = 0.5$)	Presurvey ($M=1$, $SD = 0.7$) to Postsurvey ($M=2.5$, $SD = 0.5$)
504 Eligibility Criteria	Presurvey ($M=1.1$, $SD = 0.6$) to Postsurvey ($M=2.3$, $SD = 0.5$)	Presurvey ($M=1$, $SD = 0.5$) to Postsurvey ($M=2.3$, $SD = 0.5$)	Presurvey ($M=1.2$, $SD = 0.6$) to Postsurvey ($M=2.4$, $SD = 0.5$)
504 Plan Development	Presurvey ($M=1$, $SD = 0.5$) to Postsurvey ($M=2.2$, $SD = 0.4$)	Presurvey ($M=0.8$, $SD = 0.3$) to Postsurvey ($M=2.2$, $SD = 0.4$)	Presurvey ($M=1.2$, $SD = 0.83$) to Postsurvey ($M=2.4$, $SD = 0.5$)
504 Plan Implementation	Presurvey ($M=1.4$, $SD = 0.5$) to Postsurvey ($M=2.1$, $SD = 0.6$)	Presurvey ($M=1.2$, $SD = 0.4$) to Postsurvey ($M=2.1$, $SD = 0.6$)	Presurvey ($M=1.5$, $SD = 0.7$) to Postsurvey ($M=2.3$, $SD = 0.5$)

Accommodations and Modifications	Presurvey ($M=1.4$, $SD=0.5$) to Postsurvey ($M=2.5$, $SD=0.5$)	Presurvey ($M=1.3$, $SD=0.5$) to Postsurvey ($M=2.5$, $SD=0.5$)	Presurvey ($M=1.5$, $SD=0.5$) to Postsurvey ($M=2.5$, $SD=0.5$)
Evidence-Based Practices	Presurvey ($M=0.6$, $SD=0.7$) to Postsurvey ($M=2.1$, $SD=0.6$)	Presurvey ($M=0.6$, $SD=0.7$) to Postsurvey ($M=1.8$, $SD=0.78$)	Presurvey ($M=1.2$, $SD=0.97$) to Postsurvey ($M=2.4$, $SD=0.5$)

Impact 504 PD Course Had on Course Participants' Overall Learning, Instructional Practices, and Their Students Eligible for 504

Participants were prompted to write a culminating course reflection that critically analyzed their overall learning from the course and how the course experiences impacted change in teacher instructional practice and student learning. Additionally, participants had to reflect on their learning and their students' learning as a result of the 504 implementation plan assignment. The following themes identified about participants' overall learning from the course and how the course impacted change in teacher instructional practice and student learning include: perceived new knowledge and skills ($n=9$), positive impact of 504 implementation plans on students ($n=9$), needing and wanting more time to implement 504 plans with students ($n=8$), attitude toward 504 plan implementation ($n=7$), and reflections for pedagogical improvement and plans to apply course content ($n=6$).

The highest reported area of new knowledge and skills was the historical significance and legal foundations of Section 504 ($n=9$). All nine participants reflected that they had greater familiarity with the historical significance and landmark cases that led to the development of Section 504 and the societal context in which it was written. For example, one participant wrote, "The landmark cases put everything into perspective for me...in seeing the importance of ensuring an equal education for SWDs." However, only one participant cited a specific landmark case in their reflection, stating, "In reviewing historical cases [such as] the Americans with Disabilities Act of 1990 and [its] 2010 revisions, I have become familiar with...what services can be provided [under Section 504]." Another participant reflected that the ability to identify landmark cases was an "area of growth." The second highest reported area of growth was increased knowledge and skill in understanding the components of a 504 plan and developing a 504 plan ($n=6$). One participant even listed the sequential steps in the 504 plan development process. The third highest growth area reported in knowledge and skills included understanding the 504 eligibility requirements and criteria ($n=4$). Other fewer mentioned areas of perceived new knowledge and skills included the difference between 504 and SPED eligibility ($n=3$), collecting data and tracking students' progress ($n=2$), and the importance of collaborating with colleagues and involving all stakeholders in developing 504 plans ($n=1$). For example, one student stated, "I ha[d] never formally taken data for [504] interventions...[I learned] how to collect student data, create goal lines, and analyze the data." Nearly all participants discussed how these new skills contributed to their increased confidence in their abilities to effectively implement 504 plans.

All nine participants reflected on how their 504 implementation plans positively impacted student learning. One participant commented that “The student shows some positive outcome, increasing the percentage of work completed,” while another participant wrote that “While the student did not meet her overall goal of completing all assignments with at least 80% completion rate... there was still an increase [by 20%] in completion rate from baseline to implementation data.” Two participants wrote that the use of Self-Regulated Strategy Development (SRSD) helped their students boost their test scores, with one participant sharing that “In tests 1-4 [student] used fewer of his SRSD strategies which resulted in lower test scores...In tests 5-7 [student] scores increase greatly as we see they used more if not all of the strategies.” One participant shared how the 504 implementation plan helped their students deal with anxiety, writing that “The results of the students self-monitoring show that overall, this student reports having overall low anxiety during distance learning.” Another participant shared that the 504 implementation plan process helped her student to use self-monitoring as a tool to require less verbal prompting and become more independent.

Although all participants shared that the 504 plan implementation process positively impacted their 504 eligible students, eight of them commented on needing and wanting more time to implement their students’ 504 plans. One participant shared that they wanted more time to track student data as they implemented the 504 plan, and another participant wrote, “With taking this course so late in the year, it was difficult to be able to implement and make any changes if needed...” Another participant shared “if we had more time to implement and have direct counsel with the student, then he might be more successful.”

Another theme that emerged about the 504 implementation plan were participants’ attitudes toward implementation ($n = 7$). Seven of the participants discussed how they felt more confident in their capacity to serve SWDs by implementing the 504 plans. One participant shared, “I am looking forward to applying the skills I gained in this course with my future students.” Another participant wrote, “I am much more confident in my knowledge of 504 and will continue [implementing what] I’ve learned in my teaching.” Another participant shared how their 504 implementation reflection after completing the course helped her to “make meaningful adjustments” for the benefit of her students.

Six participants explained how the overall course content led them to reflect on their ideas for pedagogical improvement and how they could apply what they learned in the future. One participant shared, “Now that I understand 504 better, my next steps will be to dive deeper into the different types of evidence-based practices to increase [the] strategies in my toolbox [to provide] appropriate accommodations.” Additionally, two of the participants reflected that the course helped them consider how they could improve their students’ learning. With the exception of not having enough time to implement their students’ 504 plans, overall, participants’ culminating reflections and 504 implementation plan reflections indicated that they were satisfied with their learning and their students’ learning; therefore, they felt they benefited from having completed the course.

Impact of 504 PD course On the Actual 504 Knowledge of Educators

The 504 PD course had a positive impact on the actual 504 knowledge of participants overall. A paired samples t-test was conducted to compare participants’ actual 504 knowledge at pretest

and posttest. There was a significant difference in the scores from pretest ($M = 4.5$, $SD = 4$) to posttest ($M = 18.2$, $SD = 2.6$); $t(8) = -8.4$, $p = .001$. According to actual knowledge pretest results, prior to instruction, the participants struggled most with evidence-based practices for SWDs ($M = 0.3$, $SD = 0.7$) and exhibited the most prior knowledge in accommodations and modifications ($M = 0.8$, $SD = 0.9$). After instruction, participants gained the most knowledge in evidence-based practices from pretest ($M = 0.3$, $SD = 0.7$) to posttest ($M = 2.5$, $SD = 0.5$), and 504 plan implementation from pretest ($M = 0.6$, $SD = 0.5$) to posttest ($M = 2.7$, $SD = 0.4$). See Table 3 for the results of participants' pre and post actual knowledge tests of each overarching 504 concept covered in the course.

Table 3

Disaggregated Pre and Posttest Results of Participants' 504 Actual Knowledge

504 Concepts	Pretest Actual Knowledge	Posttest Actual Knowledge
Historical and Legal Foundations	$M = 0.6$, $SD = 0.7$	$M = 2.2$, $SD = 0.6$
504 Evaluation Process	$M = 0.6$, $SD = 0.7$	$M = 2.4$, $SD = 0.5$
504 Eligibility Criteria	$M = 0.6$, $SD = 0.8$	$M = 2.6$, $SD = 0.7$
504 Plan Development	$M = 0.6$, $SD = 0.86$	$M = 2.5$, $SD = 0.5$
504 Plan Implementation	$M = 0.6$, $SD = 0.5$	$M = 2.7$, $SD = 0.4$
Accommodations and Modifications	$M = 0.8$, $SD = 0.9$	$M = 2.8$, $SD = 0.3$
Evidence-Based Practices	$M = 0.3$, $SD = 0.7$	$M = 2.5$, $SD = 0.5$

Social Validity

Overall, on a five-point Likert scale (one being the least and five being the most) participants reported being highly satisfied with the 504 PD course ($M = 4.4$, $SD = 0.73$). The participants found the course materials ($M = 4.4$, $SD = 0.73$), Zoom sessions ($M = 4.6$, $SD = 0.53$), google classroom platform, ($M = 4.2$, $SD = 0.83$), instructor feedback, ($M = 4.8$, $SD = 0.44$), and online peer collaboration ($M = 4.4$, $SD = 0.53$) to be highly useful. When asked about confidence in developing and implementing a 504 plan, participants were slightly more confident in developing a 504 plan ($M = 4.3$, $SD = 0.71$) than implementing one ($M = 4.2$, $SD = 0.67$). Additionally, they rated their likelihood of applying 504 strategies and skills gleaned from the course high ($M = 4.6$, $SD = 0.73$). See Table 4 for a breakdown of the course evaluation survey participant response scores.

Table 4
Course Evaluation Survey Participant Response Scores

Item Description	Mean	Standard Deviation	Minimum	Mode
Satisfaction with the course	4.4	0.73	3	5
Confidence in developing a 504 plan	4.3	0.71	3	5
Confidence in implementing a 504 plan	4.2	0.67	3	4
Usefulness of course materials	4.4	0.73	3	5
Usefulness of synchronous Zoom sessions	4.6	0.53	4	5
Usefulness of Zoom sessions regarding peer collaboration	4.4	0.53	4	4
Usefulness of Google Classroom platform	4.2	0.83	3	5
Likelihood of applying 504 skills/strategies learned in the course	4.6	0.73	3	5
Usefulness of instructor's feedback	4.8	0.44	4	5

Upon analyzing the qualitative data from the open-ended questions in the course evaluation survey, being able to develop and implement a 504 plan was one of the most useful parts of this course for participants. More specifically, most participants said that they gained a better understanding of how to develop ($n = 6$) and implement ($n = 4$) 504 plans. The course also contributed to participant knowledge in developing and implementing 504 plans by learning about accommodations ($n = 3$) and helping them understand evidence-based practices ($n = 2$). One participant commented:

“This course helped me to better understand the components of a 504 plan, the evaluation process and my role in the process, and the things to pay attention to when implementing a 504 plan such as the difference between accommodations and modifications, the importance of implementing (with fidelity) and monitoring evidence-based practices.”

Participants elaborated that another useful component of the course was learning the background and history of 504 law ($n = 4$), the evaluation process ($n = 3$), differentiating between 504 plans

and IEPs ($n = 2$), overall knowledge of 504 ($n = 2$), and the role of team members in the 504 evaluation and plan development process ($n = 1$). One participant commented that, “this course was more useful than any of the other ones I have recently taken.”

The least useful parts of the course, according to participants, were the peer feedback requirement ($n = 2$), specific assignments such as exploring the nurse’s role in 504 plans and the T-chart assignment to compare and contrast landmark 504 cases and the implications for students in modern day ($n = 2$). One participant commented that some of the readings were lengthy, difficult to read, and outdated. Another participant shared that navigating websites to find evidence-based practices was challenging. Despite two participants not finding peer feedback useful, other participants reported that peer feedback helped them to reflect and see other perspectives ($n = 4$), learn new strategies ($n = 3$), and be accountable and stay on track with their 504 implementation plans ($n = 3$).

Discussion and Implications for Practice

It is critical that TPPs and school districts work together to effectively prepare educators to effectively work with 504 eligible students. Section 504 is not a special education responsibility, and often falls on the shoulders of general education teachers, counselors, student service coordinators, and even administrators; therefore, solely training SPED teachers on 504 misses the mark and does not target crucial stakeholders who are responsible for coordinating 504 services and developing and implementing 504 plans. Quality 504 PD in a VLE that incorporates an interconnected model as adapted by Clarke and Hollingsworth (2002) is a means to provide effective PD to educators responsible for serving 504 eligible students. This study investigated the effectiveness of a free credit-based 504 PD course (offered in a VLE) on in-service educators’ actual 504 knowledge, and perceptual knowledge, confidence levels, and usefulness of 504 content. Additionally, this study explored participants’ satisfaction with the course and their perceived overall learning and impact on their instructional practices and their 504 eligible students.

As expected, using an interconnected 504 PD model adapted by Clarke and Hollingsworth (2002) in a VLE had a statistically significant positive effect on participants’ actual 504 knowledge, and on participants’ perceived knowledge, confidence, and usefulness of 504 concepts. Paired samples t-tests indicated that participants’ posttest scores were statistically higher than pretest scores. Furthermore, participants shared that the course positively impacted their instructional practices when serving students eligible for 504 and helped to boost their students’ learning. Participants reported an increased knowledge in the 504 evaluation and eligibility process, the historical and legal foundations of Section 504, and how to develop and implement a 504 plan. Overall, participants were satisfied with the course format, content, and learning activities; perceiving the course as beneficial to their roles in serving students eligible for 504.

Having participants’ engage in the four domains of the adapted interconnected 504 PD model has shown to have a positive impact on their 504 knowledge, and instructional practices in serving students eligible for 504; particularly as their pre-existing knowledge, attitudes, and beliefs on 504 (personal domain) evolved over the duration of the course by engaging with the 504 content

(external domain) and learning the nuts and bolts of effectively implementing a 504 plan with a student (practice domain), and reflecting on the outcomes (consequence domain). Furthermore, as cited in the literature delivering the course in a VLE revealed participant satisfaction with the online structure and format of the course.

As OCR calls for public input about potentially amending Section 504 (U.S. Department of Education, 2022b), perhaps a staple that should be considered in this potential amendment is mandatory 504 training and credentialing for all educators who directly or indirectly service students eligible for 504. If the intent of making potential amendments to Section 504 is to safeguard and improve the protection and rights of SWDs (U.S. Department of Education, 2022b), then we should be considering giving these children quality educators who are adequately prepared with the tools to provide them with the quality education they deserve.

Limitations and Future Research

There were several limitations of the study. First, the sample size was small. Additionally, the study was limited to one rural area of Hawai'i. Therefore, these results are not generalizable to educators serving SWDs in other communities in Hawai'i or the rest of the U.S. Future research should be conducted to see if the results of this 504 PD course can be replicated with more participants in other areas of Hawai'i and the rest of the U.S.

Another limitation is that artifacts from participants' students to evaluate the impact the PD course had on student learning were not collected, therefore future research should analyze student artifacts to see if what participants learned from the 504 PD course actually impacted the learning of students eligible for 504. Last, the timing and duration of the PD course was another limitation. It was held over the course of three months during the final three months of the school year, which may be a particularly busy time for teachers. Participants may have experienced additional benefits from the PD course had it been offered earlier in the academic year and for a longer period of time, so that participants could focus on implementing the knowledge gleaned from the PD course with their students eligible for 504 over a longer time period.

In conclusion, students eligible for 504 need quality educators who understand how to effectively develop and implement 504 plans using research supported and evidence-based practices. Students eligible for 504 cannot be left behind their non-disabled or SPED eligible counterparts as they deserve a quality education and access to a FAPE. Although one PD course is not a standalone solution to increasing the pool of 504 qualified educators, this study reveals one possible solution to ramping up quality 504 PD for educators to ensure they have the proper tools to effectively service students eligible for 504. Much more needs to be done to effectively prepare those educators who are responsible for providing a FAPE to students eligible for 504.

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Parent Perspectives of Transition Planning for English Learners with Disabilities

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Abstract

The Individuals with Disabilities Education Act emphasizes that students and parents are equal partners in the individualized education program (IEP) process, including planning for transition to postsecondary education, employment, and community living. This is especially important for English learners (ELs) with disabilities, yet little is known about the transition planning meeting experiences of parents of ELs with disabilities. We examined the transition planning experiences of a nationally representative sample of parents of ELs with disabilities and parents of non-ELs with disabilities through an analysis of data from the National Longitudinal Transition Study 2012 (NLTS 2012). Results showed parents of ELs with disabilities were more likely to perceive their children taking a passive role in the IEP transition planning meeting than parents of non-ELs with disabilities. Differences were found in several predictors of parent experiences in IEP transition planning. Recommendations are suggested for transition research and practice for ELs with disabilities.

Keywords: Parents, transition planning meeting, ELs with disabilities

Parent Perspectives of Transition Planning for English Learners with Disabilities

The Individuals with Disabilities Education Act (IDEA, 2004) has for decades supported the transition of students with disabilities from high school to postsecondary education, employment, and community living. IDEA emphasizes that students and parents are to be equal partners in the individualized education program (IEP) process. Parent participation is one of six main tenets of IDEA (34 C.F.R. § 300.321, 2004), with the intent to directly involve parents as well as students in all phases of the IEP transition planning process starting at age 16 (or younger), including a focus on post-school goals and the services and supports needed to achieve those goals (e.g., Landmark et al., 2013). Wagner et al. (2012) found that most parents of students with disabilities reported that they wanted to be more involved in the process; other researchers confirmed that parents want to be included in the planning process to ensure a smooth transition from school to adult life (Landmark et al.; Martinez et al., 2012).

Despite these findings, research has indicated that parents have faced barriers to their participation in the IEP transition planning meeting (e.g., Cavendish & Connor, 2018; Francis et al., 2019). These barriers include, for example, communication and scheduling challenges, language barriers, disagreements, disappointment, trust issues, lack of opportunity to provide input, and diversity concerns. Researchers have suggested steps to follow for engaging students and parents in transition-focused IEPs. One of the steps is to include parent input and to write goals and objectives collaboratively (Cavendish et al., 2017).

Research has also reported that parents of English learners (ELs) with disabilities were less involved in the IEP transition planning meeting (Newman et al., 2020; Trainor, Murray, et al., 2016). This is a group of students that have increased in number, with more than 0.7 million ELs with disabilities aged 6-21 in schools in 2018 (Wu et al., 2021). This is an increase from 9.2% of students with disabilities in 2012 to 11.4% in 2018 (Wu et al.). With the increase of students with disabilities from diverse cultures, it is essential to enhance culturally diverse families' involvement in the transition process because a strong partnership between parents and the school can promote cultural understanding and responsiveness in transition planning (Geenen, et al., 2001). Researchers have found, however, that the IEP transition planning participation of parents from ethnically diverse backgrounds is substantially lower than European Americans (Landmark & Zhang, 2012). To better identify ways to increase EL parent participation in IEP transition planning, it is important to examine what is known about parent participation and the family and related factors that are associated with this participation.

Parent Participation and Meeting Experiences

IEP transition planning meeting participation has been shown to be moderated by roles and contributions or responsibilities of educators, parents, and their students with disabilities (Johnson, 2019; Johnson & Wu, 2019; Shogren & Plotner, 2012; Wagner et al., 2012). Using data from the National Longitudinal Transition Study-2 (NLTS2), Wagner et al. examined data on IEP meeting attendance by both youth with disabilities aged 15-19 and their parents. They found 68.6% of parents of children age 14 or older attended the most recent transition planning meeting, and parents of older students were more likely to attend a transition planning meeting than parents of younger students. Trainor, Morningstar, et al. (2016) studied parent participation in transition planning by examining NLTS2 data for students with high incidence disabilities, including learning disabilities, emotional disabilities, and attention-deficit/hyperactivity disorder, who were 13-17 years old. They found the average parent attendance rate was approximately 80%, and that there were no significant differences across disability categories. They also found an average of 48.2% of adults in a household met with teachers to set post-graduation goals, but no significant difference was found across disability categories.

Newman et al. (2020) found that parents of ELs with disabilities were less likely to attend an IEP meeting compared to the parents of non-ELs with disabilities, but no difference in attending a transition planning meeting between the parent groups. Wu et al. (2021) explored IEP transition planning meeting experiences for ELs with disabilities and non-ELs with disabilities who participated in the meeting or their parents met with school staff to set goals and make a plan. These researchers also found that parents of ELs with disabilities, compared to parents of non-ELs with disabilities, were significantly more likely to report that it was mostly the school setting transition goals and less likely to report that the school, family, and youth equally did so. The researchers found parents of ELs with disabilities had lower participation as decision makers and were less likely to speak with teachers about their child's transition and post-school life. They also reported no differences between ELs with disabilities and non-ELs with disabilities in parent perceptions of the youth's role in the IEP transition planning meeting.

In addition to attendance, researchers also investigated parent's perception of students' involvement (youth's role) in the IEP transition planning meeting by examining NLTS2 data (e.g., Shogren & Plotner, 2012; Trainor, Morningstar, et al., 2016) and NLTS 2021 data (Trainor

et al., 2019). Shogren and Plotner found parent reported students with autism and intellectual disability were significantly less likely than students with other disabilities to attend the IEP meeting and to take a leadership role when they did attend the meeting. However, Trainor et al. found no significance differences in parent perception of the student's role in transition planning meetings for students with learning disabilities, emotional disabilities, and attention-deficit/hyperactive disorder. Wagner et al. found a significantly higher percentage of parents of students ages 15- through 19-years reported taking a leadership role in the meeting than students 14 years old (21.9% vs. 10%). However, none of these studies examined the role of ELs with disabilities. Using NLTS 2012, Trainor et al. found for both ELs with disabilities and non-ELs with disabilities who were 16 years and older, there were no differences in parent attendance at the transition planning meeting and in the perception of parents about the youth's role in the meeting.

Researchers have also analyzed the NLTS 2012 dataset to explore the underlying factor structure of transition planning meetings for students with disabilities and ELs with disabilities across all IDEA disability categories (Wu et al., 2020; Wu et al., 2021; Wu & Thurlow, 2019). Four constructs were identified in this analysis--youth/parent participation, youth contribution, youth/parent invitation and youth input, and outside agency involvement (Wu et al.). However, Wu and Thurlow conducted a similar analysis and found somewhat different constructs for ELs with disabilities, with parent participation a separate construct. Thus, further research is needed to explore parents' IEP transition planning meeting experiences for parents of ELs with disabilities.

Family Demographics

Research has also examined the influence of family demographics on parent attendance and participation in IEP/transition planning meetings. Using NLTS2 data, Wagner et al. (2012) found that parents of Hispanic and African American students were less likely to attend IEP transition meetings than were parents of Caucasian students. These researchers also found that parents with annual incomes less than \$25,000 were less likely to attend the IEP transition planning meeting compared to parents with incomes of \$25,000 or more. Attendance was also significantly associated with parent involvement at school and at home, but negatively associated with parent expectations for students' postsecondary education.

In examining family demographics of ELs with disabilities, several researchers found ELs with disabilities were significantly more likely to experience poverty and to have parents without a high school diploma compared with both the general population of students without disabilities and non-ELs with disabilities (Newman et al., 2020; Trainor et al. 2019; Wu et al., 2021). Newman et al. found that ELs with disabilities compared to non-ELs with disabilities, reported the primary language spoken at home was more likely to be Spanish (57% vs 8%) and were more likely to live with more adults and children in the household. They also found compared to parents of non-ELs with disabilities, parents of ELs with disabilities were less likely to attend a school event and to volunteer at school. No differences were found, however, for ELs and non-ELs with disabilities in attending a parent-teacher conferences.

In addition, parents of ELs with disabilities, compared to parents of non-ELs with disabilities, were less likely to help with homework and rarely talked with their children about school.

Further, Wu et al. pointed out that parents of ELs with disabilities more likely had not completed high school, compared to parents of non-ELs with disabilities. They also found three quarters (77%) of ELs with disabilities lived in households with incomes below 40,000 USD compared to 55% of non-ELs with disabilities. Parents of ELs with disabilities identified significantly fewer issues youth faced in furthering education and training after high school than parents of non-ELs with disabilities. Overall, compared to parents of non-ELs with disabilities, parents of ELs with disabilities were more likely to have lower annual incomes, to have not completed high school, and they were less likely to get involved in students' school activities and to be aware of the possible challenges that their child may face in after high school.

Importance of This Study

Although research has identified numerous barriers and challenges to parent participation in IEP transition planning meetings (e.g., Cavendish & Connor, 2017; Cavendish et al., 2017; Francis et al., 2019; Shogren & Plotner, 2012), there is limited research on the parent participation for ELs with disabilities. None of the studies reviewed or explored the predictors of the participation and experiences of parents of ELs with disabilities in IEP transition planning meetings. Recent studies have found parent participation played an important role for ELs with disabilities (Wu & Thurlow, 2019). Thus, it is important to evaluate parents' experiences and identify factors that may mediate the experiences of ELs with disabilities. This information can provide a basis for improving transition services for ELs with disabilities and contribute to further research in this area.

The purpose of this study was to use the NLTS 2012 data set to examine parent IEP transition planning meeting participation and experiences based on their child's EL status. We also explored potential factors that predict parent IEP transition planning participation and experiences.

Research Questions

Two research questions were addressed in this study by examining NLTS 2012 data: (1) To what extent are there differences in the participation and experiences of parents of ELs with disabilities and parents of non-ELs with disabilities in IEP transition planning meetings? and (2) What are significant predictors of parents' IEP transition planning meeting experiences (including meeting with staff to set goals and make a transition plan and parent perceptions of youth involvement and contribution in the meeting)?

Method

NLTS 2012 Data

NLTS 2012 is the third in a series of NLTS studies intended to examine students with disabilities receiving services under IDEA. The NLTS studies have used survey and administrative data to describe the backgrounds of students with IEPs and their functional abilities, activities in school and with friends, academic supports received from school and parents, and preparation for life after school. NLTS 2012 data were collected via computer-assisted telephone interviews from February through October 2012 and a web-based option and field interviews from January through August 2013. Across the two years of data collection, 8,960 surveys of youth with IEPs were completed; 11,130 surveys were completed for youth with and without disabilities,

representing a 51% response rate. Youth were ages 12-22 when the interviews took place. All youth were enrolled in grades 7-12 or in a secondary ungraded class at the time of the sampling. Weights were used to make the NLTS 2012 data representative of the national population of youth with disabilities. Potential bias due to nonresponse rates to survey questions was assessed; results indicated that weighting was successful in limiting any potential bias (Burghardt et al., 2017). The limited English proficient (LEP) status provided by districts was used in this study for identifying ELs. In our analyses, the enrolled youth weights were used because our focus was on ELs with IEPs who were enrolled in the school system.

Sample

The main focus of this study was to explore parents' IEP transition planning meeting experiences and significant predictors of these experiences for both parents of ELs with disabilities and parents of non-ELs with disabilities. Parent demographic information from the student survey was used to identify the parent sample. Using this approach, our study included NLTS 2012 data on a sample of approximately 330 parents of ELs with disabilities and 4,190 parents of non-ELs with disabilities who were at least 16 years old enrolled in the school system when the data were collected, and who either attended the IEP transition planning meeting themselves or their parents attended the IEP transition planning meeting.

The parents of all students with an IEP were included in this study because we wanted to include as many participants as possible. In total, data were available for 78,675 weighted ELs with disabilities and 976,027 weighted non-ELs with disabilities. Thus, the proportions of students for these two groups were about 8% and 92%; this ratio of students is comparable to national data, where percentages are 10% and 90% (U.S. Department of Education, 2019).

In this sample, approximately three out of four parents of ELs with disabilities reported they spoke a language other than English at home, with the majority speaking Spanish (66.4%), compared to 14% of parents of non-ELs with disabilities reporting they spoke a language other than English at home. Most parents reported their child (or children) lived with them all of the time; this was the case for both parents of ELs with disabilities (96.8%) and non-ELs with disabilities (94.8%). The majority of the parents in this study were married (55.0% for parents of ELs with disabilities and 55.7% for parents of non-ELs with disabilities).

Parents of ELs with disabilities were more likely to have less than a high school diploma than parents of non-ELs with disabilities (43.6% versus 11.6%). Further, approximately 80% of parents or their spouse had a paid job when the survey was administered (80.5% of parents of ELs with disabilities and 79.5% of parents of non-ELs with disabilities). For household income, 73.9% of parents of ELs with disabilities reported their household income was less than \$40,000 compared to 51.7% of parents of non-ELs with disabilities. Less than half of parents reported there were two adults living in the same household (37.7% for parents of ELs with disabilities; 43.0% for parents of non-ELs with disabilities), followed by three adults (29.2% for parents of ELs with disabilities; 27.0% for parents of non-ELs with disabilities). The majority of parents reported that either one or two children lived in the same household (51.8% for parents of ELs with disabilities; 52.9% for parents of non-ELs with disabilities).

Measures

Youth Demographic, Characteristics and Educational History

Data on student gender, age, ethnicity, EL status, and free/reduced lunch status were provided by school districts. To have same age calculation across time, we used youth's age in December 2011, instead of age at the time data were collected. For ethnicity, we used the constructed binary variable in the NLTS 2012 dataset to represent student as Hispanic or not Hispanic. For free/reduced lunch status, we recoded the data into a binary code of Yes and No (with Yes including free, reduced, and free or reduced lunch). EL status was determined by school district records. The functional abilities index, ranging from 0 to 3 points, was a constructed variable created in the NLTS 2012 dataset. This was developed from several NLTS 2012 parent survey item responses to measure the prevalence and degree of functional limitations by including eight parent-reported categorical items of the youth's abilities: the ability to communicate, the ability to speak clearly, the ability to carry on an oral conversation, the ability to understand what people say, the ability to see, the ability to hear, the ability to use arms and hands, and the ability to use legs and feet. Three items were selected from the parent survey for the student's educational history: *Youth ever held back a grade*; *Youth has been expelled from school*; and *Youth has received an out-of-school suspension*. Each was coded as a binary variable.

Family Demographic

Two family demographic measures from the parent survey were included in this study: household income and parents' highest education level. Because of small samples in some of the original categories, household income *levels* were collapsed from the original categories in NLTS 2012 into four categories (below \$20,000, \$20,001 - \$40,000, \$40,001 to \$60,000, above \$60,000); responses to highest education level attained by the parent or parent's spouse were recoded into three categories: less than high school, high school or GED, and more than high school.

Parent Involvement and Expectations in Education

For *parent involvement at home*, parents were asked how often they spoke to the child about school experiences (1 = *not at all* to 4 = *regularly*) and how often they helped their child with homework (1 = *never* to 4 = *3 or more times a week*). The sum of responses to these two items, ranging from 2 to 8 points) was the measure of parent involvement at home. For *parent involvement at school*, parents were asked whether they or another adult in the household had attended a school meeting in the current school, attended a school or class event, volunteered at school, or gone to a parent/teacher conference with the youth's teacher. Responses of "no" were coded as 0 and responses of "yes" were further coded based on the frequency parents were involved in these four activities (1 = 1-2 times to 4 = more than 5-6 times). The sum of responses to these four items was the measure of parent involvement at school with a score range of 0 to 16 points. *Parent expectations for youth's post-secondary education* was used in our analysis as an outcome measure. Responses were coded into a dichotomous variable (i.e., expecting youth to participate in education beyond high school was coded as 1 = yes and 0 = no).

IEP Transition Meeting Experiences

Five measures of the parent's IEP transition planning meeting experiences used in our analyses were: (a) being invited to the IEP transition planning meeting; (b) attending the meeting; (c)

meeting with school staff to set goals for transition and make a plan to achieve those goals; (d) parent perception of youth's role in the IEP transition planning meeting; and (e) parent perception of youth's contribution to setting transition goals. According to the NLTS 2012 parent survey, the question about whether the parent attended the meeting was asked of all parents, regardless of the student's age and the other questions were asked only of parents whose child was at least 16 years old at the time data were collected in 2012 and 2013.

For some of these variables, responses were combined for analysis. Specifically, four possible responses for the parent's perception of the youth's role in the meeting were combined to produce three responses: 1 = "*participated very little or not at all*" (combination of "did not participate" and "participated very little or not at all"); 2 = "*provided some input and took a leadership role*" (combination of the original codes "provided some input" and "took a leadership role"). A response of "*doesn't know about any goals*" was treated as missing. Seven possible responses for the parent's perception of the youth's contribution to setting transition goals were combined to produce three responses: 1 = *mostly youth and some contribution by youth* (combination of the original codes "mostly youth," "youth and respondent or other adult equally," "school and youth equally," and "school, respondent, or other adult, and youth equally," and 2 = *little contribution by youth* (combination of "mostly school," "school, respondent, or other adult equally" and "mostly respondent or other adult").

Data Analysis

Analyses in this study used the enrolled youth weights, strata, and clusters in analyses suggested by the NLTS 2012 design documentation (Burghardt et al., 2017). Descriptive statistics were used to depict parents' IEP transition planning meeting experiences. Chi-square analyses were conducted to examine parent-youth differences—invitation, participation, meeting with school staff to set goals and make a transition plan, and perception of youth's role in the IEP transition planning meeting. Chi-square tests of independence were also conducted to examine the association between parent and youth responses by EL status separately. Also, separate chi-square analyses were conducted to examine the proportions of youth and their parents having different IEP transition planning meeting experiences.

Logistic regression models were conducted for parents of ELs with disabilities and non-ELs with disabilities separately to explore associations between independent variables and two indicators of IEP transition meeting experiences (parent meeting with school staff to set goals for transition and parent's perception of youth involvement in IEP transition planning meetings). Independent variables included youth's characteristics (gender, Hispanic or not, youth's functional abilities index score, and age); family characteristics (household income, parent highest education, parent involvement at home and at school); and parent involvement and expectation for post-secondary education.

Missing Data

Across all measures, missing rates ranged from 0% to 18.0% for parents of ELs with disabilities and 0% to 16.1% for parents of non-ELs with disabilities after taking the skip logic into account. No data imputation was performed for missing data. SAS logistic regression procedures eliminate any cases with missing values on any variable included in the analyses. The missing rates for logistic regression for the transition meeting experiences for parents of ELs with

disabilities were from 36.2% to 36.5% and from 32.9% to 33.5% for parents of non-ELs with disabilities.

Results

Three family characteristics showed significant differences between the two parent groups. The majority of parents of ELs with disabilities reported the main language spoken at home regularly was Spanish (64%), compared to 50% of parents of non-ELs with disabilities ($p < .05$). Parents of ELs with disabilities generally had less than a high school diploma (38%), compared to approximately 12% of parents of non-ELs with disabilities ($p < .001$). Also, approximately 73% of parents of ELs with disabilities had a household income of less than \$40,000, compared to approximately 53% of parents of non-ELs with disabilities ($p < .001$). Compared to parents of non-ELs with disabilities, parents of ELs with disabilities reported they were more likely to have more adults ($F = 8.9, p < .01$) and children ($F = 10.3, p < .01$) living in the same household. Parent involvement at home and at school did not vary by EL status.

Research Question 1: Parent's IEP Transition Planning Meeting Experiences

We examined five measures of parents' IEP transition planning meeting experiences—invitation; attendance; meeting with school staff to set goals and make a transition plan; parent perception of youth's role in the meeting; and parent perception of youth's contribution in the meeting (see Table 1). Approximately 91% of parents of ELs with disabilities were invited to attend the IEP transition planning meeting, with 82% of them attending the meeting, and 59% of them meeting with school staff to set goals and make a transition plan. These compared with 89% of parents of non-ELs with disabilities invited to the meeting, 87% attending the meeting, and 56% meeting with school staff. For parent perceptions of the youth's role in the meeting, the parents of ELs with disabilities reported that their children participated little or not at all (43%), compared to the parents of non-ELs with disabilities who reported their children provided some input or took a leadership (60%). For parent responses to youth's contribution to setting transition goals in the meeting, parents of ELs with disabilities were significantly more likely to report their child's contribution was little (74%), compared with 59% of parents of non-ELs with disabilities ($\chi^2 = 6.3, p < .05$). No significant group differences were found for the other four measures.

Research Question 2: Predictors of IEP Transition Planning Meeting Experiences

Logistic regression analyses were conducted separately for parent IEP transition planning meeting experiences by EL status to explore the significant predictors of meeting with staff to set goals and make a transition plan and parent perceptions of youth involvement and contribution in the meeting.

Meeting with School Staff

Results in Table 2 show household income and parent highest education were the only significant predictors for parents of ELs with disabilities in terms of meeting with school staff to set goals and make a transition plan. Parents of ELs with disabilities with \$40K-60K household incomes were less likely to meet with school staff to set goals for transition than parents with a household income of less than \$20,000 ($OR = 0.20, p < .05$). Parents who did not complete a high school education were less likely to meet with school staff to set goals for transition than parents who had high school diploma ($OR = 0.36, p < .05$).

Two variables were statistically significant in relation to the likelihood of parents of non-ELs with disabilities meeting with school staff to set goals and make a transition plan (see Table 3): youth age and parent involvement at school. Positive associations were noted with age ($p < .001$) and the level of parents' involvement at school ($p < .001$).

Parent Perception of Youth Involvement

Gender was the only significant predictor for parents of ELs with disabilities of parents perceiving youth involvement in the IEP transition planning meeting (see Table 2). Parents of ELs with disabilities were less likely to report high involvement when their children were female, compared to male ($OR = 0.32, p < .05$). However, parents of non-ELs with disabilities were more likely to report high involvement when their children were female, compared to male ($OR = 1.52, p < .001$). In addition, youth functional ability index score, household income, and parent expectation of whether youth would obtain postsecondary education were significant predictors of parent perception of youth involvement in the IEP transition planning meeting for parents of non-ELs with disabilities (see Table 3). They were more likely to report their children had high involvement when the youth had a higher functional ability index score ($p < .001$). Also, they were more likely to perceive the youth had high involvement when parents expected their children would participate in postsecondary education ($OR = 2.48, p < .001$). Parents of non-ELs with disabilities with household incomes in the range of \$20,001 to \$40,000, compared to less than \$20,000 were less likely to perceive their child as having had high involvement ($OR = 0.66, p < .05$).

Parent Perception of Youth Contribution

Four variables were statistically significant predictors of parent perception of youth contribution for parents of ELs with disabilities (see Table 2): gender, ethnicity, household income, and parent expectation of whether youth would obtain postsecondary education. Parents of non-ELs with disabilities were more than four times more likely to report higher contribution when their children were female, compared to male ($OR = 4.29, p < .001$). Parents of ELs with disabilities were more likely to report that their Hispanic child made more contribution than parents who had non-Hispanic child ($OR = 1.18, p < .05$). Parents of ELs with disabilities with household incomes over \$60K, compared to less than \$20,000 were almost six times as likely to perceive their child as having made more contribution ($OR = 5.75, p < .05$). Also, they were more likely to perceive that the youth made more contribution when parents expected their children would participate in postsecondary education ($OR = 1.25, p < .05$).

Two variables were statistically significant predictors of parent perception of youth contribution for parents of ELs with disabilities (see Table 3): youth functional abilities index score and parent expectation of whether youth would obtain postsecondary education. A positive association was noted with youth's functional ability index score ($p < .01$). Also, parents were more likely to perceive the youth made more contribution when parents expected their children would participate in postsecondary education ($OR = 1.47, p < .05$).

Overall, different significant predictors were found for each parent group across different parent IEP transition planning meeting experiences. There was one significant predictor in each IEP transition planning meeting experience for both parent groups: (a) age for meeting with school

staff to set goals and make a transition plan; (b) gender for parent perception of youth involvement in the meeting; and (c) parent expectation for youth's postsecondary education for parent perception of youth contribution in the meeting. Even though few significant predictors were identified in the regression models for parents of ELs with disabilities, the same predictors in the two models explained more variation for parents of ELs with disabilities than for parents of non-ELs with disabilities (meeting with school staff: 19% vs. 5%; perception of youth involvement: 22% vs. 10%; and perception of youth contribution 22% vs 5%).

Discussion

Our study explored (1) parent experience in IEP transition planning meetings by EL status and (2) the significant predictors of parents' IEP transition planning meeting experiences.

Experience in IEP Transition Planning Meetings

Parent IEP transition planning meeting experiences did not differ by EL status for invitation to the meeting, attendance at the meeting, meeting with school staff to set goals and make a transition plan, and perception of youth involvement. These findings are similar to previous studies on parent attendance (Newman et al, 2020; Trainor et al., 2019) and perception of youth's role (Trainor et al., 2019). Also, more parents of ELs with disabilities than parents of non-ELs with disabilities perceived their children had made only a little contribution to setting.

Significant Predictors of Parents' IEP Transition Planning Meeting Experiences

Age, household income, and parent highest education level were important factors for predicting whether parents of ELs with disabilities meet with school staff to develop a transition plan. Wu et al. (2021) also found household income was a significant predictor for ELs with disabilities of youth meeting with school staff to develop a transition plan. Thus, parents of ELs with disabilities and their children had the same predictor of meeting with school staff to set goals and make a transition plan. A possible explanation for this is parents and youth have the same expectations for meeting with school staff to set goals and make a transition plan; for example, to obtain the postsecondary education. We also found that parents with older child were more likely to meet with school staff to set goals and make a transition plan. This finding was similar to Wagner et al. (2012) for students with disabilities that parents of older students were more likely to attend a transition planning meeting than parents of younger students. Parents who had less than a high school education were less likely to meet with school staff to set goals and make a transition plan. It might be that these parents had lower payment from their job or they were paid by hours worked rather than a salary. They did not have time to meet teachers.

For parents of non-ELs with disabilities, age was also a significant predictor for the parent meeting with school staff to set transition goals and make a transition plan, as well as parent involvement at school. Our findings showed differences from Wu et al. (2021) for non-ELs with disabilities. For example, they found youth's functional ability index score was positively associated with youth meeting with school staff to set goals and make a transition plan, but not associated with household income. They also found ethnicity and parent expectation for student's postsecondary education were significant predictors, but the same was not found for their parents in this study. A possible explanation for the differences in findings for parents and youth is that the categories of household income in Wu and Thurlow's study were different from

the categories in this study, along with the fact that the predictors included in their study were slightly different from this study. For example, the free/reduced lunch variable was excluded from this study because it was determined by household income. Another possible explanation was parent and youth had different intentions to meet with school staff to set goals and make a transition plan. Age played important roles in predicting meeting with school staff to set goals and make a transition plan for both parents of ELs with disabilities and non-ELs with disabilities. Parents would like to set a plan for their child regardless of the LEP status to make sure their child would have a successful transition after high school. Parents of older students were more likely to be involved in this process. This suggests the importance of parents being involved early, rather than waiting until their child is older.

Although gender was a significant predictor of a parent's perception of youth involvement in the IEP transition planning meeting for both parent groups, the direction of the finding was different for the two groups. Parents of ELs with disabilities were likely to perceive their female child took a passive role in the meeting compared to parents of ELs with disabilities who had male child. In contrast, parents of non-ELs with disabilities were likely to report their female child played an active role in the meeting compared to their male child. One possible explanation is that female students who were ELs were shyer or parents had lower expectation for them compared to male students. Youth functional abilities index score and parent expectations for student's postsecondary education were also significant predictors of the parent's perception of youth involvement in the IEP transition planning meeting for parents of non-ELs with disabilities, but not for parents of ELs with disabilities. This finding might be related to the parents' expectations being determined by their perception of their child's abilities. Parents of ELs with disabilities may have lower expectations for their child than parents of non-ELs with disabilities. These results are quite different from those of Wu et al. (2021) for non-ELs with disabilities in which ethnicity and parent highest education were significant predictors of youth's perception of their involvement in the IEP transition planning meeting. This also confirmed, for both ELs with disabilities and non-ELs with disabilities, that parents and youth had different perceptions of youth involvement in the IEP transition planning meeting.

For parent perception of youth contribution, parent expectation for youth's postsecondary education was a significant predictor for both parents of ELs with disabilities and parents of non-ELs with disabilities. One possible explanation was youth with higher expectations for post school goals may bring goals to the meeting, so they will make more contribution to coming up with goals in the meeting. For these students, their parents may also have higher expectations that they would obtain postsecondary education. Parents' and youth's post school expectations are correlated (Kirby et al., 2019). Further, parents of ELs with disabilities with higher household incomes perceived their child made more contribution on coming up with goals than parents with lower household incomes. One possible explanation was parents of ELs with higher income were likely to receive higher education so their child may have more resources and supports from outside of school. In this study, 48.4% of parents of ELs with disabilities who had more than a high school education reported their annual incomes to be more than \$40,000; however, 93.2% of parents of ELs with disabilities who did not complete high school reported their annual incomes was less than \$40,000. Students from higher income families and their parents had higher education levels and may have greater self-advocacy skills, and as a result they were more likely to contribute to post school goals.

For parents of ELs with disabilities, gender was an important predictor of parent perception of youth involvement and contribution in the IEP transition planning meeting. However, they perceived their female students playing a passive role but making more contribution in the meeting. It seems contradictory. However, by looking at the predictors of parent perceptions of youth's role and contribution, the predictors were quite different for parents of ELs with disabilities. The correlation for these two variables was 0.18, indicating a very weak association. They appear to be evaluating different dimensions.

Our study indicates that parents' IEP transition planning meeting experiences differed by youth's EL status. Predictors of parents' meeting experiences were also different from the predictors for youth and varied by EL status. For example, youth's functional abilities index score was an important factor for parents of non-ELs with disabilities of perceiving youth involvement and youth contribution, but not for parents of ELs with disabilities. Also, parents meeting with school staff was different from youth meeting with school staff. This finding confirms that parent participation should be treated as different from youth participation (Wu et al., 2021). It is important to have parents be part of the IEP transition planning meeting so that they can support their children during the transition process. Also, ELs with disabilities need information and assistance for both special education services and language services, as well as information that addresses their cultural backgrounds. The needs of ELs with disabilities and their parents are definitely different from those of non-ELs with disabilities (Newman et al., 2020; Trainor, Murray, et al, 2016).

Limitations of Study

The findings reported here make an important contribution to the knowledge base on parent IEP transition planning experiences and parent-youth differences for ELs with disabilities. Still, some limitations should be noted. The data analyzed were self-reported by parents and youth; no third-party information was collected (e.g., from school staff) to allow for triangulation of data. For example, the question of whether youth attended the IEP transition planning meeting was asked of both youth and parents. A comparison of responses showed only 74.8% agreement in their responses. Having information from school staff would be advantageous.

Although the analyses in this study used the weights, strata, and clusters in analyses as suggested by the NLTS 2012 design documentation (Burghardt et al., 2017), which had indicated nonresponse adjustments to the weights succeeded in limiting the potential for bias, some of the results should be interpreted with caution due to the high percentage of missing data for ELs with disabilities. This study also was limited by the NLTS 2012 design and the available items in the NLTS 2012 dataset. Some of the items were to be asked only of parents of youth of a certain age (either at least 16 or at least 15 years old at the time data were collected). In this study, we used youth age in December 2011 to have a same-age calculation across time. Thus, interpretation of the results should be made with caution. Also, findings in this study should not be interpreted to imply causal relationships. Differences in results for groups should also not be interpreted alone without considering other demographic and disability factors.

Research Implications

This study examined IEP transition planning meeting experiences of parents of ELs with disabilities and predictors of parent IEP transition planning meeting experiences. In addition to its several important findings, our study also pointed out several areas needing further research. For example, parent perception is an important predictor of parental aspirations for minority students (Spera et al., 2009). High parent expectations are likely to affect students' post-school outcomes (e.g., Papay & Bambara, 2014; Southward & Kyzar, 2017). Thus, research is needed to explore the relationship between parent perceptions of IEP transition planning meetings and parent expectations for post-school outcomes and youth's post-school outcomes. Also, there is a need to explore the extent to which parent perceptions can be mediated through an intervention to improve youth's post-school outcomes by supporting the transition of ELs with disabilities from high school to the adult world.

Further, in the NLTS 2012 data for youth who were at least 16 years old when data collected and enrolled in the school, approximately 65% of ELs with disabilities attended the meeting with their parents, compared to 72% of non-ELs with disabilities; 15.3% of ELs with disabilities attended the meeting alone compared to 10% of non-ELs with disabilities did. Further study is needed to explore why parents of ELs with disabilities were less involved in this process. It might be due to several factors – language barriers, inability to take time from work to attend the meeting, or being less informed by their child or school.

Because many ELs with disabilities experience poverty (Trainor et al., 2019; Wu et al., 2021), it is important to study how poverty impacts post-school outcomes for ELs with disabilities. This study, in contrast to previous findings, indicated poverty was not a significant predictor of IEP transition planning meeting participation for parents of ELs with disabilities. Further study is needed to explore how poverty mediates parent and youth participation for ELs with disabilities, in turn affecting post-school outcomes.

It is important for parents and youth to work as a team with school staff to make sure the transition plan is meaningful. Additional research is needed to explore this parent-youth finding because it is possible that missing rates in our analyses compromised results. This could be the case even though the strata, cluster, and weights were applied to the analyses because the NLTS 2012 bias study was not conducted at the individual variable level.

Further research should examine whether parent expectations varied by student's EL status. Parents tend to have lower expectations for youth's post school goals (Kirby et al., 2019) than their child. Also, parent expectations may have impact on youth's expectations on their post-school goals. Thus, it is important to explore the relationship between parent and youth, as well as whether this relationship differs by the youth's EL status. If parents of ELs with disabilities have even lower expectations than non-ELs with disabilities, schools should start interventions as early as possible to close the gap to assure that transition from high school to adulthood is as smooth as possible for ELs with disabilities.

Finally, this study investigated a somewhat limited number of variables that might contribute to the IEP transition planning meeting experiences of parents of ELs with disabilities. There are many other variables that might impact parent participation and involvement in the IEP transition

planning process, including student's disability category, percentage of time in the general education classroom, and parent's employment status.

Implications for Practice

The findings of this study have several implications for practice. The predictors of parents meeting with school staff to develop a transition plan varying by EL status may mean that these two parent groups need different supports during the transition process. For example, the finding that parents of ELs with disabilities tended to meet with school staff to develop a transition plan when they expected a higher number of challenges the youth might face in furthering education or training after high school suggests that schools should assist parents in finding solutions for the identified challenges. These parents likely need more information about how to support their children for future success. Also, providing parents information and supports can help to reduce their perceptions of barriers their child faces for success in postsecondary settings.

This study also confirmed the finding of Wu et al. (2021) that parent participation for ELs with disabilities should be treated in a different way from the participation of other youth. Parent support is especially important for ELs with disabilities because they have both barriers related to disability and language. Family supports plays an important role in successful transition. Educators should maintain open communication with these parents and support parent involvement in the youth's activities and any decisions that are made about the youth. When scheduling meetings, it is important for schools and educators to accommodate parents' schedules as much as possible. This is especially important for low-income families who may not be able to be excused from work commitments to attend a school meeting.

Our results showed the lower rates of parents meeting with school staff to set goals compared to Wu et al.'s study (2020) for both parent groups. However, the lower rate for parents of ELs with disabilities might be due to language barriers, so schools should provide interpreter services to support parents in the process of the transition planning or initiate the conversation as early as possible to build up the parent-teacher relationship in order to provide better service for ELs with disabilities.

Poverty was a significant predictor for parents of ELs with disabilities of meeting with school staff to set goals and make a transition plan. Although poverty is not a variable that can be directly addressed by educators, the nature of supports provided to parents of ELs with disabilities from low-income households may need to be adjusted. Rather than assuming that all students and their families have the same resources, a universal approach that provides resources to all parents and their children for success in school, may require whole-school rethinking (Telfer, 2012).

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Table 1

IEP/Transition Planning meeting Experiences for Parent of ELs with Disabilities and Parents of Non-ELs with disabilities

Participation	Parents of ELs with disabilities		Parents of non-ELs with disabilities	
	n ^a	% ^b	n ^a	% ^b
<i>Parent participation</i>				
Invited to IEP/transition planning meeting ^c	190	90.5	2,410	88.9
Attended IEP/transition planning meeting ^c	240	82.4	3,510	87.4
Met with school staff to set goals and make a transition plan ^c	190	59.3	2,330	55.7
<i>Youth role in IEP/ transition planning meeting</i>				
Participated little or not at all	140	43.3	1,750	40.0
Provided some input and took leadership	120	56.7	2,000	60.0
<i>Youth's Contribution of coming up the goals ($\chi^2 = 6.30^*$)</i>				
A little	190	74.1	2,410	59.2
Some and mostly youth	90	25.9	1,440	40.8

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Transition Study 2012 (NLTS 2012).

^a. Unweighted sample sizes were rounded to nearest 10.

^b. Weighted percentages were calculated based on valid responses.

^c Only listed statistics for participants responded "Yes."

* $p < .05$.

Table 2

Logistic Regression Results for Parent Experiences in the Transition Planning Meeting for ELs with Disabilities

Characteristics	Parents met with adults to set goals β (OR) [95% CI]	Parent perception of youth's role β (OR) [95% CI]	Parent perception of youth's contribution β (OR) [95% CI]
<i>Student demographics</i>			
Gender (reference: male)	-3.1 (0.48) [0.17, 1.39]	-4.72* (0.32) [0.13, 0.75]	6.03** (4.29) [1.46, 12.61]
Ethnicity (reference: non-Hispanic)	-2.19 (0.60) [0.19, 1.89]	<0.01 (1.00) [0.44, 2.28]	6.22* (4.03) [1.18, 13.74]
Age	3.88* (1.42) [1.06, 1.90]	-0.16 (0.99) [0.72, 1.35]	0.01 (1.00) [0.71, 1.42]
Youth functional abilities index score	1.32 (1.44) [0.62, 3.37]	5.1 (4.44) [0.95, 20.8]	-0.45 (0.88) [0.27, 2.87]
<i>Family demographic</i>			
Household Income (reference: $\leq$ \$20K)			
\$20,001 to \$40,000	-0.5 (0.89) [0.25, 3.12]	3.37 (2.2) [0.66, 7.27]	4.82 (3.11) [0.92, 10.48]
\$40,001 to \$60,000	-5.46* (0.20) [0.04, 0.92]	0.38 (1.12) [0.27, 4.65]	-2.76 (0.45) [0.07, 3.07]
Over \$60,000	-0.53 (0.83) [0.16, 4.23]	3.67 (3.49) [0.69, 17.72]	5.11* (5.75) [1.22, 27.12]
Parent highest education (reference: high school or GED)			
Less than high school	-4.52* (0.36) [0.15, 0.86]	-2.4 (0.57) [0.16, 2.04]	-0.6147 (0.87) [0.16, 4.70]
More than High School	-4.13 (0.38) [0.10, 1.40]	-3.78 (0.41) [0.12, 1.42]	1.14 (1.31) [0.31, 5.57]
<i>Parent involvement and expectations in education</i>			
Parent involvement at home	1.32 (1.11) [0.81, 1.51]	-0.31 (0.98) [0.67, 1.43]	-1.08 (0.92) [0.67, 1.26]
Parent involvement at school	4.88 (1.2) [0.97, 1.48]	2.77 (1.10) [0.86, 1.41]	2.15 (1.08) [0.87, 1.34]
Expectations for student's postsecondary education	1.23 (1.32) [0.46, 3.79]	4.33 (2.73) [0.94, 7.96]	6.30* (4.22) [1.25, 14.25]

Adjusted R ²	.19	.22	.22
n (weighted n)	190 (52,033)	170 (46,807)	170 (47,704)

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Transition Study 2012 (NLTS 2012).

Note. OR = odds ratio; CI= confidence interval.

* $p < .05$.

Table 3

Logistic Regression Results for Parent Experiences in the IEP/Transition Planning Meeting for Non-ELs with Disabilities

Characteristics	Parents met with adults to set goals	Parent perception of youth's role	Parent perception of youth's contribution
	β (OR) [95% CI]	β (OR) [95% CI]	β (OR) [95% CI]
<i>Student demographics</i>			
Gender (reference: male)	0.86 (1.22) [0.95, 1.58]	1.77** (1.52) [1.18, 1.97]	0.78 (1.20) [0.91, 1.59]
Ethnicity (reference: non-Hispanic)	0.31 (1.09) [0.78, 1.54]	-0.61 (0.83) [0.57, 1.22]	0.06 (1.02) [0.71, 1.47]
Age	2.55*** (1.27) [1.15, 1.41]	0.09 (1.01) [0.92, 1.11]	-0.12 (0.99) [0.90, 1.09]
Youth functional abilities index score	-1.00 (0.75) [0.53, 1.07]	3.17*** (2.55) [1.75, 3.71]	1.67** (1.62) [1.14, 2.31]
<i>Family demographic</i>			
Household Income (reference: $\leq$ \$20K)			
\$20,001 to \$40,000	-1.10 (0.76) [0.54, 1.06]	-1.63* (0.66) [0.46, 0.95]	-1.23 (0.73) [0.52, 1.04]
\$40,001 to \$60,000	0.78 (1.25) [0.82, 1.93]	-0.26 (0.93) [0.60, 1.44]	-0.14 (0.96) [0.61, 1.52]
Over \$60,000	-1.35 (0.73) [0.50, 1.05]	-1.31 (0.74) [0.49, 1.10]	-1.12 (0.77) [0.53, 1.12]
Parent highest education (reference: high school or GED)			
Less than high school	-0.11 (0.96) [0.63, 1.48]	-0.66 (0.79) [0.49, 1.28]	0.87 (1.36) [0.87, 2.12]
More than High School	0.55 (1.13) [0.85, 1.50]	-0.13 (0.97) [0.70, 1.35]	0.43 (1.10) [0.79, 1.53]
Parent involvement at home	-0.20 (0.98) [0.90, 1.08]	-0.2 (0.98) [0.89, 1.08]	0.2 (1.02) [0.93, 1.12]
Parent involvement at school	2.76*** (1.09) [1.05, 1.14]	1.24 (1.04) [1.00, 1.09]	0.88 (1.03) [0.99, 1.07]
Parent expectations for student's postsecondary education	0.45 (1.11) [0.85, 1.44]	4.04*** (2.48) [1.9, 3.25]	2.8*** (1.88) [1.47, 2.39]

Adjusted R ²	0.05	0.10	0.05
n (weighted n)	2,620 (715,768)	2,510 (686,880)	2,570 (697,760)

Source: U.S. Department of Education, National Center for Education Statistics, National Longitudinal Transition Study 2012 (NLTS 2012).

Note. OR = odds ratio; CI= confidence interval.

* $p < .05$. ** $p < .01$. *** $p < .001$.

When Parents of Children with Severe Autism Become Their Teachers: Unique Cases from the COVID-19 Pandemic

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Abstract

Parents of school-aged children experienced an increased responsibility in their child's education when the COVID-19 pandemic shut schools in March 2020. The sudden school closure was very difficult for students with autism, who need predictability and routine in their daily life. The purpose of this study was to explore the experiences of parents of children with severe autism during the school closure and uncover recommendations to improve distance education for students with autism. The participating parents in this study reported difficulty in adjusting to the abrupt disruption in routine during the COVID-19 pandemic. All parents reported trying a variety of strategies to support their student's learning during distance education. They all expressed feelings of stress during distance learning and conveyed appreciation for their child's teacher.

Keywords: Autism, COVID, parents, the school closures, case study

When Parents of Children with Severe Autism Become Their Teachers: Unique Cases from the COVID-19 Pandemic

March 2020 delivered a sudden and profound change to the delivery of education in public schools as well as sudden changes to nearly every social sector in the United States and in the world. The rapid development of the COVID-19 pandemic was the impetus for this sudden world-wide change. To decrease the opportunity of transmission of this potentially deadly disease, schools eliminated all in-person instruction for all learners and moved to only remote and online instruction: distance learning. This synchronous closure of public schools affected more than 50 million K-12 students (Zviedrite et al., 2020). This nationwide containment period caused some stress and uncertainty for parents regarding the education of their children. Parents had to take on more roles, such as being a parent, an employee, a caretaker, or a teacher (Coyne et al., 2020) while simultaneously coping with unstable financial circumstances, school closures, suspended educational services for children, uncertainties about their children's education, which further exacerbated existing anxieties and worries (Fontanesi et al., 2020). During school closures, parents experienced difficulties balancing responsibilities, motivating their children to participate in distance learning, accessing technology, and monitoring their children's learning progress (Garbe et al., 2020).

Given the significant expectations of parents to implement the educational process during the COVID containment period of distance learning, it is relevant to examine the situation through the lens of the ecological systems theory (Bronfenbrenner, 1986). This theory focuses on the

interactions between the child and other ecological systems such as family, school, neighborhood, communities, and public policies. Child development depends on an interactive system that consists of the microsystem, mesosystem, exosystem, macrosystem, and chronosystem which are “nested” within one another (Bronfenbrenner, 1986). The theory highlights the importance of cultural, political, and economic factors in shaping family dynamics (Garbarino, 1977). Chronosystem includes historical events and situations that impact development. The pandemic has affected all areas of daily life all over the world. Thus, COVID-19 and the ensuing distance learning has impacted all systems including microsystem, mesosystem, exosystem, macrosystem. According to Bronfenbrenner, the instability and unpredictability of family life can be the most harmful force to child development (Addison, 1992). The pandemic created considerable uncertainties and unknowns in terms of schooling, working, and daily life. Thus, an ecological approach can facilitate our understanding of the effects of distance learning on child development. Llewellyn and Hogan (2000) also pointed out the importance of the ecological system model in special education research since it emphasizes interactions between individuals and context.

School closures, lockdowns and suspended services are more likely to exacerbate existing hardships and challenges for parents who have children with disabilities. As a result, COVID containment had the capacity to impact children with special needs and their parents disproportionately. Kong (2021) cautioned that special education service constraints would result in developmental regression among some children with autism spectrum disorder (ASD) and that disrupted routine could bring about melt downs and maladaptive behaviors.

Parents who have children with special needs encounter more stressors and struggles, in general, compared to their counterparts (McConnell & Savage, 2015; McStay et al., 2014). Smile (2020) suggested that parental anxiety due to job loss, economic unknowns, limited access to health care, and early intervention programs may worsen the ability of parents to cope with the COVID-19 pandemic. For example, mothers who have a child with autism spectrum disorder may lack social support, which means they are more likely to experience depression and anxiety (Boyd, 2002).

Preliminary studies regarding distance learning demonstrated that parents who have children with a mental or physical disability experienced higher levels of parental burnout and anxiety along with less social support and psychological well-being in comparison to other parents (Ersoy et al., 2020; Fontanesi et al., 2020). In addition, parents of children with special education needs and their children reported that COVID distance learning affected their mental health by experiencing loss, worry and changes in mood and behavior (Asbury et al., 2021). Further studies (Alhuzimi, 2021, Saliverou et al., 2021) continued to demonstrate that parents developed additional stress and anxiety as their child showed emotional and behavioral changes (outbursts, hyperactivity) due to the disruption in their required routine. Parents who experienced negative modifications in their child’s behavior stated they had resorted to authoritarian parenting styles included higher verbal hostility or lower regulation reasoning (Fontanesi et al., 2020).

Struggling to support their children in distance learning was noted by Azoulay (2020) as well as other researchers. Cahapay (2020) interviewed five parents raising children with autism spectrum disorder in the Philippines during COVID-19. He found parents struggled with finding

educational activities, they indicated having more family members involved helped during isolation and improved the process of distance learning as well as it helped to have parents supporting parents. Using an online survey to examine the effects of COVID-19, Manning et al., (2021) found higher levels of stress (above their typically higher levels) in caregivers of individuals with autism, exacerbated by severity of disability. Isolation, illness, and finance were reported as the biggest concerns among caregivers. Toseeb and colleagues (2020) asked these parents what support they needed, and parents suggested specialist professional advice for parents; finding appropriate tasks and resources for home learning; and setting opportunities to see known faces, albeit remotely.

Students with autism, who need predictability, inflexibility, and routine in their daily life (Eshraghi et al., 2020) were forced to shift to distance learning without any preparation even though special education teachers were legally obliged to find ways to serve students with disabilities during the pandemic. Both educators and parents of students with disabilities believed that distance instruction was ineffective at providing quality services (Wheatley, 2021). Since this unprecedented pandemic has brought about some challenges regarding teaching students with disabilities for parents, understanding parents' struggles and suggestions are crucial to addressing their needs when creating and implementing future distance learning programs. In addition, Hurwitz et al. (2021) found a renewed emphasis on collaboration between teachers and parents during the pandemic.

Even though parents who had children with an autism spectrum disorder were interviewed during COVID-19 in the Philippines, considering some cultural and education differences, it is important to use interview methodology to better understand parents and students with autism experiences with remote learning during the COVID-19 pandemic in the USA. Results from the study at hand can guide educators to facilitate collaboration with parents during future occurrences of remote learning related to COVID-19 or other instances such as inclement weather. Students with disabilities need specialized instruction at home, just as they do at school. The results of this study will add to the sparse research about educating students with severe autism at home during periods of distance learning. The primary aim was to explore the experiences of parents of children with severe autism during school closures. To this end, this study sought to answer how parents of children with severe autism experienced distance learning during the first COVID19 school building closure.

Method

The current study utilizes a descriptive multiple case study design with data analysis first linking data to propositions, case-by-case, and then a thematic analysis of the multiple cases to identify themes within interview transcripts. Researchers use case study methods to study a real-life phenomenon and its related factors (Yin, 2013). This study uses a multiple case study design to examine more than one case for the purposes of understanding unique cases and identifying commonalities between cases. Furthermore, it is descriptive because it seeks to describe the case and its context in the real world (Baxter & Jack, 2008). Researchers let the propositions guide their literature review, case binding, and data analysis. In a thematic analysis of the data, interview transcripts in this study, researchers familiarize themselves with the data, identify initial codes, determine preliminary themes, refine, and define themes and codes, as necessary

(Braun & Clarke, 2006). The compositional structure used in this paper is a non-sequential one where the findings are organized by propositions, to be followed by a cross-case synthesis to compare and find similarities across cases in the discussion section.

Propositions

Theoretical propositions are formed based on relevant theories and from the literature review (Demeulenaere, 2012). They serve as a means to place boundaries on the research, thus helping the researchers to narrow the case to be studied, data to be collected. In the present study, the case is the parent who provided distance education to their child with severe autism spectrum disorder. Data collected included their experiences providing education in the spring of 2020. Propositions provide a structure for analyzing data and reporting findings (Yin, 2013). This study's research design, research questions, data collection techniques, and data analysis procedures are based on three propositions, the basis for which have all been established above in the literature review and theoretical and conceptual framework.

Proposition 1: *Children with severe autism spectrum disorder and their parents' school experiences were very different during distance learning as compared to their experiences during traditional face-to-face instruction.*

Proposition 2: *Parents of students with severe autism spectrum disorder faced unique experiences during distance learning.*

Proposition 3: *Parents of students with severe autism spectrum disorder have unique needs during distance learning.*

The study methodology described next was designed to investigate these three propositions so as to learn more about the experiences of parents of children of severe autism during distance learning during the COVID-19 pandemic.

Participants

Convenience sampling was used to identify the selected participants. One of the researchers of this study teaches at a specialized school that provides special education services for students with severe autism spectrum disorder. Students in this program present with significant communication, self-regulation, and behavioral challenges. They all require constant supervision, intensive 1-1 direct instruction, and individualized behavioral management plans. The participants consisted of three mothers of children with severe autism spectrum disorder who attend this specialized school.

Case A

Cathy has two sons with autism who attend the school and are in the same classroom; one who is eighteen years old, and one who is sixteen. During the COVID containment, Cathy, her husband, and the boys were home full-time. Cathy was the main person supporting the boys' learning and sat with them 100% of the time.

Cathy describes her oldest son as funny and personable, possibly the class clown. He is very eager to learn and gets excited when he learns something new but needs considerable support to

try new things. Verbally, he can typically state his wants and needs, though at times his communication is cryptic. If his communication is not understood he may become agitated and may then become aggressive toward others. She describes her youngest as skilled at the computer and very artistic. He is minimally verbal (one to two words), and family and educators work together to help him communicate what he needs/wants others to know. He frequently and repetitively sings songs or states movie lines he has memorized. Both of Cathy's sons are dependent on adult support for the majority of activities of daily living. They also both rely on their routine and can become highly agitated or anxious when there is an unexpected change.

When describing her time supporting her sons during distance learning, Cathy stated that when she was working with one son, the other would walk away from their work and she would have to get that son back on track and the other one would leave his area. Working on schoolwork with the boys took up many hours of the day and then she still had housework to complete – cooking, dishes, laundry.

Case B –

Suzie is a single mom of four children. Her son has Down syndrome and qualifies for autism educational services, even though he has not been diagnosed. She also mentions that he possibly has ADHD (Attention Deficit Hyperactivity Disorder) and displays impulse control issues and moodiness. She describes her son as having a sweet personality, funny, loving, and authentic. He does not hide his feelings or emotions. He has the ability to read people. He has difficulty being out of routine, but he is adaptable and adjusts quickly. He loves school and being home due to containment has been difficult for him.

Suzie had to keep both of her children on task when schooling at home during distance learning. Her son has difficulty focusing and working while on his medication, so she would work with him in the morning, then again in the evening when his medication wore off, adjusting activities to his mood and needs to avoid fighting or struggling with him. He could not sit and do schoolwork all day and refused to be on video conferencing with his teacher. Suzie says her daughter has her own issues, and her son needs constant care, so things got difficult during containment. Suzie stated that as the sole caretaker, she does not get any break, even during the night while sleeping due to her son's sleep issues.

Case C –

Emily has two children, a son, who is a 7-year-old with severe autism, and a younger daughter who is 5 years old. During the COVID pandemic, the change in routine was the most difficult for her family. Emily describes her son as very smart and very sweet. He knows his numbers and letters, is learning to spell his name and learning to read sight words. She feels his biggest weakness is his speech and that he needs a lot of one-to-one support. He talks constantly but is often unintelligible and then gets easily frustrated when others don't understand what he is telling them. He also gets easily frustrated when he doesn't get what he wants, or his routine is suddenly changed. When he gets mad, it is difficult to settle him down and it takes a lot of Emily's time. To help him calm down, she would take him for car rides. During containment, it was difficult for her son to understand that he was no longer going to school and the things that he did in school he now had to do at home. She said her son gets anxious when he is not in his routine.

Data Collection Procedure

Approval for this research project was obtained from the school district and the Institutional Review Board where the researchers work. The classroom teacher contacted the parents to give them the research project information and one of the researchers' contact information. Parents that chose to participate contacted the researcher via email to schedule a video conference appointment for the interview. Communication between the parents and researcher continued via email until a mutual time was agreed upon. A video conference link was provided to the parents for the interview.

One-on-one interviews were scheduled with the main caretaker/teacher of the student during distance learning. The interview was conducted via video conferencing and recorded with the participant's permission. The interviews ran approximately 45 minutes. Once the interview was finished, the researcher transcribed the interview and removed any identifying information from the transcripts, assigning pseudonyms to the caretaker and children. The transcript was then saved to a secure computer file.

Data Analysis Procedure

Other researchers then gained access to the secure computer file to begin the data analysis phase. First, the researchers used the propositions to analyze each case independently of the others. Yin (2013) states that relying on theoretical propositions for data analysis is, "the first and most preferred strategy" (p. 130). Following propositions requires researchers to look at the data through the lens of the propositions, which helps filter out extra data, and thus bring relevant data to the forefront of the analysis.

Next, the researchers followed Braun and Clarke's (2012) six steps for a thematic analysis when analyzing data for the cases as a collective whole. They first familiarized themselves with the data, then generated initial codes and identified themes. Next, they reviewed potential themes in comparison to the data and full data set. Finally, the researchers defined and named the themes and authored a written report of the results.

Results

Proposition 1: Children with severe autism spectrum disorder and their parents' school experiences were very different during distance learning as compared to their experiences during traditional face-to-face instruction.

Case A

Cathy shared that she and her sons followed the traditional school schedule, just as if her sons were at school. They started the day with a morning video conference with their teacher, worked on weather, and then one of her sons went on break and she worked with her other son on his academics. The children switched and the working son went on break and her other son started working on his academic tasks and work tasks. This pattern continued until lunchtime, after which, they joined a dance party that the school hosted virtually. Once the dance party ended, Cathy rotated her sons between working and breaks and finished their school day by about 1 pm. Cathy stated that she started out trying to work with both of her sons at the same time, however

found that this “was just craziness” and decided to “flipflop” the kids. She provided instruction around her, and her sons’ needs by switching off working with each son and giving the other son a break, so as to not overwhelm herself and her sons by working with both at the same time.

Case B

Suzie discussed her son’s typical school day, as well. She said he will wake up anytime between 2am to 6:30am. Suzie is “always up and out of bed by seven” since her son usually lets the dogs out and allows them to go into her bedroom, which wakes her up. Suzie noted that “[her son is] so excited the day is starting.” Next comes medication and breakfast in her bed while watching her son’s favorite television show. They continue the morning by talking, enjoying time with each other, and playing a couple of games together. Suzie says once her son’s medication starts working, he leaves her room, “and for four hours, I don’t have to deal with him, and you better believe I’m taking that break because that’s the only break I get.” She shared that this usually spans 9am until 1pm or 2pm because her son does not want to interact with anyone but his sister during this time. Suzie also clarified that there are not “any kind of academics happening” at this point in the day. Once her son’s medications start to fade, he will engage more with her and that this should be a time for academics. When he will work on school, she does flashcards and work tasks with him. Suzie said sometimes they will “do some stuff in the evening” and other times it is not a suitable time to work on academics. She has come to the realization that her son’s medication might not be in full effect at the right time to make the traditional school day most effective for him and it is something she would like to investigate more.

Case C

During her interview, Emily shared that the beginning of distance learning started with her emulating her son’s traditional school day. They would first begin with a morning meeting, followed by their work box, free time, and then additional academic programming. This changed, however, when Emily went back to work, and her dad took care of her son. During this time, Emily said that her dad and her son spent much time hanging out and “riding snowmobiles.” When Emily came home from work, she attempted to hold school and it “just didn’t work.” She said she tried for about two months to follow a new routine in the evening, but eventually school let out for the summer, and they tried to do some educational tasks then, but for the most part she gave him a break and “focused more so on his speech.” Because of her work schedule, Emily had to switch the school day to after work, which ultimately was not successful. This demonstrates how she needed to hold schooling around her needs. The family clearly had two main routines. Early in the pandemic, Emily and her son’s school routine was successful with being able to provide his academics, but once she had to return to work her son’s new routine mostly included hanging out with his grandfather and attempting to do schooling in the evenings. Emily’s interview showed how the family struggled with at-home schooling and either provided the full academic programming passed along by the school (while Emily was home from work) or minimal academic programming (once Emily went back to work).

Cross-Case Findings

Themes identified during data analysis for Proposition 1 include: *schooling around other needs*, *full engagement in academics or minimal engagement*, and *having a routine*. While at home, Cathy and Emily were able to mirror their sons’ typical school day. They both shared about holding a morning meeting and then working on academic tasks and integrating break time into

their sons' schedules. Once Emily went back to work, the amount of time her son spent on academic tasks was more congruent with Suzie and her son. In these cases, minimal time was dedicated to formal instruction of academics. These three cases show how the children's school days at home were drastically different than the ones they experienced while at the school building. Even when parents were able to mirror the school routine they finished the day earlier, were engaged for half of the day (as in the case of switching off between working and breaks) and had one main support person (their moms) at home. Themes showed that all three had to schedule schooling around other needs (mom's work schedule, medication times, and times needed to also teach a sibling), parents were either fully engaged in academics (as was the case with Emily before she returned to work and with Cathy) or minimal academic engagement (as was the case with Emily after she returned to work and with Suzie), and having a routine (which, while different routines, all three had).

Proposition 2: Parents of students with severe autism spectrum disorder faced unique experiences during distance learning.

Case A

During her interview, Cathy openly talked about her struggles of balancing the responsibilities of cooking, dishes, laundry, in addition to assuming the role as her son's at-home teacher. She says, "I'm a mom, not a teacher." For her, it was difficult to separate the roles and for her sons to see that at any given time, she could be acting as the teacher, and they needed to do their schoolwork. This was further exacerbated by the fact that the family was "housebound" and "stir-crazy." Generally, Cathy felt lost, confused, exhausted, and overwhelmed. Her kids often wanted to be done with schoolwork, but she had to take on the teacher's role and tell them that they could not be done until they finished their worksheets. Ultimately, Cathy felt as if they did not accomplish as much while learning at home as her sons would have if they were at school. She did say, however, she was thankful for the amount of support the school provided. In addition to sharing her emotional responses, Cathy also shared what successes she experienced during distance learning. Cathy felt uplifted that she was able to balance household responsibilities with teaching her sons. She said she was surprised by the work that her sons were able to do, especially when they finished a work task with ease. Cathy also shared that upon being tested when they returned to school, their teacher told her the boys' skills did not decline.

Case B

Suzie said that she tried a lot of strategies to address their learning at home challenges. She said it was difficult to find out his learning style, but she tried to incorporate life skills throughout the day, as he struggled with focusing on academics and because he is highly dependent on her for everyday tasks that she says he can do by himself. Suzie says that her son has a short attention span and she needed to implement reward systems where she gave him "pop" if he completed work. Another difficulty was having to catch him at the right time for schoolwork because this was not during typical school hours. To begin work with him, Suzie said she avoided saying we are doing school, "because to him, schools, getting on a van and going to school." She had to change her approach to schooling. Suzie also explained feeling frustrated, especially when seeing others' social media posts littered with complaints of parents with typically developing children, when she was struggling with her "special needs kid." The break from their typical routine was hard and she had a smaller break from her son, as compared to when he was at the school

building. Suzie also felt bad that her son was missing out on social time and that it was also a lonely and isolating time for her. She said she was hoping to get through it and that she did the best she could and is ok with that. Ultimately, Suzie feels uplifted by realizing how much her son can actually read.

Case C

The difficulty of her son being out of his normal school routine was a big challenge for Emily. She outright said that learning at home “didn’t work.” Her son was not able to get the time away from his sibling that he needed and in general, the pandemic and learning at home elicited anxiety. Emily said that starting schoolwork would cause tantrums and that the entire experience was stressful. While Emily called a bad day frustrating and said that it was hard for her to see her child get frustrated, she said that there were also good days. Her son’s biggest success was his speech.

Cross Case Findings

Special challenges, uplifting successes, and emotional responses are themes identified during data analysis for Proposition 2. All three parents faced unique challenges, successes, and feelings during distance learning. The three mothers interviewed shared that engaging their sons in learning activities proved to be difficult. Reasons included that their sons were out of their routine, medication took effect at the wrong time, had a short attention span, and was not as effective since their mom was their teacher. All shared a sense of sadness for their child when he got frustrated or missed out on social interactions. Each of the moms also shared similar feelings as each other. These emotional responses to distance learning included frustration, stress, and thankfulness for the teacher and school’s support. Similarly, while each child experienced unique successes, each mom shared a success that occurred during distance learning.

Proposition 3: Parents of students with severe autism spectrum disorder have unique needs during at-home learning.

Case A

As presented in Proposition 1, it was clear throughout Cathy’s interview that her family had a set routine that they followed, which allowed them to get their schooling at home done. If supporting the students at home via live video conferences, as the teacher did, she needed to hold the meetings at a set time each day, for a maximum of 5 minutes or her sons would disengage. Cathy also shared that she received an “abundance of support [which] was so very helpful.” She continued, there “wasn’t ever a day that it was like okay I feel lost... and now I have nothing to do, I gotta totally come up with something.” The teacher provided Cathy with the right amount of extra work, work in multiple ways (in case her son refused to do work one way), visual schedules/step-by-step pictures of the day, iPads, made phone calls to the family, and dropped off her sons’ work. Cathy envisions turning an empty bedroom into a private workspace for her and her sons so that she can reduce some of the distractions her sons experienced while working in the living room, in hopes that they will be able to work for a longer duration of time. Within this space, she would continue to use the picture schedule and totes where she put her sons’ daily work.

Case B

The unique needs that Suzie and her son experienced centered around school hours that worked for them and the ability to have their own routine. Suzie realized that because of her son's medication, the best time of day for learning was not during typical school hours. For this reason, much of the time they worked on academics was right after breakfast and in the evening. They had a routine that revolved around her son's medication schedule; a bit part of that routine was a four-hour break in the middle of the day. Suzie shared that she needed leniency with schedules and support because her son was not able to participate in video conferences like others at school. Additionally, support from the teacher came in the form of individually scheduled video conferences that fit better with Suzie's son's schedule (for example, trying to meet at 1pm instead of at 8:30 am).

Case C

As evidenced by Emily's interview, the routine she was able to create prior to returning to work was essential for helping her son complete his schoolwork. After struggling to find a good routine once returning to work, Emily shared how important this is. She also noted that he was distracted by his environment since it was full of "all of his toys, and his show and his sister [which made it] nearly impossible to keep him focused." Throughout the pandemic and learning at home, she used car rides and repetition to keep him calm, help him learn, and work on his speech. In addition, Emily shared that the school, "gave us pretty much anything that we needed." This included advice, opinions, comments, concerns, accommodations, and schoolwork. While they did attempt to hold Zoom meetings with the teacher, her son would not engage and usually walked away.

Cross Case Findings

Themes identified during data analysis for Proposition 3 include: *a separate/reduced distraction learning space, the ability for parents to set their own routine and school hours, and good support from school (resources and materials)*. Even though each of the parents experienced learning at home differently, there were similarities amongst the three. Emily and Cathy shared a desire to implement a separate/reduced distraction learning space if at home learning occurs again in the future. They both shared that the distractions around the house may have limited their sons' productivity. All parents had a need for their own routine and school hours. Reasons for this varied. Suzie shared her family's routine revolved around her son's medication schedule and when he was most cooperative and productive. Emily's need for a unique routine and school hours was due to her work schedule. Providing instruction and learning support for her son at home during the day was effective, but because of going back to work, she needed to change the routine and hours during which she worked with her son. Finally, all three parents cited a need for good support from school, in terms of resources and materials. The mothers shared that their sons' teacher provided them with the work to be done, but also offered/held video conferences, and supported them by giving advice and talking to them about concerns and strategies.

Discussion

Parents reported that they had to take on more roles due to the COVID-19 containment. Parents had to manage their child's academic needs in addition to other responsibilities (working, home, and other parental duties). Cathy discussed her pre-COVID pandemic routine of completing

chores and errands during the school day in order to concentrate on her children's needs when they were home. During the pandemic, she had to do everything while tending to their needs. Emily also spoke about the disruption in routine after she had to go back to work. She could not ask her father to become the teacher once she went back to work and so she had to take on the role after her work hours. This finding of taking on more roles due to the pandemic aligns with previous research findings (Coyne et al., 2020; Garbe et al., 2020)

Engaging their children in academics at home, out of the school setting, as well as the disruption to their routine, were struggles all the parents faced. The disruption to the routine was sudden with no preparation for students, parents, or teachers. Two of the three parents attempted various strategies to replicate the school routine to some success. All three parents discussed that their children enjoyed going to school and had a difficult time understanding why they were no longer attending school and instead completing school tasks at home. These findings align with previous research, that parents faced a myriad of challenges during the containment period and parents of children with disabilities had additional challenges related to disability to overcome (Garbe et al, 2020; Kong, 2021).

The sudden lockdown without any preparation brought about struggles with well-being for their child and themselves due to the containment. All three parents shared feelings of stress during this time along with an appreciation for the teacher and school. They had to work with behavior and emotional issues due to the disruption in routine. One parent discussed a lack of support and not getting a break, ever, due to her child's unique needs. The Covid-19 pandemic and remote learning affected parents' well-being negatively (Asbury et al., 2021; McConnell & Savage, 2015; McStay et al., 2014; Smile, 2020).

Along with the many challenges related to distance learning, each parent interviewed was able to articulate lessons learned as a direct result of containment. Cathy learned first-hand how much her sons can do. Even though she was attentive at IEP (Individualized Education Program) meetings and read the graphs, she had not been fully cognizant of their skills. She also stated that she had wanted to be a teacher, but after this distance learning experience she does not want to be a teacher anymore. Suzie learned that she was sending her son to school on a schedule of medication that was not conducive to learning. She did not realize this until she was the 'teacher.' Emily stated that from this experience she and her son need to work on having patience. She also stated "Props to all of the teachers, that's all I got to say. God bless them because it is not easy."

Limitations

Despite the convenience sampling, one-time interview, and small sample size, these results bring forth several questions to address for the future. First, how can schools pre-emptively prepare for future sudden changes to instructional delivery, particularly for students with severe autism? Secondly, can potential models of delivery be explored and evidenced for implementation rather than parents and teachers navigating instruction through trial and error? Third, how can public entities develop and implement plans for support of parents with children with significant challenging needs during sudden, unprecedented changes in daily life? Future research (educational, public policy, social services, etc.) should determine evidence-based practices to address all these questions.

Suggestions for Practice

Based on the findings of this study, educators are encouraged to heed several suggestions if presented with another situation of distance learning. First, they should develop and provide individualized resources to parents to explain the significant change in routine using a format that is accessible to their child's specific processing needs. A readily available explanation (social story, video, book) for children or individuals with disabilities will typically not be appropriate for a child with severe autism. Secondly, educators need to remain accessible through multiple forms of contact (phone, email, text, video) to assure parent participation and comfort. A parent and child may be isolated with minimal support. Frequency of contact from educators should be determined based on the needs of the parent and child rather than a preset amount for all. Through this communication educators need to provide parents with resources, advice, behavioral strategies, clear expectations, and consistent reassurance that they are doing the best they can in addition to their already full day of expectations. Third, as indicated through the interview results, educators should strongly encourage parents to create a separate and or distraction free location for school time. Some parents may require suggestions and materials to accomplish this.

Conclusion

The purpose of this research study was to explore the experiences of parents of children with severe autism during school closures during the COVID-19 pandemic. Our findings aligned with previous research on distance learning for students with disabilities and research on the COVID-19 pandemic. All three parents had to schedule schooling around their needs including work schedules, medication times, and times needed to also teach a sibling. Finding the routine that worked best for their family and children was important. All three parents discussed emotional responses to distance learning including frustration, stress, and thankfulness for the teacher and school's support. Similarly, all three parents discussed unique successes. Finally, all three parents cited a need for support from school, in terms of resources and materials.

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A Rural Community's Role and Process to Secure Work Experiences for Youth with Disabilities

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Abstract

The purpose of this study was to gather the perspectives of community partners regarding the work experiences for youth with disabilities to provide an understanding of (a) the community's role and (b) how connections in rural communities were formed. This study provided a deeper understanding of the processes that influence the phenomenon of transition to work for rural youth with disabilities. Employing a basic qualitative research design, information was captured regarding community members' perspectives on their roles and experience partnering with rural schools to transition youth with disabilities to work.

Keywords: rural special education, transition to work, youth with disabilities, school-community partnerships

A Rural Community's Role and Process to Secure Work Experiences for Youth with Disabilities

Despite the efforts to improve the postschool employment outcomes for youth with disabilities, youth continue to struggle to find decent wage jobs in inclusive work environments, which is especially important for successful engagement in employment (Lindsay et al., 2021; Newman et al., 2010). The 2019 Youth Transition Report showed an employment gap of 17 percent between youth and young adults (ages 14-24) with and without disabilities (Cheng & Shaewitz, 2019). As persons with disabilities age, the employment gap gets significantly worse. Sixty-one percent of adults with disabilities (ages 25-64) are not participating in the labor force compared to 17.6 percent of those without disabilities (Cheng & Shaewitz, 2019). The data suggest that the longer youth and young adults with disabilities are unemployed, the less likely they will be able to find a job.

Youth with disabilities who live in rural areas have more difficulty gaining access to work experiences and obtaining paid employment (Irvin et al., 2012; Kinnison et al., 2005; Meece et al., 2009). Those who find jobs are more likely to earn lower wages and work in jobs with little opportunity for career advancement or technical training (Commission for Rural Communities [CRC], 2013).

Youth's experience with work before they leave school can positively or negatively impact their future employment prospects. Significant research has addressed transition program components and employment outcomes for students with disabilities; however, these studies have focused primarily on the activities and services provided in the classrooms and the school personnel who deliver those services (Hasazi et al., 1999; Lawson & Everson, 1994; Test et al., 2009; Williams & O'Leary, 2001).

Other studies have focused on disability and employment; however, a majority of those studies examined disability and its influence in the workplace (Chiang et al., 2012; Lee et al., 2017; Walsh, 2010) and employers' attitudes toward hiring individuals according to the type or severity of their disability (Burke et al., 2013; Copeland et al., 2007; Unger, 2002;). These studies of employers' attitudes have shown inconsistent findings due to variations in research design. For example, employers had greater concerns about hiring individuals with mental disabilities than individuals with physical disabilities. In contrast, other studies showed that employers had productivity and performance concerns about individuals with physical disabilities (Unger, 2002). Although these studies were not focused solely on the perspectives of businesses and their perspectives of their school-community partnership, these studies shed light on how employer perspectives can have an adverse effect on the experiences of individuals with disabilities who are looking for employment.

Furthermore, all communities are not the same; rural and urban communities, for example, differ in significant ways. Rural communities have their own characteristics, which render their circumstances dramatically different from those of urban communities. Rural areas have the highest rates of deep poverty and unemployment and poor growth in the labor force when compared to urban areas (U.S. Department of Agriculture [USDA], 2021). Rural communities are smaller and contain fewer businesses, and a smaller number of companies mean fewer employment opportunities for job seekers. It most certainly is a challenge for rural youth with disabilities to improve their employability and obtain paid employment (CRC, 2013). According to the United States Department of Agriculture (USDA) Economic Research Service (ERS) (2018), there is a wage gap of \$7,622 between the average median earnings of urban and rural adults, ages 25 and older. Rural youth who find employment are more likely to earn lower wages and work in jobs with little opportunity for career advancement or technical training. In many cases, the ability of youth to access training and work experiences is severely limited, even for the most promising youth.

Activities such as career exposure, job shadowing, volunteering, service-learning, internships, and paid employment promote the development of employability and originate in the community. The community is where youth can practice and develop essential work habits and skills to improve their employability (Benz et al., 2000, Cook et al., 2015). All these activities can potentially serve as powerful learning tools primarily when delivered in authentic workplaces. However, access to these experiences is limited and preparation efforts for students with disabilities who desire to enter the workforce and gain a living wage are less than adequate (Lindsay et al., 2013).

The community can also provide vital feedback and information about the development of work skills and the work performance of students who participate in the community. Community members can be the source to share knowledge of where the industry is heading and identify industry-related skills that students need to be competitive in the workforce. The community can also provide recommendations for enhancing or expanding employment partnerships and job networks that support secondary transition programs (Carter et al., 2009; Mazotti et al., 2020). In rural communities, gaining input from community members is especially important because job opportunities and employment resources are often limited in rural areas and may require innovative and strategic solutions to secure community connections.

In the literature, community experiences and work experiences are strong predictors of post-school employment (Carter et al., 2012; Mazotti et al., 2020; Solberg et al., 2013; White & Weiner, 2004). Providing youth with these experiences early in their high school years can provide numerous benefits that include developing essential work habits and work skills, gaining occupational awareness of industries in the community, shaping their work preferences, expanding job networks and work history, and building relations with employers and coworkers who can be used as future job references. Although relationships with the community can offer valuable knowledge to transitioning youth, forming school-community partnerships is an ongoing challenge among secondary transition programs (Carter et al., 2016).

Transition to work requires collaboration focused on post-school employment outcomes and the involvement of all stakeholders (National Technical Assistance Center on Transition [NTACT], 2015). Community partners may have the most important role because they control the environment where youth can practice and develop the work habits and skills needed to improve their employability.

Bronfenbrenner's ecological systems theory (1979) supports the idea that a person's development is influenced by everything in their surrounding environment. The framework provides an ecological approach to understanding the contexts surrounding a person's development at a particular place and time (Garcia & Dominguez, 1997; Gil-Kashiwabara et al., 2007; Mithaug, 1996; Trainor et al., 2008). The environment of a student transitioning to work includes their family, their school, and entities in the community. Transition to work is a unique time and period when the school's role in providing direct support to the student transfers to the community. Through a reciprocal relationship, the community and the school will influence the student in ways that facilitate or inhibit their development toward employability and obtaining work. Bronfenbrenner's ecological systems theory provided the framework for this study. It supported a better understanding of the factors that can influence the development of rural youth with disabilities who are work-bound.

The purpose of the study was to capture a rural community's role in securing school partnerships and supporting rural youth with disabilities who are transitioning to work. Doing so provided an understanding of (a) the community's role and (b) how connections in rural communities are formed.

The following research question guided this study: What are the roles and actions of community members who purposefully partner with rural schools to transition youth with disabilities to work?

Method

Basic qualitative research was used for this study to gather an in-depth collection of the experiences of rural community members who represented businesses or community organizations and collaborated with schools to provide work experiences and activities for youth with disabilities. The types of data sources included one-on-one interviews, documents, and an observation at a worksite.

The population for this study included people who resided in rural towns on the island of O‘ahu, Hawai‘i. The Bureau of Labor Statistics (2000) identified the term *rural* by its land type. The towns in this study were categorized as *rural distant* because the average distance from the rural towns to the nearest urban city was 24 miles. According to the Bureau of Labor Statistics, *rural distant* refers to a territory that is located five to 25 miles from an urbanized area. The average population of the rural communities was 15,000 residents.

The target population consisted of community members who represented businesses or organizations that (a) represented competitive, supported, or integrated employment, (b) provided work-based learning settings for youth with disabilities, and (c) partnered with a rural school to train youth with disabilities transitioning to work. Four rural high schools were contacted to obtain information on organizations and businesses for which they had partnerships. A total of fourteen potential participants were identified, an average of 3.5 partnerships per rural high school, and the number of students participating at each community work site ranged from one to four students.

The participants had to meet one or more of the above inclusion criteria to be considered eligible as a participant. Eligible participants who met the inclusion criteria may have been disqualified from participating because they also identified themselves as being a provider of, or as representing an out-of-school adult employment program, a sheltered work or unintegrated work environment, or a state or federal public agency.

Participants

Of the four rural high schools, 14 potential participants were identified by school personnel as meeting the inclusion criteria. Of the 14 possible participants, 11 volunteered to participate, and 10 (71%) participated in the study. Of the 10 participants, six represented businesses and four represented organizations from a rural community. Six participants had maintained a school partnership for between one and five years. Four participants had maintained a school partnership for 10 to 15 years (see Table 1).

Table 1
Characteristics of Participants

Participants	Community Partner Type	Years of Partnership
Participant 1	Organization	5
Participant 2	Organization	15
Participant 3	Business	1
Participant 4	Business	3
Participant 5	Organization	1
Participant 6	Business	1
Participant 7	Organization	2
Participant 8	Business	12
Participant 9	Business	10
Participant 10	Business	15

All 10 participants completed a four-question interview. Semi-structured questions in one-on-one interviews elicited each person's perspective on their experience in partnering with schools and their roles in developing youth work skills. Documents were gathered and analyzed to verify the sequence of events that occurred over time (Miles & Huberman, 1994) to secure and maintain partnerships, to identify the roles of community members, and the types of work and community experiences that community members were providing. Documents included communication memos, schedules of activities, flyers for school-related activities and events, improvement plans, and yearly reports. One observation was conducted at the worksite in the rural community to gain a deeper sense of the community's role, the types of work activities offered, and factors that influenced the school-community partnership. Interview transcripts, documents, and field notes from the observation were organized and analyzed to answer the research question.

Procedures

Interviews proceeded using open-ended conversations and semi-structured interviews. The interview structure remained flexible and open to exploring areas that emerged from open-ended discussions relevant to the topic of study (Merriam, 2009). The following interview questions were used.

1. Describe your role and actions in making connections with the school.
2. Describe your experiences of collaborating with the school.
3. What factors directed you to establish school-community connections?
4. How was the process structured?

Participants were asked to provide documents relating to their involvement with the school and their provision of work-based opportunities for rural youth with disabilities. These documents included copies of school flyers and copies of email memos between the school and community partners. Other documents from public websites, such as school improvement plans and annual school reports, were gathered. Observations were used as a third source of data. Participants were asked to provide upcoming dates of meetings or activities relating to the study that would be valuable to observe. The observation occurred at a worksite to see the actual work activities performed by youth with disabilities. During the scheduled observation, an observation protocol was used to validate the activities relating to the community's role, the factors that influenced the school-community partnership, and the types of work tasks performed by students. By the end of the data collection period, sources of data collection included transcripts from ten face-to-face interviews, documents in the form of flyers and newsletters, and one observation from a single event that occurred at a worksite.

Data preparation included organizing the data from flyers and newsletters, typing up field observation notes, and producing a word-for-word transcript of the audio recordings taken from interviews. The participants assisted in reviewing the data for mistakes in the transcripts or observation notes. All data was transferred to language-based data to be used for data analysis.

Creswell's (2009) six-step process was used to guide data analysis. Data analysis was commenced by a single researcher by reviewing the language-based data several times to gain a sense of familiarity with the data. Introductory notes written in the margins depicted thoughts

about the data (Creswell, 2009). Sentences, phrases, and paragraphs that appeared to be meaningfully related to the research question were highlighted.

Tesch's (1990) eight-step coding process supported the analysis of the language-based data. The data was used to name a combination of predetermined and emerging codes (Bogdan & Biklen, 1992). To account for the difference in judgment that can be made during the coding process, controlling the coding accuracy was accomplished by reviewing the data for new codes that might have been missed. There were times when data was assigned more than one code. Analysis of the codes generated major themes by clustering each data set by similarities to illuminate patterns.

Then, constant analysis of these patterns was used to support the emergence of overarching themes. Further examination of themes generated a deeper understanding of their relations and interconnections. This process combined and reorganized the data sets according to their relations and interconnections.

To establish the credibility of the data analysis process, multiple reviews of the data and codes were used to ensure the accuracy and credibility of the data to solidify the major themes and patterns. In the results, thick descriptions include quotes to represent the experiences of the participants accurately.

All participants were offered the opportunity to review and check the accuracy of the data collected through member checks. One participant requested to clarify a response to one interview question by substituting the terms and phrasing that was initially provided in the interview for a more accurate description. The other participants made no requests for changes.

Results

The data revealed that the community and the school maintain a cooperative partnership to meet the needs of the community and the school. The three overarching themes include: factors that influence school-community connections, community roles, and processes to secure partnerships (see Table 2).

Table 2
Summary of Themes and Descriptions

Themes	Descriptions
Community Roles	• Assign work duties that best fit the student's interests and needs. • Provide a safe and inclusive environment for the student to develop work skills. • Teach workplace behaviors and technical skills. • Train the student supervisor to support the student in the workplace. • Provide feedback to the teacher on student performance.

	• Provide staff training and support to work alongside students with disabilities.
Process to Secure Partnerships	• A 6-step process included recruitment, intake, developing a training plan, training, providing progress, and ending the work experience. • Responsibility to raise youth from the community. • Meet the needs of the business or organization. • Responsibility to take community action.
Factors that Influence School-Community Connections	

Factors that Influence School-Community Connections

The community partners established connections with a school for (a) raising youth from the community, (b) meeting the needs of the business, and (c) taking care of the community. Nine participants felt it was their responsibility to take care of the community. One participant stated, "I live in the community, so I have an interest here". Another participant said, "The bonds in the community are deep, strong, and lifelong. We're very connected and committed to each other." One business partner said, "It's been a great help on our labor as well as our morale within the kitchen." Another business partner commented "the school is a big part of the community and is the only high school in the community." During the observation at the worksite, students working as volunteers instilled a positive influence on the school-community partnership. The students met the needs of the business by reducing the time other staff spent on food preparation. Students developing their work skills at an actual worksite also helped relieve businesses of hiring extra staff to cover during the week. This was a financially smart investment for businesses located in rural communities. One participant said, "You put the two together, working together, you end up with a lot of good stuff."

Community Roles

The community members stated that their primary role was to (a) provide a safe and inclusive work environment and (b) help students develop their work skills. Upon analysis of the data gathered from documents such as teacher-made flyers and email memos, there was no information to identify the community's roles. Regardless, some community partners met with their staff to inform them about the student and discuss how they could support and welcome the student into their workplace. For example, one community partner said, "I tried to make it seem very welcoming and normal for everybody but I had to train my office to see it that way because some felt she's not really doing the work." Another partner felt that safety in the workplace was important "to make sure they're not going to trip or be hazardous." Community partners met with teachers to discuss and assign work duties that would be a good fit for students. One community partner said, "The task is to find where they fit. It's a learning curve. But, once they get it, it's a big thing for them." Another community partner said, "They are expected to show up on time. They are expected to call in if they couldn't attend."

Process to Secure Partnerships

A six-step process was constructed based on the interview responses, documents, and observations. The process began with recruitment, to intake, developing a work training plan,

training, providing progress, and ending the work experience. It should be noted that not every participant completed each step of this process. Figure 1 illustrates the six-step process from top to bottom. The steps to establish school-community connections are interrelated and completed in the order presented. The process is explained in the following section.

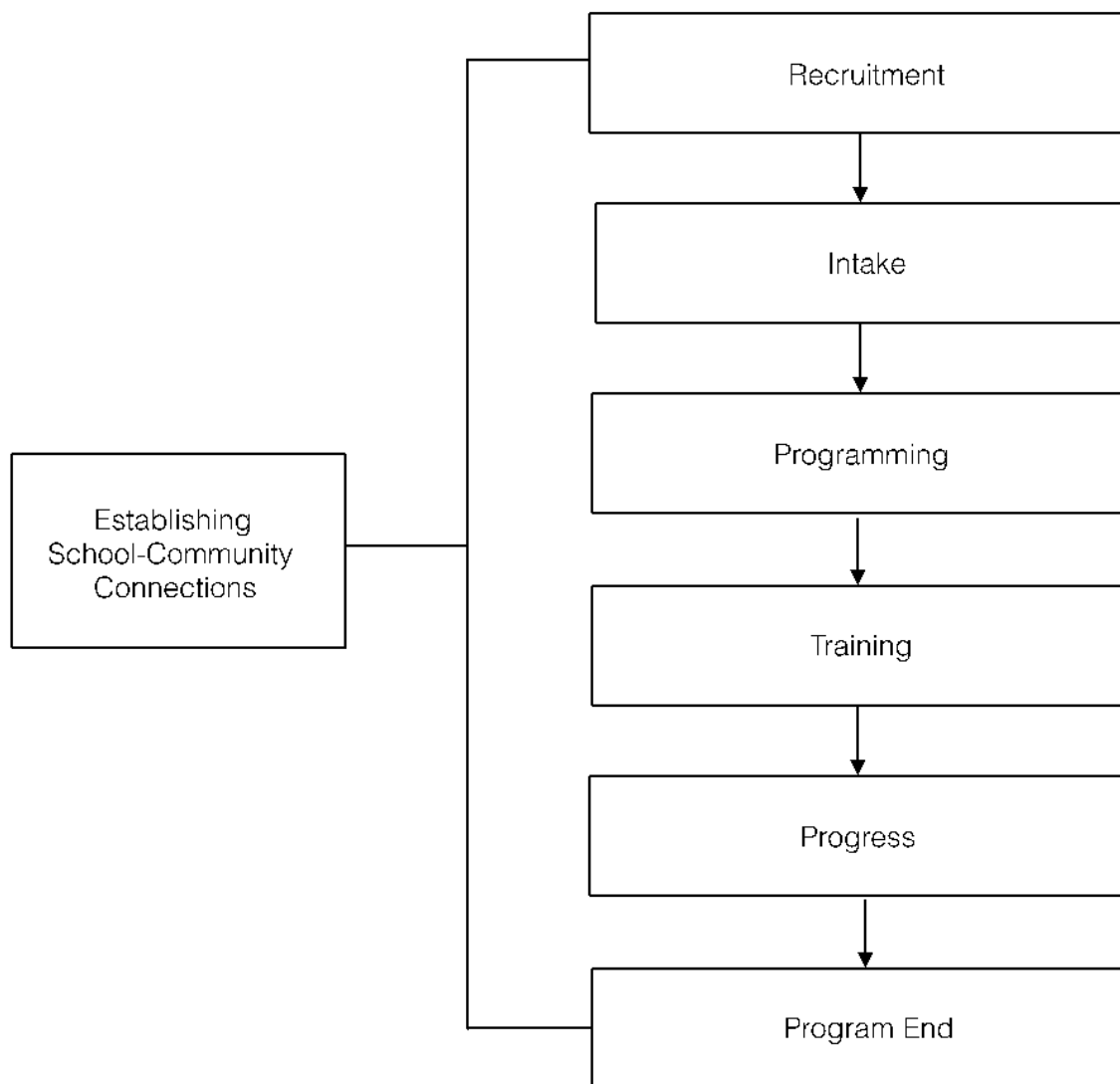


Figure 1: *Process to Establish School-Community Connections*

Step 1. Recruitment

Recruitment was initiated either by the school or the community partner. Recruitment was informal, occurring through non-prearranged visits or phone calls asking for support. For the most part, businesses reached out to schools when needed, and community organizations reached

out to schools when funding became available to support students. One business said, “We reached out to the school because we wanted to get the kids from the culinary department with us and then it kind of branched out to other students.” Another business said, “The teacher exercises here and approached me. She asked whether there was an opportunity for her students to come in and gain some work experience.” In this particular event, a teacher-made flyer was presented to the business, including a list of work training opportunities students were interested in. Another participant shared that when the school initially approached them, they did not want to make a hasty decision, so they researched about the school and called other businesses in the community to see if they were familiar with the school’s program for students with disabilities. One organization said, “We were trying to get a student voter registration project running and they [school] saw that we had volunteer opportunities and they came to us.”

Step 2. Intake

The intake process was a series of activities before the student began their community or work experience. During this process, the community partner, the teacher, and the student completed documents and participated in various activities to set up the community or work experience. Types of documents included parental consent forms, background checks, and proper forms of identification.

One business partner mentioned that a survey of the workplace was conducted by a school representative before students were assigned to the workplace “They surveyed the place to see what kind of work they [students] can do. Then they [student] come and visit to take a look if they [student] are able to do it.” The business partner answered a series of questions to describe the job duties and the types of tasks performed by employees. The participant further stated that the survey served to “find a good fit.” The time required to complete a worksite survey was one day.

Other activities included participating in student interviews and meetings with parents and the school to discuss the student in the workplace. Interviews and meetings were held at the worksite. The intake process typically began with a face-to-face meeting to share what the students would do and then included a follow-up meeting to finalize the details before the student’s first day. One business said the teacher “would just call and ask for an appointment to see me because she had a student who could come in and work.” They set an appointment to discuss the student and then scheduled the student to begin work. One business said, “the biggest part was to actually interview the student then make that decision if we’re going to use them or not.” Based on dated documents and the responses provided by participants in interviews, the time to complete the entire intake process ranged from two weeks to eight months. Sites that required students to obtain background checks and documents such as a state identification card took up to eight months to complete the intake process.

Step 3. Developing a Training Plan

All 10 participants described the training plan development before the students began their experience. This involved a collaborative meeting to discuss and develop training for the student(s). This meeting was often held in the community at the community partner’s worksite. Participants mentioned that during this meeting, the following activities often occurred:

1. Teachers shared a syllabus or information about the student's abilities and needs.
2. Community partners shared about their entity and the type of jobs and skills commonly performed in the workplace.
3. The teacher and community partner identified the type of duties and skills the student could learn in the workplace.
4. The teacher and community partner prepared a work schedule of the days, hours, and duties the student would perform in their experience.

One business explained they wanted to ensure that the student would (a) find a good fit, (b) learn something new, and (c) feel part of the office. Another business said that students were at "different levels of learning, so we had to differentiate the curriculum." One organization commented that the teacher provided suggestions of tasks the student could complete in the workplace. The school and community partner also prepared a schedule that worked best for the student and the community partner. One business stated, "It's trying to get the kids to come" and getting "their schedule to coincide with ours."

The training plan was usually completed in two to three meetings between the teacher and the community partner with at least one of those meetings being face-to-face. Sometimes, the collaboration was conducted over the phone or via e-mail. Participants noted instances when the student, the parent, or the student's supervisor were present in the collaboration meeting.

Community partners often designate a lead person to take responsibility for training the student or the student's job coach on the job duties and work expectations. This training occurred either on the first day of the student's work experience or was scheduled before the student's first day of work. One participant said, "The only thing we had to invest in was the time to train the coach or the student. It didn't take too long." Another participant explained that students learned their duties on the first day and spent the rest of the week practicing at their own pace. After students learned their duties, they were given a specific time to complete their tasks. For example, students were given 30 minutes to make a batch of cinnamon twists.

Step 4. Training

All participants taught students a combination of workplace behaviors and technical skills. Examples of workplace behaviors included customer service skills such as interacting with customers and employees, managing time to complete tasks, and following directions. Technical skills included tasks that required the operation of common office or kitchen equipment. Participants who provided work readiness training on a high school campus taught soft skills and job search skills such as completing job applications, developing resumes, and practicing for job interviews. The community or work experiences lasted anywhere from a few weeks to an entire year. During the interviews, participants who hosted students for a few weeks to a few months mentioned that the time to train and retrain students was difficult and they preferred a longer experience.

Step 5. Communicating Progress

Progress was communicated by the community partner to the student's teacher at least monthly and weekly regarding the student's progress. Sometimes, teachers would stop to "talk story" with the community partner. At other times, the communication was accomplished with a simple e-

mail or phone call to “check-in” about the student. One participant stated, “They would drop by to make sure things were going okay” and ask “if I had any questions. That made me feel good that someone was following up and it wasn’t just left to us to take care.” Participants communicated about schedule changes. One participant said, “I would inform them of what we’re doing” and “I always make it a point to tell them what we accomplished that day.”

Step 6. Program End

A variety of activities occurred at the end of a student’s experience. Participants wrote letters of recommendation for students who performed well and offered to retain them as volunteers to give them more time to practice their skills. At times, students were offered employment. One participant said he wrote a letter of recommendation: “She was going to culinary school and I knew a couple of the people over there”. One out of all of the participants said that the teacher would ask if their business was willing to hire the student. Having students in the workplace allowed businesses to observe how the student worked. One business said, “He worked with me for about one year and then, after that, I hired him and he’s still with me for about three years now.” The business went on to say that they were more inclined to hire someone who already knew the work duties rather than training someone new.

Discussion

Prior to this study, we did not know the community’s role in forming partnerships with rural schools to support the transition to work for students with disabilities. It is evident that community partners experienced a shift in roles and responsibilities when partnering with schools. It required a working knowledge of disabilities and how to train students with different types of disabilities. For example, businesses were accustomed to ensuring a safe work environment, however, when working with students with physical or cognitive limitations, they took extra precaution at the worksite to prevent slips, trips, and falls. Also, businesses were not familiar with customized employment and had to find tasks that were a suitable match based on the student’s abilities. These roles were not typical of community members who manage businesses and organizations. This supported Bronfenbrenner’s theory (1979) and its idea that a student, during the transition, is crucially dependent upon the presence and participation of their innermost circle to transition from school to work.

Luecking (2004) stated that competent professionals assist in matching youth to specific job assignments, ensure effective accommodations, and provide follow-up for youth and the business. Based on the findings from this study, half of the community partners did not have prior experience working with people with disabilities. The community partners would have benefitted from disability awareness training. School personnel facilitating the transition to work should utilize their knowledge and experience to foster the school-community partnership. Training and consultation can improve the community’s competence in working with students with disabilities, increasing their willingness to continue and possibly expand their partnership to serve more students with disabilities. This indicated a possible disconnect between the school and the community partners resulting from the lack of knowledge of what everyone can offer. More importantly, based on Bronfenbrenner’s theory (1979), this disconnect could profoundly affect the development of students trying to improve their employability and ultimately obtain paid employment.

Fabian and Luecking (2015) indicated that if collaboration directly focused on post-school outcomes and the systems that serve them, employment rates would be improved. This study found that the community partners were unaware of students' postschool employment goals and would have been more mindful and selective of the skills that students were developing if they had known the goals and interests of students. Rowe et al. (2014) identified observing and documenting students' attainment of desired behaviors and skills as an essential program characteristic of community experiences. The community can provide vital feedback and information about the development of work skills and the work performance of students who participate in the community (Carter et al., 2009). Despite the valuable feedback that teachers gathered about students' progress, teachers generated no documentation to track the actual progress and performance of students in their community and work experiences. Consequently, the community partners were unsure if they were making a difference and schools may have missed opportunities to maximize the development of students' work skills, which is necessary if their goal is to be employable and obtain paid employment.

The focus of this study was the processes that produce the phenomenon of employment for rural youth with disabilities. Based on the findings, teachers rarely asked the community partners if they were willing to hire the student at the end of their experience. Only one out of 10 community partners mentioned that a teacher persistently asked throughout the school year for paid job opportunities. This study showed that even when rural schools had community partnerships and offered community and work experiences for students, their efforts to contact the community partners for paid employment were inadequate and resulted in an abrupt end to the student's community experience and perhaps a missed chance to secure paid employment for the student. If the postsecondary goal of students is to obtain employment, teachers need to keep the end goal in mind and help the student seek paid employment from the community.

Most responses from the community partners voiced their personal interest and civic responsibility to focus on the community's future. They viewed youth as the solution to sustain their rural community and felt it was worth investing the time and effort to teach and raise their own youth so that, in return, they might grow their own roots and remain in the community. This information can be insightful for schools as they self-assess their recruitment efforts.

The National Technical Assistance Center on Transition (NTACT, 2015) identified three main reasons employers become involved in school-community-business partnerships: to meet the company's need, an industry need, or the community's need. Elrod and Franklin (1994) stated that businesses in rural areas are more likely to take direct ownership and feel pride in partnering with their local school. Similar to findings by Elrod and Franklin (1994), this study indicated that rural community partners placed a greater value on meeting the needs of youth and the community than on meeting their own business needs. This study revealed the commitment and sense of responsibility that members of rural communities possess. Luecking and Mooney (2002) suggested that schools engage effectively with employers by identifying employers' needs and highlighting the students' skills that meet those needs. Perhaps, in rural areas, schools need to not only highlight how the business' needs will be met but also emphasize how the partnership will benefit youth and the community.

Limitations

The study was limited to the basic qualitative study design utilizing “(a) how people interpret their experiences, (b) how they construct their worlds, and (c) what meaning they attribute to their experiences” (Merriam, 2009, p. 23). The study centered on rural school-community partnerships and due to limitations with time and money, the study was limited to its geographic area. The sample consisted of 10 participants accessed through four rural high schools.

Implications for Research

If the goal of community and work experiences is to develop employability and obtain paid employment, an implication for research is to examine the type of work skills students acquire across both school-based and community-based programs to gain paid employment. Examining the acquisition and development of skills and how students are being taught across both settings might inform the field of specific factors necessary to enhance employability and obtain paid employment. It may be beneficial to use a mixed-methods approach to quantify such data. For example, a survey can be used to gather information about the types of work skills students attain and interview questions could be used in focus groups to identify how students are being taught across school-based and community-based programs.

Implications for Practice

This study has several implications for practice that can influence work experiences and paid employment for youth with disabilities. In this study, the community partners were not given clear roles or expectations prior to their participation. This knowledge can allow schools to examine and establish clear roles and expectations for everyone involved. In doing so, everyone will have a clearer idea of the type of training that offered and how each person will support one another and the student to improve their employability. Businesses may also be more inclined to partner with schools with clear expectations.

The six-step process to establish school-community connections can help stakeholders operationalize the process of securing work experiences for youth with disabilities. Often, schools only have one transition coordinator. In this study, 40% of the participants were fairly new and had less than two years in partnership with the school. This process can be used to familiarize oneself with actionable steps to strengthen current partnerships and secure future partnerships.

Teachers, as consultants, can provide follow-up and help manage changes that might occur from implementing training, accommodations, and support in the workplace (Luecking & Mooney, 2002). In this study, following up on the students' progress was informal and was performed monthly and sometimes weekly, however, it went undocumented. It is critical to monitor the progress of students performing their work skills because employers are more likely to offer employment to someone who already can perform the work duties than to someone they have to train. Monitoring to improve the work skills of students can lead to paid employment. This information will allow schools to be more strategic and ensure that the time and effort spent during community work experiences to improve employability is maximized. This may give students their best chance to secure paid employment at the end of their work experience.

Those community partners who trained students for a few weeks to a few months preferred a longer experience. It is recommended that schools begin the intake process as soon as possible to lengthen the time that students spend in the workplace. When students remain in the workplace for a longer duration of time, employers do not have to train new students as frequently. Students are also given more opportunities and time to develop their work skills, learn the specific job duties, and increase their chance of being offered paid employment from the community partner.

Conclusion

The community may play the most important role for youth with disabilities trying to obtain paid employment. Identifying the roles of all shareholders from the beginning is a critical component of community and work experiences because the experience will require numerous collaborative activities. The findings indicated that partnerships in rural communities were limited, a fact that stressed the importance of maximizing the available resources from existing partnerships. Although community and work experiences provide opportunities for students with disabilities to access employment experience and participate in various inclusive activities that promote employability, this study revealed that many youths with disabilities complete high school without accessing these valuable experiences. Missed opportunities to experience valuable experiences are still common for many youths with disabilities. However, one strength of rural communities is their sense of responsibility to raise their youth and sustain the community. Rural schools can tap into this strength by establishing more opportunities for the community to be involved with youth before they complete high school. Findings from this study highlighted the importance of involving all who are connected with community partnerships to meaningfully address planning, monitoring, and supporting youth in community and work experiences. The school alone cannot successfully address these issues. Efforts to improve the post-school employment outcomes of students with disabilities will require the involvement of teachers, employers, organizations, community members, parents, and students with disabilities.

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Building Communities of Practice: Initial Perceptions of an Interdisciplinary Preparation Program for Special Education Teachers and Social Workers

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Abstract

Pedagogical knowledge has been identified as an essential factor for impacting the learning, behavioral, and social emotional outcomes for children with disabilities, particularly students with emotional disturbances (ED). There are many professionals in and out of the school environment who work with children with ED. Oftentimes, these professionals are required to have specialized knowledge and skills. Unfortunately, they acquire these skills and knowledge separate from each other. Therefore, this 5-year interdisciplinary project funded by the U.S. Department of Education, Office of Special Education Programs (USDOE, OSEP) was designed to enhance the skills and knowledge of special education teachers and social workers regarding students with ED. The purpose of this study was to explore participants' perceptions of interdisciplinary teacher preparation. The study adopted a basic qualitative (i.e., content analysis) design. Each question was analyzed to capture the emerging categories. The results for each question are discussed in detail. Some recommendations for teacher educators and practitioners are provided.

Keywords: interdisciplinary, special education, school social work, educator preparation, content analysis, emotional disturbance

Building Communities of Practice: Initial Perceptions of an Interdisciplinary Preparation Program for Special Education Teachers and Social Workers

In the United States, teacher preparation began in the mid-19th century. The two-year teacher education programs focused primarily on the dissemination and application of instructional methods and academic content instruction to women as they transitioned into their role as classroom teachers (Bohan & Null, 2007; Paterson, 2021). During the 20th century, education programs in the U.S. began to take shape and the university model (i.e., clinical sites for the preparation of teachers) expanded into general, regional, and state teacher's colleges (Paterson, 2021). Teachers sought access to higher education and advanced degrees (Labaree, 2008). As a result, education programs evolved into colleges and schools of education with specialized programs (Goldin & Katz, 1999).

According to the National Center for Education Statistics (NCES, 2022), there were approximately 3,600 degree-granting postsecondary institutions in the U.S. during the 2020-2021 academic year. Of course, these almost 3,600 colleges and universities can be further divided into two- and four-year public colleges, private for-profit and non-profit schools, as well as

further divided into subcategories of two- and four-year colleges and universities (NCES, 2022). However, according to Moody (2021) higher education has experienced numerous closures and mergers for various reasons (e.g., financial, lower enrollment, etc.). Some of those closures and mergers involved entire universities, such as Marymount California University while others involved specific colleges on campuses (Bauer-Wolf, 2022).

Kuenzi (2018) noted that there were approximately 26,000 state-approved teacher preparation programs in the U.S.; however, there has been a sharp decline in student enrollment in teacher preparation programs due to alternative route to traditional teacher preparation programs (Partelow, 2019). NCES (2022) further reported that 53 colleges closed in 2019-2020, and this presents unique challenges, especially to colleges and schools of education to determine contributing factors to this decline.

In Call for Action for American Education in the 21st Century (Clinton, 1996), the goal was to have qualified and committed teachers for every classroom. This is still true today, but perhaps now is the time to look more closely at building stronger teacher preparation models. Entities concerned with teacher preparation such as policymakers, colleges and universities, and teacher educators must consider more progressive knowledge content that includes intersecting areas of knowledge across multiple disciplines. PreK-12 students are complex human beings and they come to classrooms with a myriad of intersecting needs and concerns (Stolz, 2021). No longer should teachers be prepared in silos or in separate tracks. One solution to this persistent problem was to cultivate a co-teaching model between special and general education teachers. Although widely used, the co-teaching or collaboration model does not address the issue of teachers being trained separately during their preparation programs. One way to address this issue could be through interdisciplinary programs.

Interdisciplinarity to Address Unique Student Needs

Recently, interdisciplinarity has been posited as a possible model to address the complex needs of students and as a way to work collaboratively with other professionals in an effort to mitigate increasing professional demands with the goal of developing more effective teachers (Goldstein, 2014; Schijf et al., 2022). Many of these complex problems and professional demands may require more than the knowledge gained in teacher preparation programs to solve problems. Interdisciplinary learning is described as the “integration of multidisciplinary knowledge across a central theme or program” (Ivanitskaya et al., 2002, p. 95). Teacher education programs must begin to relay the importance and support the application of collaboration, inquiry, and involvement for pre- and in-service teachers as well as related service professionals.

Benefits

Interdisciplinary learning in education has been debated for decades. It is not a new concept. In fact, researchers have documented this type of learning throughout the 20th century across different disciplines (Brassler & Dettmers, 2017; Ivanitskaya et al., 2002; Wellmon et al., 2009). The research is replete with the benefits of this model of teacher preparation (e.g., enhanced critical thinking and metacognitive skills, more in-depth coverage of topics, synthesis of ideas from multiple perspectives).

Ivanitskaya et al. (2002) found that exposure to interdisciplinary thought during an interdisciplinary Master of Arts and Humanities program leads to “more advanced epistemological beliefs (i.e., how one constructs knowledge) enhanced critical thinking and metacognitive skills, and an understanding of the relations among perspectives derived from different disciplines” (p. 95). In another study designed to enhance interdisciplinary competence, Brassler and Dettmers (2017) conducted a pre-post study of 95 students enrolled in courses that utilized either problem-based or project-based learning. They found that the students’ interdisciplinary skills, reflective behaviors, and recognition of disciplinary perspectives were enhanced when a problem-based learning (PBL) approach was implemented. Finally, Wellmon et al. (2009) identified six categories regarding students’ perceptions of learning, including a) better understanding of the professional roles of others, b) increased awareness of professional role overlap, c) a value for the importance of collaboration, d) collaboration can lead to conflict and competition during collaboration, e) an appreciation for leadership, and f) development of professional competence and confidence in their own abilities as part of a team. The benefits for teacher candidates and ultimately their PreK-12 students are numerous. However, implementation can sometimes be difficult.

Barriers

Despite the numerous benefits of interdisciplinary learning, there are several potential pitfalls to the implementation of this model during teacher preparation. According to Burkhardt (2006), interdisciplinary teaching may disrupt the status quo of the department, college, or university culture. If others in the department or college are not engaged in this model of teaching and learning, this could cause any attempts to fail. Additionally, Minnis and John-Steiner (2006) stated that the students may have difficulty integrating disciplines if programs do not successfully integrate them during development. Finally, one of the biggest barriers to interdisciplinary teaching and learning is the necessity for faculty/educator collaboration (Newell & Green, 1982). Faculty from each of the involved disciplines are needed to provide expertise in the content that students require.

Teacher educators must reevaluate their current practices and engage in restructuring efforts with their colleagues if they hope to have an interdisciplinary program that will be effective for their programs and their students. Interdisciplinary learning could be the model necessary to meet the unique learning, behavioral, and social-emotional learning (SEL) needs of today’s students. Projects like Pedagogues Readily Addressing Interdisciplinary Special Education Requirements (P.R.A.I.S.E.R.) could serve as a model for teacher preparation in the future.

Project P.R.A.I.S.E.R.

Twenty-first century students need to be able to think and work across disciplinary boundaries. However, in today’s institutions of higher education, few students get to study in programs that are truly interdisciplinary. This is unfortunate as the problems that need solving often require more than one way of thinking and multiple perspectives. This is especially true in education because students in PreK-12 come to school with complex needs (e.g., ability, cultural, social-emotional, etc.) that require a team to synthesize multiple perspectives to develop potential solutions.

With Project P.R.A.I.S.E.R., we sought to understand the connections and interrelations that existed between special education and social work disciplines and how they might blend their respective disciplinary training to address the unique needs of students with emotional disturbances (ED) and other disabilities. To understand each project participant's perspective, learning approaches (i.e., problem-and-project based learning) were utilized in the courses that could assist the professionals in working more effectively with each other, as well as in working with children with ED in PreK-12 and other settings.

At the completion of one year, the SPED scholars would receive a 36- credit hour master's degree in special education; the SW scholars would earn a 15-credit hour School Social Worker Certificate (SSW) that would allow them to work as social workers in the schools. Each cohort of scholars complete the program in one year (i.e., three semesters including summer term). The project was designed so that the scholars would receive instruction together in four of their courses. Within the special education department, they took two courses regarding working with children with ED, specifically regarding a) theories and research concerning learning characteristics and psychological and social aspects and b) the behavioral characteristics as applied to the practical classroom. They also received two courses together through the Social Work department. One of the courses was specific to critical issues faced by children with ED and how Social Work (SW) and special education (SPED) professionals can work together to combat some of those critical issues. The final course, co-taught by the grant PI and a SW faculty member, was a special problems course designed to address the needs of SW and SPED professionals in a school. It was a project-based course where the scholars were required to spend 10-15 hours in a school together to assess the needs of SW and SPED professionals on that campus. This course was a 5-week long summer course, culminating in a needs assessment and presented to their co-teachers and peers.

Special educators and social workers are pedagogically diverse and are often housed in different colleges; however, we felt that we could draw from their knowledge regarding teams and groups that is familiar to both their professions. By implementing project-and-problem based activities in the courses, we envisioned a/an a) building of interdependence amongst the students, b) reduction in stereotypes and biases held by members from the other discipline, c) improvement in students' social processing (e.g., interpreting the cues of someone unlike themselves) using group diversity.

Prior to acceptance into the project and before any courses were taken, the potential project participants were asked to complete six questions regarding their understanding of interdisciplinary programs and their perceived value. We used their responses as the baseline regarding the project's focus, specifically regarding interdisciplinary learning. Once selected into the project, the participants took special education courses together in the College of Education and social work and criminal justice courses together in the College of Urban Affairs. The interdisciplinary courses that they took were specifically designed to address working with students with ED who may have high intensity needs.

The overarching research question was to determine the student's understanding of interdisciplinary learning prior to their acceptance into the project. Assessing the effectiveness of Project P.R.A.I.S.E.R is an important question, but is not the focus of the current study. To

address the current research focus, six open-ended research questions were posed to the scholars. They included:

1. What are your perceptions of the roles of special educators and social workers in the schools?
2. What are your perceptions of the benefits of special education and social worker students being trained together prior to working together as professionals in the school setting?
3. What are your perceptions of the potential challenges of special education and social work students being trained together prior to working together in the school setting?
4. What are your perceptions regarding the competencies needed by school personnel to support children with high intensity needs?
5. What are your perceptions regarding how this training could benefit you in your current/future position?
6. What specific evidence-based practices do you use to address the needs of students with high-intensity emotional/behavioral needs?

Researchers' Positionalities

This study explored teachers' and social workers' perceptions of an interdisciplinary preparation project designed to increase skills and knowledge when working with children with ED in the school setting (i.e., Project P.R.A.I.S.E.R.). We approached the study with the understanding that we would be learning from current practitioners and acknowledge that their perceptions may be different than our own. We also acknowledge that the authors/researchers are not social workers and that we have no direct experience of their day-to-day realities. The authors have a) worked in special education for their entire careers, b) currently work in special education teacher preparation, and c) have worked collaboratively with related service personnel. We acknowledge that we view interdisciplinary teaching and learning through the lens of special educators and those perceptions may be skewed or biased. We also recognize that we left the PreK-12 environment prior to Covid-19 and that things have changed for children, teachers, related service personnel, families, and schools since 2019. Finally, we acknowledge that the district in which these participants worked was understaffed with school social workers (SSW) and that this may have impacted their knowledge when responding to some of the questions.

Methods

Participants

Data were collected online via the Qualtrics platform. The participants were 32 current graduate students enrolled in Project P.R.A.I.S.E.R., a 5-year interdisciplinary project with yearly cohorts of students pursuing master's degrees in their respective disciplines (i.e., special education teachers and school social workers). The participants consisted of 22% school social workers and 70% special educators and 8% who did not respond or selected "Other" as a category. The study received exempt status (IRB #1614526-1) in 2020, as there was minimal or no risk to the applicants for Project P.R.A.I.S.E.R. Only data from completed applications (i.e., those indicating that they met the criteria for the project) were collected. Table 1 includes complete demographic information for the participants.

Table 1

Demographic Table

Demographic Categories	Frequency	Valid Percentage
Gender (<i>n</i> = 32)		
Male	1	3.1
Female	31	96.9
Non-Binary	0	0
Race and/or Ethnicity (<i>n</i> = 32)		
Asian/Asian American	4	12.5
Black/African American	8	25.0
Native American/Native Alaskan	0	0
Pacific Islander/Hawaiian	1	3.1
White, non-Latinx	12	37.5
Latinx	5	15.6
Multi/Biracial	1	3.1
Prefer not to answer	1	3.1
**Education Attained		
Bachelor's	29	58.0
Special Education	11	
General Education	4	
Other	14	
Master's	13	26.0
Special Education	3	
General Education	1	
Other	9	
Associates	3	6.0
General	1	
Liberal Arts	2	
Certificates/Endorsements (i.e., Ed. Specialist)	4	8.0
Post-Baccalaureate ARL	1	2.0
Work Placement (<i>n</i> = 27)		
*Special Education		
Classroom teacher	14	51.9
SPED Facilitator	2	7.4
Early Childhood Educator	1	3.7
Behavior Interventionist/SPED	2	7.4
Instructional Facilitator (SEIF)		
*Social Worker		
Community Resource	2	7.4
Legal Advocate	3	11.1
Mental Health Worker	1	3.7
No Response/Answer	1	3.7
Other	1	3.7
Behavior Interventionist/SPED	2	7.4
Instructional Facilitator (SEIF)		

*Years in Career ($n = 32$)	SPED	SW	
0 - 5	6	9	
6 - 10	2	1	46.9
11 - 15	6	0	9.4
16 - 20	2	0	18.8
21 - 25	2	0	6.3
>25	1	0	6.3
Practicum Only	NA	1	3.1
No Response/NA	2	0	3.1

Note: All percentages were rounded to the nearest tenth.

***Note:** All categories do not total 32, as all applicants did not respond to all questions.

****Note:** This category was tabulated by recording all degrees, certificates, and endorsements indicated by applicants.

Data Collection

Once the study was approved by the researcher's institutional review board (IRB protocol #1614526-2), all Qualtrics data were downloaded into an Excel Spreadsheet. There were 32 completed applications. Because this was an application process, identifying information was collected on the application itself; however, no identifying information was used during the analysis.

Data Analysis

The six open-ended questions were analyzed using qualitative conceptual content analysis (Kuckartz, 2014). This analysis allowed the research team to establish categories by which the participants' responses were organized regarding the interdisciplinary practice of combining school social workers and special education teachers into a single cohort and providing them training in both disciplines. Demographic characteristics were reported as descriptive statistics (See Table 1). The categories for this study were determined using an open coding procedure of each sentence of each response for all six of the questions. Each researcher coded two questions. The research team analyzed each sentence of the responses and grouped categories based on the implications of coded sentences. Frequencies of those categories were then counted, and this process continued until all responses were categorized.

Interrater Reliability

Following the coding procedure each member of the research team completed validity checks using an agreement rubric for each coded category. Researchers coded a 2 if they agreed with all categories for the student response, a 1 if they agreed with some of the categories for the student response, and a 0 if they disagreed with categories for the student response. The interrater agreement threshold was set to 80% or higher on each student response as well as the overall categories coded for each question. Any categories that scored below 80% were targeted for follow up analysis to determine whether agreement could be reached. There was approximately 99% overall agreement for the categories combined.

Results

The results from each of the six questions will be discussed in the following sections. Examples that emerged from the analyses of each question are presented, including examples of the unique statements/responses from each. Tables are presented with the complete information from each category.

Question 1 (Q1)

Q1 asked the applicants to indicate their perceptions of the roles of special educators and school social workers. Two categories accounted for over 64% ($n = 95$) of the unique statements, teaching and learning ($n = 56$) and school resource ($n = 39$). Examples from each of these categories are presented in the following paragraphs.

Teaching and Learning

The participants perceived the roles of these two professionals (i.e., special educators and school social workers) as those who provide instruction for students and colleagues. For example, one response was that their role was to *“implement IEPs and support student behavior/emotional, academic, and social success.”* Another indicated that their role was *“conducting assessments and developing interventions to help students achieve academically and socially.”* Finally, a third respondent indicated that the role was to *“help school staff, parents, and students both general and special identify the needs that impede with learning.”*

School Resource

They also felt that these professionals were there to serve as a resource for the students and their families, the community, and the other professionals with whom they work. For example, one participant indicated they *“help parents and students solve problems cope with issues in their everyday lives.”* Another noted they *“support students and families so they can be successful in the school and community setting.”* One respondent indicated that they *“can influence students and be an excellent role model for students to look up to.”* Table 2 presents the complete category information for Q1.

Table 2

Q1: Perceived Roles of Special Educators and School Social Workers

Category	F (N = 148)	Percentage
Teaching and Learning	56	37.8
Connects to Needed Resources & Services	14	9.5
School Resource	39	26.4
Secretarial or Managerial	4	2.7
Team Member	6	4.1
Personnel Trainer	6	4.1
Advocate	6	4.1
Home-School Bridge	8	5.4
Collaborator in Practice	9	6.1

Question 2 (Q2)

For Q2, the applicants were asked to discuss some potential benefits of interdisciplinary training prior to their practice in the field (i.e., schools and other settings that serve children with disabilities). This question was most concerned with how the applicants believed they would

learn in the program. Three of the categories; collaboration in practice, 21.5% ($n = 26$), enhanced skills and knowledge, 19.8% ($n = 24$), knowledge/understanding of other professionals, and 16.5% ($n = 20$) accounted for nearly 60% of the statements.

Collaboration in Practice

It was evident that engaging in interdisciplinary activities during their programs could assist them in their ability to collaborate with other professionals in the workplace, and that those effective collaborations could ultimately benefit students. For example, one response was that *“these collaborations could help students succeed in all settings by having both professionals work together and utilize evidence-based practices in both fields.”* Another indicated that a program like this could *“help them effectively work together as a part of the multidisciplinary team.”*

Enhanced Skills and Knowledge

Like the collaboration category, the unique statements from participants indicated that a project like P.R.A.I.S.E.R. could help with their knowledge and skill levels. One respondent indicated that this training would *“be beneficial in providing supports since both the social worker and the special educator will have had the same training to identify student needs.”* Another respondent indicated that, after this training they would, *“have a multitude of resources combining [sic] their knowledge and expertise.”* A third respondent indicated that, after this training they would, *“have a multitude of resources combining [sic] their knowledge and expertise.”*

Knowledge/Understanding of Other Professionals

The third most-mentioned benefit was regarding the increased knowledge/understanding that special educators and social workers would gain regarding what the other does in the school and other settings. Several of the participants mentioned things like *“they’ll be better understanding of each other’s roles, an increase in understanding the roles of the two parties, and an understanding the needs of professionals working in the field.”* Others mentioned things like *“I would never have gained as much knowledge if I didn’t have special educators helping me along the journey and learning from each other.”* See Table 3 for more information regarding the categories for Q2.

Table 3

Q.2: Perceived Benefits to Interdisciplinary Training of Special Educators and Social Workers

Categories (N = 9)	F (N = 121)	Percentage
Knowledge/Understanding of Other Professionals	20	16.5
Holistic Approach	6	4.9
Collaboration in Practice	26	21.5
Shared Goals and Plans	7	5.8
Relationship Building	12	9.9
Professional Harmony	11	9.1
Diverse Ideas and Perspectives	6	5.0
Enhanced Skills and Knowledge (General)	24	19.8
Bridging Home and School	9	7.5

Question 3 (Q3)

There were eight categories that emerged from Q3 regarding the challenges on interdisciplinary training of special education teachers and social workers. Most of the unique statements center around the differences in approach between a special education teacher and a social worker, although some participants indicated that there were no challenges concerning interdisciplinary training.

Unclear Roles

Unclear roles ($n = 25$) made up the largest percentage of statements (32%). The participants emphasized multiple ways that special education teachers and social workers may struggle to understand their role in supporting students including overstepping boundaries and having issues with collaboration. For example, one participant indicated that *“prior to working together as professionals in the school setting would be overstepping boundaries.”* To expand on that concept, another participant expressed that *“each feels like the other wants to take control of the situation and one of them may feel like the other is crossing the line and stepping into their partner’s area of expertise.”* Two additional participants elaborated on areas of expertise stating that *“the primary focus whether its academic, social, or emotion the role of the special education teacher and the role of the social worker may become blurred”* and *“the social workers main focus is on the mental health aspect and the teacher feels it’s more important to focus on how academics will be impacted by student behavior.”* Finally, although most statements indicated struggles, a participant noted that *“by training special education teachers and social workers together, it will force challenges to be worked out and dealt with professionally.”*

Conflicting Plan of Action

The second largest category that emerged from the data was concern regarding a conflicting plan of action ($n = 22$; 29%). A participant indicated that special education teachers and social workers may be challenged to *“be in agreement with the right direction and strategy and proceeding forward with proper interventions.”* Another participant noted that *“special educators may have different guidelines or standards set by the district that social workers do not”* and *“aspects of crisis intervention in the school setting applies more the knowledge [sic] of the social worker.”* One of the participants expanded on the special educator’s role stating, *“social workers may not be exposed to the same pedagogy as students”* and *“as a special education teacher, I have a certain pathway that I need to take to reach my student’s goals and benchmarks for the semester of year.”* One participant indicated that these conflicts may exist *“after exiting the program as young professionals, the partnership between teachers and social workers may not mirror the same at their first job.”* Finally, one participant summarized the issue by noting *“each may have contrasting ideas of what success means for the child and how any success could be attained.”*

Conflicting Student Needs Assessment

The next largest category was conflicting student needs assessment ($n = 9$; 12%). One participant indicated that a *“potential challenge to special education and social work students being trained together prior to working together as professionals in the school setting would be a clash of priorities.”* Another participant elaborated on this concept stating this clash of priorities could result in *“misidentifying the needs of students.”* While a different participant noted there might be a *“different level of compassion for the children”* and *“I believe social workers want to save*

children.” This notion of difference creating conflict was noted by yet another participant who indicated that pedagogically diverse students “*will not always use the same methods or have the same responsibilities.*” Another participant noted that it would be “*difficult for students with different specialties to meet each other halfway,*” and a different participant stated that it “*may be difficult to see each other’s perspective.*” Table 4 highlights the complete list of categories.

Table 4

Q.3: Categories Regarding Challenges of Interdisciplinary Training of Special Education Teachers and School Social Workers

Categories	Number of Reponses	Percentage
Conflicting Student Needs Assessment	9	12
Unclear Roles	25	32
Lack of Trust and Communication	7	9
Conflicting Plan of Action	22	29
Lack of Resources	2	3
Overworked/ Large Caseloads	1	1
No Challenges	4	5
Differing Background Knowledge	7	9

Question 4 (Q4)

Eight categories emerged from Q4 regarding perceived competencies school personnel needed when working with students with ED in order to support them in the least restrictive and natural environments. Most of the unique statements are specific to individual skills that teachers and social workers possess that may not specifically be a result of training. However, a few participants noted the importance of understanding and implementing evidence-based practices according to the respective competencies acquired during their graduate or undergraduate programs.

Intervention/Instruction

Intervention/ instruction was the largest category that emerged from the data ($n = 35$; 29%). The participants emphasized a variety of intervention and instructional competencies important for working with students with high-intensity emotional behavioral needs. One participant stated that it’s important that school personnel have an “*awareness of the causes and triggers*” of behavior, while another indicated that they should have “*knowledge on how to prevent a high-risk situation.*” An additional participant specifically identified the importance of “*trauma-informed training and knowing how to apply it in a school setting*” while another participant suggests a more robust “*knowledge of behavior, positive reinforcement, and good communication with the student.*” One participant broadly identified the importance of knowledge regarding “*positive behavior interventions*” and additional participants more specifically identified the importance of “*functional behavior analysis (FBA) and behavior intervention plans (BIP)*” as well as “*data collection with fidelity, giving effective reinforcement, and the crisis cycle.*” One participant highlighted that school personnel should “*recognize the importance of evaluating process and outcomes to advance practice, policy, and service delivery effectiveness.*”

Teacher Response

The second largest category that emerged from the data was teacher response ($n = 23$; 19%). One participant indicated that it is important that school personnel have “*expertise in handling student emotions and mental health problems*” while another noted “*you have to be aware and in control of your own emotions and reactions.*” One participant indicated that expertise could consist of knowing “*how to react in a potential crisis*” and “*how to intervene when a crisis occurs*” as well as knowing “*how to prevent a possible high-risk situation.*” One participant stated that school personnel mindset is important to have the “*ability to think critically past the drama and emotion of the situation*” while another outlined the importance of patience noting that “*with patience, one can maintain control over the situation and coach a student on strategies to deal with everyday life situation.*” Another participant elaborated on the importance of patience in addition to “*using constructive language while being compassionate*” and an “*understanding of complex traumas, behaviors associated with cognitive levels, ways of de-escalation in a safe manner, and experience with trauma informed practice.*”

Collaboration

Collaboration was the next largest category that emerged from the data ($n = 19$; 16%). Two types of collaboration were noted, teacher-to-teacher collaboration and collaboration from stakeholders within and outside the school. One participant stated that the “*special educator needs to have the general educator teacher acquainted with the behavior plan*” while another participant stated that there should be support for “*general education teachers.*” One participant stated that “*school personnel should demonstrate an openness to new ideas in special education*” and “*be able to maintain cooperative consultative relationships with other professionals in special education.*” Another participant expanded collaboration to include “*working with students and their families.*” An additional participant emphasized having “*discussions with all staff who work with the student and parent involvement.*” Another participant expanded on those discussions noting that “*the school team would need to be on board with working with students and their families on positive behavior supports and interventions as well as crisis plans.*” See Table 5 for the complete list of categories.

Table 5

Q.4: Competencies for Working with Students with High-Intensity Emotional Needs

Categories	Number of Responses	Percentage
Teacher Response	23	19
Intervention/ Instruction	35	29
Collaboration	19	16
Teacher-Student Relationships	16	14
Professional Development	11	9
Curriculum Knowledge	5	4
Support and Resources	2	2
Data-based Decision Making	8	7

Question 5 (Q5)

In Q5, participants were asked to identify how the interdisciplinary training would impact their respective professional competencies. Their responses were coded into six distinctly different categories. The three most frequently reported categories are detailed below.

Professional Development

The most identified benefit the participants reported was an increase in overall professional development ($n = 19$, 22%). The participants reported that the interdisciplinary program would allow them to be better informed practitioners, would increase access to knowledge, and allow them to better support the students they serve. One participant reported that the program would “*improve my overall effectiveness as a teacher*” and another stated “*we always need to grow and to improve, this course will be supporting my professional growth.*”

Collaboration

Nineteen percent of the coded responses ($n = 17$) referred to an increased capacity for collaboration. Participants mentioned a variety of collaborative relationships to include collaborations with administrators, related service personnel, co-teachers, families, and students. One participant reported “*I will be working with a variety of different health, education, social professionals.*” Another participant noted that the interdisciplinary program would increase capacity to “*effectively work with others and demonstrate the ability to share my knowledge and skills with other professionals.*”

Increased Knowledge of Comprehensive Student Needs

Another frequently identified benefit of the interdisciplinary program was an increased knowledge of the comprehensive needs of students with ED ($n = 16$; 18%). For example, one participant stated, “*I will be able to have more understanding of the WHOLE child*” and another participant reported it would help “*me to meet the academic, social-emotional and behavioral needs of all my students with their wide and swinging range of needs found within my classroom setting.*” Additionally, participants reported that the program would increase their understanding of the function of student behavior as well as critical issues in student mental health. Table 6 includes a complete list of categories.

Table 6

Q.5: Perceived Benefit of Interdisciplinary Training on Special Educators' and Social Workers' Professional Competencies

Categories	Frequency (N = 86)	Percentage
Collaboration	17	19
Professional Development	19	22
Evidence Based Practices	13	15
Improve Student Services and Outcomes	15	17
Advocacy	8	9
Increased Knowledge of Comprehensive Student Needs	16	18

Question 6 (Q6)

For Q6, the participants (i.e., special education teachers and social workers) were asked to provide specific evidence-based practices (EBP) for students with ED. Using Cooper et al. (2018) as a model, the participant responses were coded into four distinct categories:

(a) antecedent, (b) instructional, (c) consequence, and (d) self-management. However, it became evident in coding that a fifth category was needed to capture additional responses.

Framework / Programs

Thirty-three percent ($n = 20$) of the participants' examples were specific programs and/or a theoretical framework. For example, Positive Behavior Intervention and Support or PBIS was provided by four participants. Additionally, participants responded with Applied Behavior Analysis (ABA), CHAMPS, and Sanford Harmony. As such, those responses were coded into a fifth and separate category Framework/Programs.

Consequence Strategies

Participants provided consequence strategies as the second most frequently identified practice ($n = 16$, 27%). Responses varied from more general examples of consequence strategies to specific examples of consequence strategies in practice. For example, one participant stated, "*Verbal Reinforcement, Planned Ignoring, Earned privileges [sic]*" while other participants provided more specific examples including "*snack with the principal [sic]*" and "*good news call of the day.*"

Instruction-Interaction

Participants provided instructional strategies ($n=13$, 22%) as the third most frequent EBP for students with ED. This category largely included various strategies to develop new skills and specifically to increase student capacity in social-emotional development. Participants identified the importance of teaching emotional regulation skills and more specific examples of mindfulness instruction. One participant stated the importance of "*learning the desired positive behavior,*" another participant stated "*modeling, rehearsal,*" while another participant reported "*learning about naming our emotions, expressing our emotions, and recognizing different emotions in others.*" See Table 7 from complete list of categories.

Table 7

Q.6: Participant Identified Evidence-Based Practices for Students with ED

Categories	Frequency (N = 37)	Percentage
Antecedent-Prevention	7	12
Instruction-Interaction	13	22
Consequence Strategies	16	27
Self-Management	4	7
Framework / Programs	20	33

Discussion and Conclusions

The present study focused on the perceptions of the defined roles, benefits, challenges, and necessary competencies related to enrollment in an interdisciplinary program training special

education teachers and social workers to meet the needs of PreK-12 students with ED. The participants in this study indicated that their roles encompass myriad responsibilities that fall under the umbrella of providing instruction to students, staff, and other adults. Additionally, participants indicated collaboration and enhanced learning as potential benefits. However, participants indicated challenges still exist regarding unclear roles of the special educators and social workers as well as how they may differ in their approaches to supporting students with ED. Despite these perceived challenges, participants did indicate evidence-based competencies necessary for supporting students with ED and indicated how interdisciplinary training would support their professional growth in understanding and implementing evidence-based practices with students with ED from both special education and social work disciplines.

The participants mentioned that their overall role was to support student success. However, each indicated that being successful at supporting student success for students with ED could include academic instruction, behavior management and skill development, and collaboration with critical stakeholders (i.e., parents, general education teachers, school staff, administration). These results are in line with current research in evidence-based practice supporting students with ED, that outlines a holistic support system to support students in a variety of environments with multiple supporting personnel working in tandem (Kauffman & Badar, 2018). When teachers, social workers or other mental health school personnel work together with parents to concurrently address mental health needs as well as behavioral needs, students with ED demonstrate increases in academic achievement, positive behavioral outcomes, and reduction in drop-out rates (Cuming et al., 2018).

The second finding had to do with collaboration as well as enhancement of professional skills. The participants mentioned the largest benefit of interdisciplinary training was the ability to collaborate with other professionals from another professional discipline as well as the opportunity to engage in collaborative work within their training program to better prepare them for the school context. Also, as part of this collaboration, participants indicated that they would be able to grow their professional knowledge and enhance their skills. These findings align with current research in interdisciplinary training that notes students who engage in interdisciplinary programs benefit from collaboration as they increase their skills in their respective profession, they more readily recognize the skills and knowledge honed in other disciplines, and improve their personal interdisciplinary skills (Brassler & Dettmers, 2017).

Although the participants indicated some valuable benefits from interdisciplinary training, they also indicated challenges related to lack of clarity in roles and responsibilities in supporting students with ED. Participants indicated that special education teacher's role is to support the student in improving academic and behavioral skills, while social worker's role is to support the student in a variety of contexts (e.g., school and home environments) and support the student's mental health. As a result, participants indicated that if roles are not clearly defined, it is likely that there will be inconsistency and confusion with the proposed plan to support the student. These results reflect current research regarding supporting students with ED in that a holistic approach is necessary to improving their outcomes. However, if the school is not on-board with defining roles and outlining a specific plan of support across multiple contexts issues with collaboration will occur (Kauffman & Badar, 2018). Additionally, an interdisciplinary approach to addressing the needs of students with ED may disrupt the current school-level approaches that

will then work against collaboration and will dismantle a holistic approach to supporting their needs (Burkhardt, 2006).

Another finding had to do with knowledge of important teacher competencies required for working with and supporting students with ED who have high-intensity emotional and behavioral needs. Participants indicated that, above all, knowledge of evidence-based intervention and instructional strategies are most important. While there was agreement with this overall area of importance, there were differences in the types of intervention and instruction that were most important. Some participants indicated knowledge of applied behavior analysis strategies (e.g., FBA, antecedent-based interventions, positive reinforcement, data collection) while others stated that knowledge of trauma informed instruction and building teacher-student relationships with improved communication should be emphasized. These results support Burkhardt's (2006) stance that without school support professionals may revert to working in silos relying on what they believe to be important rather than leaning in to interdisciplinarity. Despite this, participants all indicated knowledge of evidence-based practices that could work harmoniously to comprehensively support students with ED.

Finally, the last two questions queried how interdisciplinary training would impact their professional practice and existing knowledge regarding evidence-based practices for students with ED. Participants indicated that the most important competency they will develop will be an increased professional development regarding evidence-based instruction and intervention as well as a holistic understanding of students with ED. Additionally, participants indicated that specific evidence-based strategies for addressing the needs of students with ED can be derived from behavioral informed programs (PBIS, ABA) and from which specific strategies and interventions are implemented. These results support the knowledge that interventions must be student specific and that teachers must understand and apply an evidence-based framework that encompass a multitude of intervention options specific to the student's function of behavior and mental health needs (Kauffman & Badar, 2018).

Limitations

This study did present limitations. The data presented and analyzed here is a reflection of the values, beliefs, and perceptions of this cohort of students entering Project P.R.A.I.S.E.R. As new cohorts are developed the categories that emerge from the data may shift in importance or new categories may emerge that were not identified in the data from this first cohort. Second, most of the participants in this study had special education backgrounds (70%) that may skew the results to highlight more perceptions, concerns, and experiences related to being a special education teacher for students with ED.

Recommendations

The data indicate the scholars actively pursued Project P.R.A.I.S.E.R. due to its collaborative and interdisciplinary nature. The program was structured to support the scholars in developing their interdisciplinary competence and increasing their ability to support the complex needs of students with ED. However, the scholars consistently reported concern regarding conflict in working with other service providers given perceived differences in epistemologies and scopes of practice. The critical next step is to examine scholars' perceived and demonstrated interdisciplinary competence upon successful completion of the program and to assess what

concerns or issues remain. Further, as indicated in the limitations, this analysis is a snapshot in time based on the perceptions of the existing cohort. It will be critical to continue to assess the data as additional scholar cohorts are admitted to increase the confidence that the results obtained here are consistent across the remaining cohorts.

Implications

The goal of this study was to identify participants' perceptions and knowledge of an interdisciplinary program prior to participation. The analysis of their responses revealed that the interdisciplinary nature of the program is beneficial as it more closely mirrors the need for collaboration within the school setting needed for student success. Additionally, they expressed interest in the interdisciplinary nature of the program as a means for continued professional growth and development. As previously mentioned, they did acknowledge a concern regarding potential conflict that may arise from the different epistemologies and scopes of practice across the disciplines; however, that concern was tempered by the recognition that students with emotional and behavioral disorders have significant needs that require complex solutions and a multitude of resources.

As teacher educators continue to move forward, it is essential to reflect on what those within the schools are telling us. It is incumbent upon us to listen to what they need. The teacher shortage continues; pre-pandemic estimates indicated approximately 100,000 uncertified teachers were the teacher of record in classrooms nationwide (Suchter, Darling-Hammond, & Carver Thomas, 2019) and enrollment in teacher preparation programs decreased more than 33% from 2008-2009 to 2016-2017 (Partelow, 2019). The data from this study indicate that these students are returning for a better understanding of how to support the complex needs of students with significant emotional and behavioral needs.

PreK-12 students are complex, and they come to classrooms with a variety of needs and concerns (Stolz, 2021). Furthermore, it has been documented that youth mental health issues were significant prior to COVID-19 and post-pandemic research indicates that anxiety, depression, and other mental health disorders have continued to increase at alarming rates (Cooper et al., 2022). The increasing mental health needs for children and youth is well documented, but more alarming is the absence of supports and services that are provided. Whitney and Peterson (2019) estimate that half of the 8 million children with an identified mental health disorder in 2016 did not receive appropriate care. Students with ED present complex academic, social, behavioral, and mental health needs. As such, the response must be equally dynamic and multifaceted. If the response is not dynamic and multifaceted, school professionals (e.g., special education teachers and school social workers) will continue to be trained in silos and will be underprepared to meet the unique needs of children in today's schools, especially those students with ED. The consequences for school professionals are a lack of effectiveness and efficiency (e.g., duplication of effort, narrow minded perspectives; Friedman, 2018) or an inability to provide PreK-12 students with ED with the social, educational, and emotional care they require for success.

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This research was conducted as a part of a grant from the Office of Special Education Programs (OSEP).

Parent Perceptions of Interactions with Professionals that Improve Individualized Education Program Development

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Abstract

Educational professionals (e.g., special educators, general educators, administrators, related service providers) play an important role in promoting engagement with parents during the development of individualized education programs (IEPs). For this study, we conducted semi-structured interviews to evaluate parents' ($n = 16$) perceptions of interactions with professionals that improve IEP development. Through a qualitative analysis, we identified the following themes: (a) proactive and transparent communication during planning, (b) welcoming and understandable meetings, (c) compliant and data-driven documentation, (d) effective and individualized services, and (e) development of trust and shared power throughout process. Our findings offer practical suggestions for enhancing parent-professional partnerships and increasing collaboration to improve services for students with disabilities.

Keywords: family/parent involvement, individualized education program, educational decision-making

Parent Perceptions of Interactions with Professionals that Improve Individualized Education Program Development

The right for parents to participate in educational decision-making for their child with a disability is a foundational tenet of special education (Turnbull et al., 2006). The Individuals with Disabilities Education Act (IDEA, 2004) requires that parents (e.g., biological, non-biological, legal guardian, primary caregiver) be included as members of multidisciplinary teams along with educational professionals (e.g., special educators, general educators, related service providers, administrators) in the development of individualized education programs (IEPs). Federal court decisions (e.g., *Doug C. v. State of Hawaii Department of Education*, 2013) have affirmed the central role of parents in IEP development, finding that failures to meaningfully involve them can violate a child's right to a free and appropriate public education (FAPE; Yell et al., 2015).

Per IDEA (2004), parents can exercise their rights and pursue legal action related to FAPE violations. This can lead to prolonged dispute resolution attempts, mediations between parties, and hearings. The U.S. Government Accountability Office (GAO; 2019) has reported that such disputes are costly and time consuming. Mueller and Vick (2019) assert that these disputes could be avoided through increased parent involvement and improved parent-professional relations. Although most parents attend IEP meetings (Wagner et al., 2012), a large body of research indicates considerable barriers to meaningful participation that schools should seek to address (Elbaum et al., 2016; Francis et al., 2019; Johnson et al., 2004; Love et al., 2017; Kurth et al., 2020).

At a minimum, parent participation in IEP development includes the opportunity to attend and provide input during formal meetings (Yell et al., 2015). However, logistical challenges, such as scheduling constraints, availability of childcare, and communication barriers, often limit this type of parent participation (Johnson et al., 2004). For parents from culturally and linguistically marginalized backgrounds, researchers have identified additional barriers to IEP meeting involvement, including limited translation services, past experiences with discrimination, and conflicting views about special education (Harry et al., 1995; Kalyanpur et al., 2000; Povenmire-Kirk et al., 2010; Trainor, 2010).

For meaningful participation beyond meeting attendance and input, parents should be given the opportunity to influence decision-making at various phases in IEP development (e.g., before, during, or after formal meetings) and in various components of the IEP document (e.g., placement, goals, supplementary aids and services; Blackwell & Rossetti, 2014; Kurth et al., 2019). However, research has found that many parents lack opportunities to meaningfully participate in decision-making (Fish, 2008; Slade et al., 2018; Wagner et al., 2012). For example, Wagner et al. (2012) found in national surveys that over a quarter of parents of 11- to 19-year-old students with disabilities desired to be more involved in IEP-related decisions. Triangulating these findings, Kurth et al. (2019) examined IEP documents ($n = 88$) and found no evidence of parent input in 38%. Moreover, in the documents that included parent input, 33% lacked any correspondence between parent input and IEP goals or services (Kurth et al., 2019), indicating a considerable lack of meaningful involvement.

Barriers to meaningful parent participation in IEP decision-making and development are multifaceted (Love et al., 2017; Valle, 2011). In some cases, parents may not participate due to a lack of knowledge of the IEP process, special education, or their rights (Elbaum et al., 2016; Fish, 2008). Yet, a meta-synthesis of intervention studies by Goldman and Burke (2017) found little evidence for the effectiveness of parent trainings that cover this type of knowledge in increasing parent engagement. Instead, research suggests that professionals have more success increasing meaningful involvement by developing collaborative partnerships (Goldman & Burke, 2017). Although various strategies exist for fostering more collaborative and equitable parent-professional partnerships (Connor & Cavendish, 2018; Diliberto & Brewer, 2012; Staples & Diliberto, 2010), parents continue to report perceiving an imbalance of power rather than equity with professionals (Lalvani & Hale, 2015; Ruppard & Gaffney, 2011; Zeitlin & Curcic, 2014).

The purpose of this study was to further examine parent perceptions of interactions with professionals that improve IEP development (e.g., meaningful participation, decision-making, collaboration). Blue-Banning et al. (2004) identified six factors that parents considered most important for engagement with professionals, which include communication, commitment, equality, skills, respect, and trust. This study adds to the literature by exploring parents' interactions with professionals in various facets of IEP development. Given the diversity of parents' backgrounds and approaches to involvement in special education (Kalyanpur et al., 2000; Rossetti et al., 2021; Trainor, 2010), we sought to identify a wide range of perspectives and uncover common factors that professionals and policymakers can address to improve practice. We posed the following research question: What are the perceptions of parents of students with disabilities related to interactions with professionals that improve the IEP development process?

Methods

To answer our research question, we employed a basic qualitative research methodology; Merriam (2009) states that the purpose of this approach is "to understand how people make sense of their lives and their experiences" (p. 23). By interviewing parents of students with disabilities, we sought to highlight the ways they made sense of the IEP development process and empower them to offer recommendations to improve it (Brantlinger et al., 2005). Espousing the need for more qualitative inquiry in special education, Valle (2011) argued, "I believe that our best and most reliable sources of information about special education are mothers (more likely to negotiate with schools than fathers)" (p. 188). To best capture and interpret parent perspectives, we followed recommendations from Trainor and Graue (2014) for conducting rigorous qualitative research, which include the use of collaboration (i.e., including multiple interviewers and coders), reflexivity (i.e., reflecting on researcher identity and bias), and transparency (i.e., detailing study procedures and decision-making processes).

Participants

The participants in this study participated in interviews as a follow-up to the Choiseul-Praslin et al. (2021) study that surveyed parent perceptions ($n = 1047$) of the IEP process. These participants were identified using a snowball sample across the U.S. through parent organizations and social media groups. Of survey participants, 372 indicated their willingness to participate in an interview. Given the volume of responses, we employed two types of sampling methods to select participants for interviews: simple random sampling and purposeful sampling. First, simple random sampling was used to randomly identify 30 participants. Upon reviewing demographic information, we found that nearly all the selected participants were White females who identified themselves as mothers, meaning this approach would result in a limited understanding of parent experiences and values. Therefore, we then employed purposeful sampling strategy to include all non-White and non-female participants ($n = 12$). Of the 42 total participants identified through sampling, 21 (50%) replied to our requests for an interview, and 16 (38%) participated (see Table 1). Research shows that nine to 17 interviews are typically necessary to reach code saturation (Hennink & Kaiser, 2021).

Table 1
Participant Demographics

Parent/ caregiver name	Gender	Race/ethnicity	Education level	Child's grade range	Child's disability
Ariel	Female	White	Professional	Middle	ASD
Charlene	Female	White	Professional	Transition	DB
Claire	Female	Black	Professional	Transition	MD
Emily	Transgender	White	4-year	Elementary	ASD
Genesis	Female	White	2-year	Elementary	ASD
Grace	Female	White	Some College	Middle	HI
Isabela	Female	White	Professional	Elementary	D
Jamie	Female	Hispanic/Latina	Professional	High	SLD
Jeremey	Male	White	4-year	Middle	OHI
Mara	Female	Asian	Professional	Elementary	SLI
Michael	Male	White	Professional	Middle	SLD
Natalie	Female	White	Professional	Middle	VI
Olivia	Female	American Indian	2-year	Elementary	SLD
Smith	Male	White	Professional	Transition	D
Stephanie	Female	White	High School	Transition	ID
Valerie	Female	White	Professional	Elementary	SLI

Note. Professional refers to degrees beyond 4-year. Transition refers to district's 18+ program. ASD = autism spectrum disorder, D = deafness, DB = deaf-blindness, MD = multiple disabilities, HI = hearing impairment, SLD = specific learning disability, OHI = other health impairment, VI = visual impairment, ID = intellectual disability.

Researchers

We organized a collaborative research team with diverse experiences related to special education to conduct this study. The first three authors completed data collection and analysis. The first author is a White male who is a former high school special education teacher. He is the parent of a young child with a disability who receives an individualized family service plan (IFSP). The second author is a White female who is a former elementary special educator. In school, she was identified with a learning disability (LD) and received an IEP. Now, she is the parent of a child in elementary school with a disability who receives an IEP. The third author is a Latina female who is a former secondary special educator and administrator. She has experience working with parents in IEP development and in conflict resolution cases (i.e., mediation and due process). As a team, we drew on our backgrounds and experiences to engage with parents during interviews. We acknowledge that our shared experience as special educators and researchers may present biases. Thus, we engaged participants in member checking (i.e., sharing transcripts and findings with participants) to provide them with the opportunity to confirm data and check for biases in our interpretation.

Data Collection

We conducted individual semi-structured interviews with each participant that lasted approximately 30 to 45 minutes (Jamshed, 2014). Since participants lived across the U.S., we conducted interviews over the phone and recorded using Temi software. To prepare for interviews, we reviewed participant demographic information and had brief informal conversations with participants to build rapport. Interview questions/prompts were open-ended and drew on prior research (e.g., Blue-Banning et al., 2004; Lalvani & Hale, 2015; Slade et al., 2018). They included, (a) “Walk us through your experience during the development of your child’s most recent IEP,” (b) “How satisfied were you with the IEP process,” (c) “Overall, how do you feel during your child’s IEP development,” (d) “Describe your level of trust in members of the team,” (e) “What do professionals do to make you feel comfortable/uncomfortable,” (f) “How do you perceive the balance of power with professionals,” and (g) “Have you ever felt bullied, coerced, or shamed during the IEP process?”

We asked follow-up questions to gather additional information on specific topics, clarify responses, and probe emergent themes. To continue to build rapport with the participants throughout the interview, we shared genuine reactions to responses (e.g., surprise, interest) and engaged in follow-up commentary as appropriate. Each interview ended with an overview of the timeline for the study, including next steps for member checks. After an initial Temi software transcription, we reviewed the transcriptions manually to ensure accuracy and remove personally identifiable information. In total, our transcription resulted in 204 pages of text. We sent copies of transcriptions to each participant for a first-level member check, so they could confirm or revise responses and clarify words or phrases that were unclear. After data analysis, we sent a copy of the results section with themes and selected quotations for a second-level member check. Thirty-one percent ($n = 5$) of participants responded to the email with study results. None reported issues with results or dissatisfaction with the way participants were characterized.

Data Analysis

We uploaded transcripts into Dedoose, an online qualitative coding platform, to complete a collaborative multi-cycle coding process (Saldaña, 2021). For the first stage, we completed an open coding procedure to categorize data. We line-by-line coded transcripts in two ways, including (a) components of IEP development (i.e., planning, meetings, documents, services) and (b) factors related to parent interactions with professionals (i.e., communication, commitment, equality, skills, respect, trust; Blue-Banning et al., 2004). We began by coding two transcripts together. Then, we coded the remaining transcripts individually, meeting after every three to discuss and come to consensus on unclear coding decisions. During this stage, we reflected on the nuances of codes and solidified our inclusion criteria for each (Harry et al., 2005).

For the second cycle, we conducted axial coding to identify the relationships between open codes (Charmaz, 2014). First, we isolated data by open code(s) and reread all excerpts. In an iterative process of re-organizing and analyzing excerpts within each open code, we identified 18 axial codes. For instance, we open coded the excerpt— “they refused to give us the information from last year”— from Jeremy as “planning” and “communication.” Then, we applied the axial code

“transparency in communications during planning” to the same excerpt. In axial coding, we again coded individually but met frequently to discuss decisions and revise inclusion criteria. Finally, we discussed similarities between axial codes and synthesized them into five major themes.

Results

Our five themes on parents’ perceptions of interactions with professionals that improve the IEP development process include (a) *proactive and transparent communication during planning*, (b) *welcoming and understandable meetings*, (c) *data-driven and thorough documentation*, (d) *effective and individualized services*, and (e) *development of trust and shared power throughout process*. The following sections further detail each theme and provide representative quotations from participants.

Proactive and Transparent Communication during Planning

For IEP planning, parents discussed the importance of communication with professionals prior to formal annual IEP meetings or revisions. Frequently, parents discussed the importance of proactive communication. This type of communication helped address issues before they became more serious— “Having the [informal] meeting before [the formal meeting] kinda dispelled any arguments and maybe any disputes or disagreements that would’ve happened at the meeting” (Valarie). It also helped parents feel more prepared during planning— “They’re really good at giving me an IEP [draft]...to help prepare me and [child] for IEP meetings” (Claire). Similarly, parents also emphasized the importance of transparent communication. This type of communication helped parents have a true understanding of their child’s performance— “We had literally a weekly email, of here’s what assignments are still outstanding that he hadn’t turned in and here’s anything that he’s failed. So, that was a really good system to keep in constant contact” (Jaime). Transparency was also important for keeping parents abreast of the need for potential program revisions— “The [school] was very communicative. If they would change the way that they did things based on what was working for my kid that particular week, they would let me know” (Emily). However, in many cases, parents described professionals who were neither proactive nor transparent, which made planning cumbersome—

We went back and forth about this [placement] for months. The school got their lawyer involved. It took us an extraordinary amount of conversations with the special ed director, talking off the record to get things solved...people worrying more about financial consequences and the letter of the law as opposed to the spirit of what everybody was trying to accomplish (Smith).

Welcoming and Understandable Meetings

For IEP meetings, parents expressed the importance of professionals who were welcoming and understandable. Welcoming professionals solicited parent involvement with genuine interest—

When I go into a meeting, I really feel like I’m a team player. I’m part of a team. They’re not dictating what’s happening. They want to know my opinion. They want to know how we can make things easier at home (Charlene).

These professionals also facilitated positive conversations about students— “They always made it seem like, you know, it’s that time of year. It’s time to go over his things, and we talked about how much progress he made. It [IEP meeting] has always been a pleasant encounter” (Natalie). In addition, parents discussed the importance of professionals who could make meeting contents and procedures understandable. For example, these professionals were systematic in highlighting the most salient information — “The speech pathologist and the OT [Occupational Therapist] did a really good job explaining how he’s been doing, what to expect, what the next goals were and all that” (Genesis). Alternatively, many parents discussed professionals who were neither welcoming nor understandable, using unclear educational jargon or rushing through meetings. Combatting this, Stephanie explained the creative steps she took to ensure meetings were adequate— “I always make sure I’m the last appointment...I want it explained and if I don’t understand it then you’re just going to sit there until I do...this mommy needs more than half an hour. I’m sorry.”

Data-Driven and Thorough Documentation

For IEP documentation, parents discussed the importance of professionals who were data-driven and thorough. Parents believed that data-driven professionals were able to tailor IEP documents to the specific needs of students and set appropriate goals that students could accomplish—

Someone else looked at her test scores and evaluations and made me very aware that there were no accurate measurable goals, and she hasn’t met any goals yet, which is a sign of digression. She helped me set these measurable goals, and the tutor and I are working together trying to work toward some of these goals (Olivia).

Parents were concerned when they felt as though professionals developed IEP documents and goals without supporting data— “They just wanted me to be loosey goosey, make things up. I’m like, ‘Well, I need some evidence...I need to have some baseline here. You’re the expert, give me a recommendation’” (Isabel). Parents also discussed the importance of professionals who were thorough in their documentation— “We have a fantastic neuropsychologist and he does these real evaluations that are very thorough and very interesting and relevant. He always includes pages and pages of very specific recommendations for different situations” (Ariel). However, many parents lamented that IEP content was not thorough due a lack of preparation— “She [special educator] basically just copied the last one [IEP], pasted it on the new [one]...it just felt really last minute, like, there wasn’t any thought put into it” (Genesis).

Effective and Individualized Services

For IEP services, parents discussed the importance of interactions with effective professionals who promoted individualization. Parents described effective professionals as those with the experience and expertise to improve outcomes for their child—

The teacher that my daughter had was really ineffective and they changed it to a different teacher who had experience working with multi-handicapped kids, and she was great. They had a different system down and it just really made a difference and she thrived there (Charlene).

She is in small groups. She has extra time to do tasks...the teacher collaborates with the reading specialists and talks about what to do for class that week and everything. I really do feel like having that reading specialist is what sealed the deal (Mara).

Alternatively, parents described ineffective professionals as those who failed to provide adequate instruction— “It wasn’t robust enough in the educational components. I felt it was too watered down, and I wanted my son to be challenged,” (Claire) or they failed to provide adequate supports— “There are like zero services. There’s no co-teaching. There’s no teacher assistant. There is nothing” (Jeremy). Parents also discussed the importance of professionals who individualized services for students. These professionals understood students’ unique needs— “So, basically everybody has an individualized education plan and that’s just part of their culture. And they understand that kids have different needs. They’re very open. All the kids get access to sensory equipment” (Emily). A few parents mentioned that professionals struggled with providing individualized services due to overwork— “They’re very overwhelmed with paperwork and their caseloads are very high...It has to be individualized, and they’re going to do the least amount necessary which is just an ugly cycle” (Isabel).

Development of Trust and Shared Power throughout Process

Throughout the process of designing and implementing IEPs, parents discussed the importance of professionals who developed trust and shared power. Professionals tended to build trust over time— “I’m lucky that the speech path and the special ed teacher, they know me. They’ve known me for a long time...and I work closely with them, which I think helps a lot” (Grace). They also built trust through interactions outside of the school— “She’s [special educator] also my neighbor. Her daughter used to babysit my kids...so, I totally trust them. These are people that live local, that live in our community. You can really tell they are doing their job” (Charlene). When parents lost trust in professionals, the entire IEP process could become contentious—

You don’t trust the information that you’ve gathered because they want to do as limited an amount as possible. They’re not looking out for the child’s best interest. They’re looking out for the school’s best interests and then the district’s looking out for the district’s best interests. So, I’ve had three due process complaints (Michael).

Beyond trust, parents also valued professionals who shared power during IEP development. These professionals promoted a sense of equality between parents and the school—

I felt like it was very equal, and I’ve always felt that. I’m trying to think of a good word, not camaraderie but something to that effect. It’s always felt like they’ve had a great group of people who would make sure that they [children] got the best education they could get [and] they were getting the services they needed (Genesis).

However, parents reported that professionals were often too controlling— “They say, ‘Your child will do this. They will be placed here. This is the services he or she will get.’ That shouldn’t be what the conversation is. So yeah, I think there is an imbalance” (Isabel). In some cases, parents even viewed professionals as bullies—

The special ed coordinator, he was actually very forceful, and I would consider him a bully...he would just try and dominate the conversation, dismiss parent concerns, make parents feel like they don't know what they were talking about, that our input wasn't valued (Jaime).

Discussion and Implications for Practice

Interviews with parents of students with disabilities revealed a wide range of perspectives on interactions with professionals that improve IEP development. A qualitative analysis resulted in five themes related to the IEP development process. Our findings aligned with many of the factors associated with positive parent-professional collaboration identified by prior research (e.g., Angell et al., 2009; Blue-Banning et al., 2004; Francis et al., 2019). Although these important factors for parent engagement in IEP development, such as trust, equity, and communication, are well documented in the literature spanning several decades; our findings confirm the lack of meaningful parent collaboration in the IEP process is *still* an issue.

Halpern (1991) used the metaphor “old wine in new bottles” (p. 203) to describe an issue in special education that has long existed and has been addressed or discussed from multiple perspectives. This metaphor aptly describes issues in meaningful parent participation in the IEP process: the problem is well known; research has and continues to be conducted to understand the minutiae and complexities that exacerbate the problem (including our work in this study); solutions and recommendations are offered by researchers, parents, school administrators, teachers, and advocates (Turnbull & Turnbull, 2015). And yet the problems persist. Therefore, based upon our findings, we seek to provide parent-focused implications for practice, drawing on new and old ideas, that might allow educational professionals themselves to enact this critical change.

We frame these implications for practice within the most recent Supreme Court ruling on IDEA, *Endrew F. v Douglas County School District* (2017; hereafter *Endrew*) wherein the court established that providing special education services that result in minimal progress for students with disabilities no longer meets the FAPE directive. The *Endrew* ruling provides a new outlook on the service provisions and data collection techniques used by school districts and educators when developing IEPs (Prince et al., 2018). This outlook emphasizes higher expectations for the IEP team to collaborate in support of student growth. Accordingly, we suggest four areas of needed improvement within IEP planning, meetings, documentation, and services and include practical strategies to facilitate the needed improvements.

For IEP planning, we found that parents emphasized proactive and transparent communication with professionals. As informed by our participants, proactive communication is defined as contact initiated by educators which includes pre-meetings to develop the IEP. Transparent communication refers to the sharing of information related to the IEP, which includes sending drafts of documents, assessment results, and other data prior to the IEP meeting for parents to review and be prepared ahead of time. According to Angell et al. (2009), communication, along with authentic caring and knowledge of the child, is critical in establishing and maintaining trust with parents. Special education literature supports the use of various communication strategies, including pre-meetings (Jones & Gansle, 2010), home visits or community visits (Wright et al.,

2018), and communication folders (Staples & Diliberto, 2010). The literature also offers advice for communicating with parents from culturally and linguistically diverse backgrounds, including guidelines for partnering with interpretation services, using appropriate cross-cultural, nonverbal communication, and promoting an environment that honors all cultures, (Gerzel-Short et al., 2019; Lo, 2012). Given that parents have differing communication preferences, we recommend surveying parents at the beginning of the school year to determine the amount and type of communication they desire. For instance, some parents may desire multiple informal pre-IEP meetings at the school, the daily sharing of classroom data through a shared drive online, and frequent emails on student performance. Other parents may desire an annual informal home or community visit, the quarterly sharing of classroom data through a physical portfolio of student work samples, and weekly handwritten notes on student performance (see Staples & Diliberto, 2010 for additional communication schedule examples).

For IEP meetings, we found that parents desired welcoming and understandable professionals. As informed by our participants, welcoming professionals demonstrated authentic caring for students and speak about them in positive ways during meetings. Understandable professionals synthesized complex information without using jargon or rushing through reports. Research espouses the use of these practices to promote equity between parents and professionals (Connor & Cavendish, 2018; Lalvani & Hale, 2015; Ruppert & Gaffney, 2011; Zeitlin & Curcio, 2014). Of course, disagreements and feelings of power imbalance during meetings are likely inevitable. To address disputes, Mueller and Vick (2019) developed a facilitated IEP process to resolve differences of opinions prior to due process. Another strategy which could be used to foster equity during IEP meetings is for educators to take a strengths-based approach rather than only focus on the deficits of students (Wehmeyer, 2019). Yeager and Deardorff (2021) created a research-based framework for educators to utilize during IEP development that focuses on student strengths. Devoting time to discussing strengths can help to build trust with families and set a positive tone during the meeting. By holding meetings that are welcoming and understandable, IEP teams can ensure all members, including parents, can collaborate to design services that promote positive student outcomes (see Diliberto & Brewer, 2012 for additional strategies for holding successful IEP meetings).

For IEP documentation, we found that parents emphasized professionals who were data-driven and thorough. As informed by our participants, data-driven IEPs clearly aligned high-quality data sources to each component of the IEP (e.g., goals, services, accommodations). Thorough IEPs included comprehensive evaluations, multiple data sources, and well-prepared, detailed reports. Prince et al. (2018) noted how *Andrew* emphasized the use of high-quality progress monitoring to assess student growth. Thus, teachers should strive to make efforts to ensure they are systematically and frequently collecting data on students' academic and functional performance. We suggest that professionals utilize resources from the IRIS Center (<https://iris.peabody.vanderbilt.edu/>), which provides accessible online modules on (a) conducting multiple forms of assessment (e.g., progress monitoring, functional behavior assessment, data-based individualization) with students with disabilities and (b) developing high-quality IEP documents that incorporate this data. By developing data-driven and thorough IEP documents, professionals and parents can accurately monitor and facilitate student growth.

For IEP services, parents clearly echoed sentiments from *Andrew* regarding effectiveness and individualization. As informed by our participants, effective services provided adequate support for students to learn and access rigorous academic content. Individualized services met the unique needs of students so they could be successful. There are several online resources available to help educators identify evidence and research-based practices to increase the effectiveness of IEP services. The What Works Clearinghouse (<https://ies.ed.gov/ncee/wwc/>) website provides listings of these practices based upon topic areas like reading, math, transition, behavior, and others. Another source for information is from the Council for Exceptional Children (<https://exceptionalchildren.org/>); their website provides information on high-leverage practices rooted in research. To better individualize services, The National Center on Intensive Intervention (<https://intensiveintervention.org/>) offers training and resources on data-based individualization, a system that helps educational professionals tailor interventions to the unique needs of students. These resources are free and provide an avenue for educators to learn about these important instructional practices and how to use them to provide students with effective and individualized services.

Limitations and Suggestions for Future Research

There are several limitations associated with our study. Despite our efforts to purposefully sample for a diverse group of participants, our sample was still a majority white and female with college or professional degrees. Participants also expressed a high level of participation in the IEP development process that may not be representative of nation-wide parent participation. Likely, our recruitment process, through parent organizations and social media, disproportionately attracted participants with these characteristics. Future research should seek out the perspectives of parents from more diverse backgrounds and parents who might not typically participate in the IEP process. These perspectives can provide additional insight into the actions professionals can take to make the IEP development process more collaborative.

In addition, our findings may be limited by our data collection procedures. Additional, longer, or in-person interviews may have been helpful in building rapport between the interviewer and interviewee. Furthermore, additional data sources (e.g., IEP documents, observations, questionnaires, interviews with other IEP team members) could help triangulate findings. Future research should examine the factors that contribute to the development of parents' perspectives over the course of their child's educational experience and the specific strategies professionals can implement to individualize the IEP development process based on parent preferences. Researchers should develop tools (e.g., interview protocols, questionnaires, surveys) that professionals can use to tailor the IEP development process for parents.

Conclusion

In conclusion, our qualitative analysis revealed important themes for improving parent-professional partnerships during the IEP development process. As expected, parents had a diverse range of perspectives, with some sharing mostly positive experiences and others expressing severe frustration. In each interview, parents offered practical suggestions and salient critiques of IEP planning, meetings, documentation, and services. By better understanding these perspectives and considering the recent *Andrew* decision, professionals and policymakers can

continue to confront the persistent challenges facing the field of special education and work to design a more equitable IEP development process that best meets the needs of students with disabilities and their families.

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A Comparison of Teaching Efficacy Between Paraprofessionals and Special Education Teachers Working with Special Education Students

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Abstract

This study aimed to examine and compare the teaching efficacy of paraprofessionals in the four desired domains identified in prior research about teaching special education : academic instruction, behavioral management, assessment, and professional ethics; and to identify what demographic or background factors predicted paraprofessional efficacy in the four domains. The researchers surveyed 41 paraprofessionals and 18 special education teachers using a scale adapted from the Student Teachers' Efficacy in Teaching Students With Disabilities (STETSD) scale (Zhang et al., 2018). Two significant main effects were found: efficacy domains and the professional's role. A significant interaction effect was found when controlling for years of professional experience. Results suggested that (a) on average, paraprofessionals reported lower self-efficacy than special education teachers in all four desired domains, and (b) paraprofessionals perceived lower teaching efficacy in academic instruction and assessment.

Keywords: paraprofessionals, special education, teaching efficacy, effectiveness

The Background

A paraprofessional can be defined as an educator who regularly assist students with disabilities with instructional, behavioral, and social support, in various capacities (French, 2003), yet often have no formalized degree to prepare them for this vocation. They are widely employed in inclusive school settings to serve students with disabilities but once again, often do not have adequate formal training required for their role (Giangreco & Broer, 2005; Giangreco et al., 2010). Their qualification requirements for employment are less demanding compared to special education teachers (U.S. Department of Education, 2004); yet paraprofessionals assume considerable responsibility for teaching and managing students with disabilities. Indeed, paraprofessionals are often viewed as "teachers" by society based on the amount of instruction they provide to students. Limited research has focused on paraprofessionals compared with special education teachers, particularly in terms of observed differences in teaching efficacy.

Self-efficacy, or one's view of self-competence in task performance, is rooted in Bandura's social cognitive theory (1997), in which self-efficacy is connected to resilience and ways of coping in stressful environments. It is important to investigate paraprofessionals' efficacy in teaching students with disabilities because evidence shows that teachers with strong self-efficacy are more likely to implement positive teaching behaviors and practices while reinforcing the belief that all students can learn (Bandura. 1997; Goh Swee-Choo et al., 2012). Teaching efficacy has also been associated with positive student achievement across academic areas (Shidler, 2009), and has been closely linked to non-academic outcomes such as teachers' emotional exhaustion (Tschannen-Moran & Hoy, 2001) and teachers' attrition rate (Poznanski et

al., 2018). Researching paraprofessionals' teaching efficacy relative to special education teachers can provide recommendations regarding professional development or training for paraprofessionals that will contribute to positive student outcomes. This is a necessary area of investigation given that paraprofessionals continue to outnumber special education teachers in the public-school setting (Biggs et al., 2019; U.S. Department of Education, 2017). Additionally, paraprofessionals continue to assume more direct roles working with students with disabilities.

Paraprofessionals

Paraprofessionals (the prefix *para* means alongside or near) have historically served a variety of purposes alongside educators by providing supplemental support where and when needed. The role of paraprofessionals was first recognized in President Lyndon Johnson's Elementary Secondary Education Act of 1965, which focused on school districts that served families with lower socioeconomic status (Conley et al., 2010). The first school aides were parents from within the school neighborhood who had specific skills needed to serve the school. Currently, paraprofessional roles are unique to the students, the types of classrooms, and the teachers to whom they are assigned (Garwood et al., 2018). Their roles encompass a wide range of responsibilities, including clerical duties, providing student progress or feedback, tutoring, and assisting in instructional (individual, small or large group) or behavioral management activities (Patterson, 2006), depending on certifications and endorsements held. In addition to their roles changing over time, professionals have also carried a diverse range of titles or names, including paraeducators, teacher aides, paraprofessionals, instructional or educational assistants, educational technicians, and paraprofessionals, among others (Douglas et al., 2019). For the purpose of this study, the term *paraprofessional* will be used exclusively throughout the study.

The special education field faces many challenges in attracting and retaining qualified educators (Thornton et al., 2007), and with the increasing number of students who are eligible for special education services (National Center for Education Statistics [NCES], 2020), the demand for paraprofessionals has likewise been increasing (Hampden-Thompson et al., 2007). Hampden-Thompson et al. found that in the 2003-2004 school year, 91% of public elementary and secondary schools had at least one paraprofessional on staff. Shortages in special education personnel have led to paraprofessionals outnumbering special education teachers, with the proportion of paraprofessionals increasing annually (Biggs et al., 2019; U.S. Department of Education, 2017).

Training Differences Between Special Education Teachers and Paraprofessionals

Under the Individuals with Disabilities Education Act (IDEA) and No Child Left Behind Act (NCLB), the qualifications or training required of special education teachers and paraprofessionals are broadly outlined (IDEA 20 U.S.C. 1412[a] [14]). Licensed teachers serving in special education must be *highly qualified*, yet little guidance is provided on how to accomplish this for paraprofessionals, with legislation giving individual states authority to set their own requirements. While some states such as Maine have developed a comprehensive overview of the paraprofessional's role, indicating responsibilities, trainings, and supervision requirements (State of Maine, n.d.), many other states have fallen short by not providing documentation outlining their requirements and responsibilities. In fact, many paraprofessionals

have reported receiving minimal training for the roles they are expected to fill (Barnes et al., 2011).

Chronic concerns have emerged concerning the adequacy of paraprofessionals' supervision and training (Etscheidt, 2005). Breton (2010) reported that most respondents perceived that they were inadequately prepared for their duties. In Breton's study, 40% of male paraprofessionals and 62% of female paraprofessionals did not have a bachelor's degree; in the sample from Maine, paraprofessionals typically completed 60 to 90 college credits in their degree programs (Breton, 2010). Educational and fieldwork requirements vary by state, with some colleges and universities providing degree programs in Paraprofessional Education, typically at the associate level (Indeed, 2020). Other educational programs include early childhood education and specific subjects in education, special education, and similar areas.

The inconsistency in requirements was also observed in the ParaPro Assessment (Educational Testing Service [ETS], n.d.a), the official standardized assessment for paraprofessionals that measures the expected aptitude (skills and knowledge) of prospective or practicing paraprofessionals. Many states and school districts have set their own qualifying scores for achieving proficiency (ETS, n.d.b). Furthermore, there is limited training due to the paraprofessional's limited education requirements (Fisher & Pleasants, 2012). Basic credentials for paraprofessionals include a high school diploma (2 years of college credits, or in some cases, a minimum of an associate degree) and passing the ParaPro Assessment, if required by their state/school district, to show competency in reading and math.

In addition to the lower training requirements for paraprofessionals before being hired by schools, inadequate training/supervision resources provided by schools after being hired are also concerning. IDEA (2004), NCLB (2001), and the Council for Exceptional Children (CEC, 2015) require adequate supervision of paraprofessionals by special education teachers, school administrators, or general education teachers (Westat, Inc., 2001). However, problems arise when special education teachers either lack the relevant training or are hesitant to supervise paraprofessionals, but the paraprofessionals are assigned to work directly with students with challenging disabilities (Breton, 2010). Sobeck et al. (2020) found that there was reluctance by pre-service teachers to supervise paraprofessionals because of no previous requirement or training in their college preparatory programs. In many cases, paraprofessionals establish their own agendas and plans because of a lack of supervision by special education teachers, although this might contradict the ethical standards established for paraprofessionals (CEC, 2015).

Problems arise because of inadequate training and supervision for paraprofessionals. Frustration is experienced by special education teachers who are overburdened with administrative work regarding their caseloads, leaving the paraprofessional to carry out instruction. Paraprofessionals not trained in evidence-based practices for students with severe disabilities might risk exacerbating a student's challenges or symptoms through ineffective instructional techniques (Brock et al., 2017). Both special education teachers and paraprofessionals reported paraprofessional proficiency as taking an active role in the classroom and seeking opportunities for professional growth (Biggs et al., 2016). However, trainings typically done in single-session workshops are often ineffective in providing enough scope, modeling, and feedback to

paraprofessionals regarding their roles and responsibilities (Barnes et al., 2011). Thus, the need to determine paraprofessional self-efficacy is important.

After conducting a systematic review to investigate if paraprofessional training materials aligned with the values and regulations set forth by legislation and evidence-based guidelines, Douglas et al. (2019) found that most materials aligned only with federal legislation. Trainings reviewed in Douglas's study covered broad topics, specific disabilities, and situations such as behavioral management, visual impairments, and response to intervention. Several training programs failed to recognize the teacher as the person providing direct supervision for the paraprofessional. Another program review (Garwood et al., 2018) suggested that the top-rated training programs emphasized skills development in natural environments to paraprofessionals and for special education teachers to assist in reducing burnout in paraprofessionals.

Paraprofessional and Special Education Teachers: Teacher Efficacy Comparison

Teacher efficacy denotes the individual perceived capability of a teacher or paraprofessional to handle potential classroom situations or tasks to bring about the desired student outcomes (Atalay, 2019; Moen & Sheridan, 2020) and is highly associated with teachers' teaching quality, students' academic outcomes, and teachers' attrition rates (Schwarzer & Hallum, 2008; Tsoupoulas et al., 2020, Zee & Koomen, 2016). The literature has consistently demonstrated lower teacher efficacy in teaching students with disabilities (Gersten et al., 2001). Poor job conditions, lower job satisfaction, and inadequate training are found to be common factors that contribute to lower teacher efficacy (Protheroe, 2008).

One area of lack of teacher efficacy is in diverse student backgrounds. Brown (2007) found that special education teachers had particularly low teaching efficacy when instructing students with disabilities from culturally and linguistically diverse backgrounds (Chu & Garcia, 2014). This may be due to a lack of training and experiences in teaching students in special education with diverse needs. In a study on self-efficacy, Straus and Brondie (2015) found that job satisfaction was the only organizational predictor (i.e., a factor that impacts the school as a collective whole) of self-efficacy and noted the need for a paraprofessional teaching efficacy scale.

There has been sparse research on paraprofessionals, including their teaching efficacy in working with students with disabilities. In comparison to special education teachers, paraprofessionals typically suffer from both poor working conditions and inadequate training (Giangreco et al., 2002; Giangreco & Doyle, 2002; Giangreco et al., 2010), both of which were reported to be significant contributors to low teaching efficacy (Berry et al., 2010). The literature review showed that limited research has focused on comparing teaching efficacy between paraprofessionals and special education teachers through a validated scale.

Purpose of the Research

Because of reported concerns with paraprofessionals being pushed into instructional roles for which they feel inadequately prepared, the researchers adapted a validated scale to measure the teaching efficacy of paraprofessionals across the four domains identified by Zhang et al. (2018): assessment, academic instruction, behavioral management, and professional ethics. The aim of our study was to answer three research questions: In comparison to special education teachers,

what is the perceived efficacy of paraprofessionals who work with special education students? Among the four domains that are identified in the existing literature as essential for teaching special education, which areas represent the strengths and the weaknesses of paraprofessionals in comparison to special education teachers? Which demographic variables and training factors influence paraprofessionals' teaching efficacy in the different domains?

Method

Participants

Sixty-eight participants from four school districts in the Southwest and Northeast regions of the United States participated in this study. Of the total participants in the study, only 59 participants completed the full survey, including 18 special education teachers and 41 paraprofessionals. Participant demographic information can be found in Table 1. For both special education teachers (89.9% females and 11.1% males) and paraprofessionals (87.8% females and 12.2% males), there was an overrepresentation of female participants, which is typically observed in the field of education. Special education teachers reported their highest education obtained to be divided equally between bachelor's and graduate-level degrees (44.4% each), and two special education teachers reported that they held only a high school diploma (11.1%). In contrast, the most frequently reported highest degree obtained by paraprofessionals was at the bachelor's degree level (46.3%), followed by associate degree (22%), high school diploma (19.5%), graduate degree (9.8%), and technical degree (2.4%). Finally, it was interesting that not all special education teachers were certified and not all paraprofessionals were uncertified; 77.8% of special education teachers reported having at least a Special Education Certification compared to 24.4% of paraprofessionals.

Measures

The 30-item survey consisted of seven demographic information questions and the 23-item Student Teachers' Efficacy in Teaching Students With Disabilities (STETSD) scale (Zhang et al., 2018). The first six demographic questions asked about the role of the survey taker, range of years of experience with five options, preferred gender identity, racial/ethnic identity, age range, and highest level of education obtained ranging from high school diploma to graduate degree. Finally, Question 7 asked about all teaching certifications, licenses, and/or endorsements held, with an option for survey takers to write in other endorsements not listed on the survey.

After administering the demographic questions, the researchers employed the STETSD scale to assess special education teachers' and paraprofessionals' efficacy in teaching students with special needs in four different domains (Zhang et al., 2018). Participants were instructed to identify how competent they felt in response to each domain's set of questions using a 5-point Likert scale that ranged from *strongly agree* (5) to *strongly disagree* (1). Zhang et al. (2018) identified four efficacy domains for teaching students with disabilities: academic instruction ($\alpha = .88$), behavioral management ($\alpha = .91$), assessment ($\alpha = .89$), and professional ethics ($\alpha = .88$). The STETSD scale also reported moderate positive correlations with other established efficacy scales and strong prediction of continuing to pursue a career in serving students with disabilities. The researchers reviewed the scale questions to ensure that all questions were suitable for in-service teachers and paraprofessionals.

Table 1
Participant demographics and efficacy

Variables	Teachers (<i>N</i> = 18)		Paraprofessional (<i>N</i> = 41)	
Efficacy Domain				
Academic Interventions	<i>M</i> = 4.23, <i>SD</i> = .59		<i>M</i> = 3.93, <i>SD</i> = .59	
Behavioral and Functional Skill Intervention	<i>M</i> = 4.35, <i>SD</i> = .54		<i>M</i> = 4.18, <i>SD</i> = .45	
Identification and Assessment	<i>M</i> = 4.28, <i>SD</i> = .49		<i>M</i> = 3.85, <i>SD</i> = .70	
Professional Ethics	<i>M</i> = 4.58, <i>SD</i> = .58		<i>M</i> = 4.48, <i>SD</i> = .57	
	Frequency	%	Frequency	%
Years of Experience				
0-3 years	6	33.3	22	53.7
3-5 years	4	22.2	3	7.3
5-8 years	0	0	3	7.3
8-11 years	4	22.2	2	4.9
11+ years	4	22.2	11	26.8
Gender				
Male	2	11.1	5	12.2
Female	16	89.9	36	87.8
Race/Ethnic Identification				
White	14	77.8	34	82.9
Hispanic/Latino	1	5.6	2	4.9
Asian/Pacific Islander	1	5.6	3	7.3
Biracial	1	5.6	0	0
Other/Did Not Specify	1	5.6	2	4.9
Age Category				
18-24 years	2	11.1	3	7.3
25-34 years	8	44.4	14	34.1
35-44 years	6	33.3	3	7.3
45-54 years	1	5.6	10	24.4
55-64 years	1	5.6	9	22
65-74 years	0	0	2	4.9
Highest Education Obtained				
High School Diploma	2	11.1	8	19.5
Associate's Degree	0	0	9	22
Technical Degree	0	0	1	2.4
Bachelor's Degree	8	44.4	19	46.3
Graduate Degree	8	44.4	4	9.8
Teaching Endorsements Held				
Special Education Certification	3	16.7	8	19.5
Early Childhood/Elementary Teacher Certification	0	0	2	4.9
Teacher's National Board Certification	0	0	2	4.9
Multiple certificates including Special Ed	11	61.1	2	4.9
Multiple certificates NOT including Special Ed	1	5.6	0	0

Procedures

Participants were special education teachers and paraprofessionals who worked for four school districts in the Northeast and Southwest regions of the United States. The participants were from a professional development training workshop held in their home school districts. All special education teachers and paraprofessionals who work with students with disabilities of the participating districts were invited for the professional training, regardless of work experiences, gender, endorsement status, etc. At the very beginning of the professional development workshop before any lecturing started, teachers and paraprofessionals were invited to complete an efficacy survey on a voluntary basis. Participants were asked to complete the survey independently and no prompts were provided.

Results

Differences Between Paraprofessionals and Special Education Teachers Across the Four Efficacy Domains

The researchers conducted a 2 (paraprofessional vs. special education teachers) x 4 (four domains of efficacy) mixed design ANCOVA with a repeated variable of four domains of efficacy and a covariate of years of professional experience. The researchers first examined the assumption of homogeneity of variance. The results of Mauchly's test of sphericity showed that the assumption of homogeneity of variances had been violated, $\chi^2(5) = 27.463$, $p < .001$. To correct for the assumption, a Huynh-Feldt procedure was done to correct for the degrees of the freedom when $\epsilon = .862$.

The researchers tested the assumption for conducting ANCOVA that the covariate should not interact with the independent variable(s) on the dependent variable(s). There was no significant interaction between the efficacy domains and the covariate of years of professional experience, $F(2.586, 149.988) = 1.902$, $p = .140$, $\eta_p^2 = .033$, nor was there a significant interaction between the educator role and the covariate, $F(1, 57) = .478$, $p = .492$. These non-significant interaction effects between the covariate and the independent variables met the assumption of ANCOVA. The covariate of years of professional experience did not explain a significant amount of variance in the average efficacy, $F(1, 174) = .417$, $p = .521$, $\eta_p^2 = .007$.

The role of special education teacher and paraprofessional made a significant difference in the average efficacy, $F(1, 174) = 4.438$, $p = .04$, $\eta_p^2 = .073$, showing a significant main effect for professional role. Using the estimated marginal means, special education teachers ($M = 4.365$, $SD = .78$) had significantly greater average efficacy than paraprofessionals ($M = 4.107$, $SD = .52$) across the efficacy domains, $F(1, 56) = 4.438$, $p = .04$, $\eta_p^2 = .073$. A medium effect size was found in which approximately 7.3% of the variance in average efficacy was explained by the professional role.

A significant main effect of efficacy domain was found, $F(1, 56) = 10.698$, $p = .002$, $\eta_p^2 = .160$. Post hoc tests showed that the professionalism efficacy ($M = 4.532$) was significantly greater

than the efficacies for academic instruction ($p < .001$), behavioral management ($p = .005$), and assessment ($p < .001$). The efficacy for assessment ($M = 4.069$) was significantly less than the efficacy for behavioral management ($p = .011$). Finally, the efficacy for behavioral management ($M = 4.267$) was significantly greater than the efficacy for instruction ($M = 4.076$; $p = .001$). A significant interaction between the individual's role and efficacy domains was found after controlling for the years of professional experience, $F(1, 56) = 4.378$, $p = .041$, $\eta_p^2 = .073$. This result suggests that paraprofessionals may have even lower teaching efficacy in certain domains in comparison to special education teachers. Next, we conducted a follow-up analysis to compare the efficacy of the two groups in each of the four efficacy domains.

Differences Between Paraprofessionals and Special Education Teachers in Each of the Four Efficacy Domains

In the first efficacy domain, academic instruction, special education teachers ($M = 4.23$, $SD = .59$) reported significantly more efficacy than paraprofessionals ($M = 3.93$, $SD = .59$), $F(1, 56) = 3.01$, $p = .088$, $r^2 = .036$. This effect was only marginally significant. The adjusted r -squared value suggested that approximately 3.6% of the variance in academic interventions efficacy could be accounted for by the professional role of the individual. Specifically, an itemized comparison suggested that paraprofessionals reported significantly lower teaching efficacy in “develop(ing) lesson objectives that address IEP goals, curriculum/state standards, and student needs,” $F(1, 57) = 5.167$, $p = .027$, and marginally significantly lower efficacy in “implementing explicit instruction, including modeling, guided practiced, and independent practice,” $F(1, 57) = 3.782$, $p = .057$.

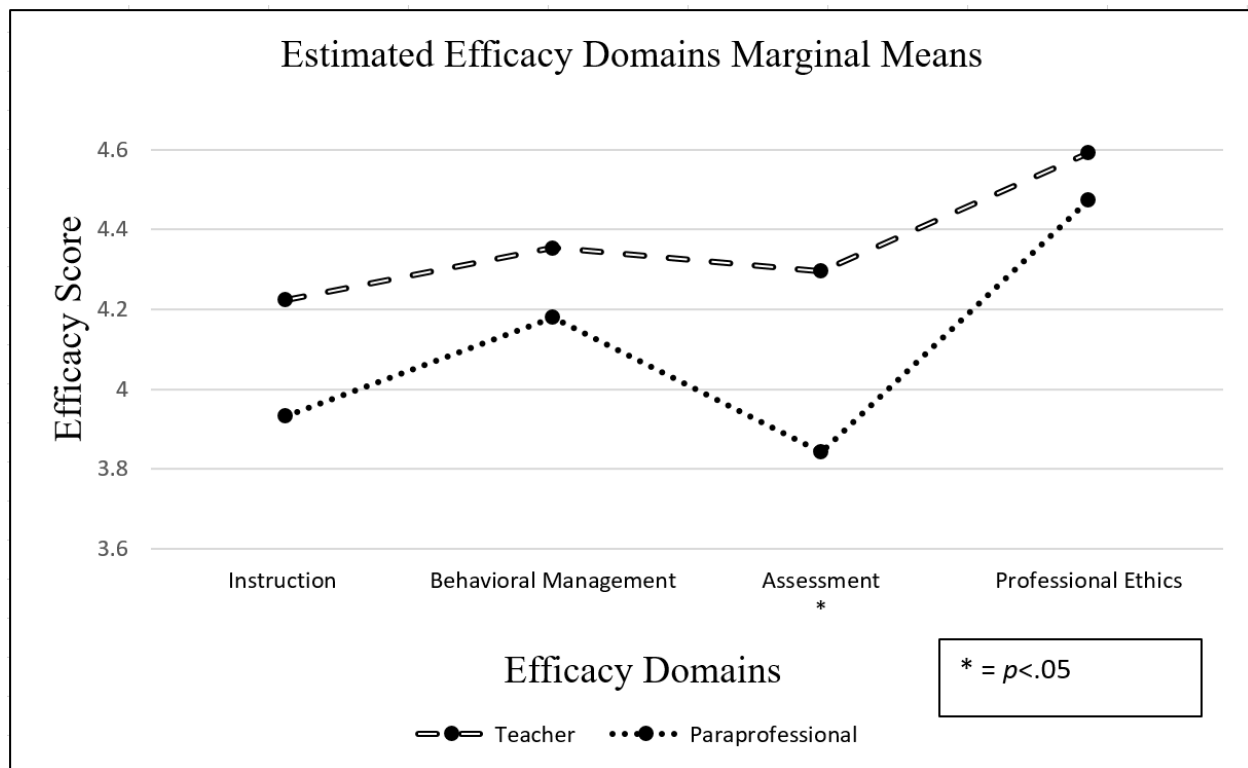


Figure 1: *Estimated Efficacy Domains Marginal Means*

Note. The academic instruction efficacy was marginally significant.

In the second efficacy domain, behavioral management, the efficacy reported by special education teachers ($M = 4.35$, $SD = .54$) was not significantly different from that of paraprofessionals ($M = 4.18$, $SD = .45$), $F(1, 56) = 1.572$, $p = .215$, $r^2 = -.003$. The adjusted r -squared value suggested that approximately no variance in behavioral and functional skill intervention efficacy could be accounted for by the professional role of the individual. While no specific items within this domain showed statistically significant differences between paraprofessionals and special education teachers, two items had a marginally significant difference: “Plan and implement individualized reinforcement systems and environmental modifications to change students’ inappropriate behaviors,” $F(1, 57) = 3.52$, $p = .066$.

In the third efficacy domain, special education teachers ($M = 4.28$, $SD = .49$) reported significantly more efficacy than paraprofessionals ($M = 3.85$, $SD = .70$) in identification and assessment, $F(1, 56) = 6.141$, $p = .016$, $r^2 = .088$. The adjusted r -squared value suggested that approximately 8.8% of the variance in identification and assessment efficacy could be accounted for by the professional role of the individual. Specific items that demonstrated a significant group difference between paraprofessionals and special education teachers included: “Identify factors that influence overrepresentation of culturally and/or linguistically diverse individuals,” $F(1, 57) = 4.605$, $p = 0.036$; “Explain the procedures of a special education referral,” $F(1, 57) = 5.021$, $p = 0.029$; “Provide ongoing data about student progress in meeting short-term and long-term IEP goals,” $F(1, 57) = 4.453$, $p = 0.039$; and “Use appropriate communication skills to report assessment results to students, parents, teachers, administrators, and other professionals,” $F(1, 57) = 3.714$, $p = 0.059$.

In the final efficacy domain, professionalism and ethics, the efficacy reported by special education teachers ($M = 4.58$, $SD = .58$) was not significantly different from that of paraprofessionals ($M = 4.48$, $SD = .57$), $F(1, 56) = .535$, $p = .468$, $r^2 = -.017$. The adjusted r -squared value suggested that approximately no variance in the professional ethics efficacy could be accounted for by the professional role of the individual. No item in this domain was found to be significantly different between paraprofessionals and special education teachers.

Discussion

The current study investigated the teaching efficacy of paraprofessionals and special education teachers who work with special education students and produced several major findings. First, paraprofessionals generally reported lower teaching efficacy across all four efficacy domains, supporting our hypothesis. This is concerning because paraprofessionals continue to be pushed into roles of serving students with disabilities in which they report feeling less competent than their supervisors. Prior literature has shown that working conditions (Giangreco et al., 2010) and training (Barnes et al., 2011) are areas of expressed concern for paraprofessionals. States and school districts and institutions of learning should address these concerns by providing more formalized professional development and training, clearer job descriptions and responsibilities, and opportunities for mentorship and supervision from special education teachers.

The second major finding was that paraprofessionals reported marginally statistically significantly less efficacy in academic instruction and statistically significantly less efficacy in assessment and identification than special education teachers. Efficacy in assessment and identification is primarily concerned with identifying and referring students who are at risk of having disabilities. Important characteristics of this efficacy domain include understanding proper procedures for referral, collaborating with educators, and using data to inform instructional practices. With paraprofessionals needing to demonstrate only basic knowledge and skills through the ParaPro Assessment in some states, and meeting other less strenuous requirements (e.g., credits completed, work history), the expectation that they have the expertise to identify students for special education is low. In comparison, training programs for special education teachers have likely addressed the basic characteristics of various disabilities and the referral process to special education. This echoes the literature that paraprofessionals do not have adequate training on pedagogy or content knowledge in certain areas, such as mathematics.

Regarding efficacy in academic interventions, teacher programs discuss instructional methods, differentiation of instruction, and pedagogical approaches to student learning, information to which paraprofessionals may not have access even though they are placed frequently in the role of instructor. In one study that exclusively examined paraprofessionals (educational technicians) in Maine, approximately 51.8% of 258 respondents indicated receiving 10 or more hours of in-service training, whereas 11.5% indicated receiving no training and 4.4% receiving only 2 hours of in-service training (Breton, 2010). Other studies found inadequate pre-service training of special education paraprofessionals (Riggs & Mueller, 2001), with Trautman (2004) reporting that most paraprofessionals learned on the job rather than through internships.

Our third major finding was that out of the four efficacy domains assessed, in both behavioral management and professional ethics, paraprofessionals' perceived efficacy was not statistically significantly different from that of special education teachers, although paraprofessionals showed a lower mean score than teachers on these two domains. One reason why paraprofessionals may not differ significantly from special education teachers in terms of efficacy in professional ethics is possibly due to this efficacy domain representing the most basic requirements of working with students with disabilities: confidentiality, privacy, safe record keeping, and valuing inclusion of diverse student backgrounds (Zhang et al., 2018). Schools typically provide relatively sufficient training on work ethics to paraprofessionals to avoid any legal confrontations, and paraprofessionals are often involved in classroom management duties (Giangreco, 2003). Paraprofessionals did not report significantly lower efficacy in behavioral and functional skill intervention, suggesting relatively sufficient training in behavioral management. In the literature, paraprofessionals are often assigned to work with the most challenging students, including students with emotional, social, and behavioral problems (Breton, 2010). Additional literature has documented paraprofessionals as being eager to receive further training in working with students with emotional disturbance (O'Brien et al., 2019; Wall et al., 2005) in order to be able to cope with the complexities of managing and mitigating student behaviors in their classroom roles (Fisher & Pleasants, 2012).

Paraprofessionals did not report significantly lower efficacy in behavioral and functional skill intervention, suggesting relatively sufficient training in behavioral management. In the literature,

paraprofessionals are often assigned to work with the most challenging students, including students with emotional, social, and behavioral problems (Breton, 2010). Breton found that of 258 respondents, 43.3% indicated wanting training in dealing with students with these types of challenges. Additional literature has documented paraprofessionals as being eager to receive further training in working with students with emotional disturbance (O'Brien et al., 2019; Wall et al., 2005) in order to be able to cope with the complexities of managing and mitigating student behaviors in their classroom roles (Fisher & Pleasants, 2012).

Implications for Practice

The attrition rates and gaps to hiring among special education teachers continue to be a major concern for school administrators across the country (Billingsley et al., 2020; Emery & Vandenberg, 2010). This shortage of special education teachers is especially felt in rural areas, exemplified through the requirement of having “highly qualified” educators, due to the difficulty of finding accredited individuals (Courtade et al., 2010). Fewer teachers are enrolling in secondary education programs for endorsement in special education (Bergert & Burnette, 2001). Because of these constraints, paraprofessionals have been utilized as cost-efficient alternatives to fill the teaching gaps found in special education. For students of color who are disproportionately represented in special education, they continue to be underserved and provided the same quality educational experience as their peers. As these concerns are addressed, special education teachers and institutions will feel less reluctant to place paraprofessionals in more demanding roles where they have been unprepared to lead due to lack of training.

With the literature demonstrating a strong need for more professional training of paraprofessionals, future training programs should emphasize development of paraprofessionals' teaching efficacy in academic instruction and assessment. Levine (2020) reported that a lack of skills and knowledge was the most common cause for paraprofessionals' lack of self-efficacy. Brock and Carter (2015) found that a professional development package of multiple sessions compared to a single-session workshop was more effective in improving special education paraprofessional efficacy in implementing evidence-based practices with high fidelity. Also, coaching was the most important factor, including performance feedback and video modeling (Brock et al., 2017) for paraprofessionals' efficacy improvement. As result, a multi-session training covering multiple task domains is suggested for paraprofessionals to improve their teaching efficacy; we also suggest providing opportunities for paraprofessionals to receive modeling and feedback on knowledge and skills acquired through such trainings.

Limitations and Future Directions

Based on the literature review conducted, this study is the first to compare the teaching efficacy of paraprofessionals and special education teachers using a validated scale. One limitation of the current study was the small sample of participating teachers and paraprofessionals. Future investigators should aim to replicate the study with a larger sample to further validate these findings at different school levels from various regions of the country. Furthermore, future studies should assess the teaching efficacy of more diverse groups of paraprofessionals and special education teachers, as most of our sample consisted of female educators who identified as White. This will address concerns relating to external validity and generalization of the results across participants with different racial and ethnic diversity and across different settings.

One issue that was not addressed in the current study was the collective teaching efficacy of special education teachers and paraprofessionals. Future research should also investigate collaborative teaching efficacy, given that students with disabilities are supported through a diverse instructional team consisting of educators and specialists. Goddard et al. (2000) found that collective teaching efficacy, the belief in teaching competency by a collection of teachers, is significantly positively associated with an increase in student achievement for both math and reading scores. McCray (2012) found that teachers in supportive school environments were more efficacious in their teaching of students, including students with disabilities. With paraprofessionals forming part of this instructional team, future research should assess the collective teaching efficacy of paraprofessionals for comparison.

Finally, although our study investigated the efficacy of paraprofessionals, it did not explore special education student outcomes. Efficacy and positive student achievement outcomes have traditionally been associated with one another in the literature (Herman et al., 2018; Muijs & Reynolds, 2015). Future research should look more directly into investigating the associations and relationships of paraprofessionals' teaching efficacy with student achievement and success outcomes. As indicated previously, the literature review found that the teaching efficacy of paraprofessionals can have both positive and negative effects on students in special education and, as such, this area needs further exploration.

Declaration of Conflicting Interest(s)

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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