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# Experiences of Rural Teachers of Students with Visual Impairments During the Pandemic

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## ABSTRACT

Students who are educated by schools in rural areas experienced challenges around the world even before the COVID-19 pandemic, such as lack of resources and inadequate infrastructure (Çiftçi & Cin, 2018; Dube, 2020). The COVID-19 pandemic drew attention to the inequities of the conditions facing students in rural areas (EDC, 2020).  These unique challenges were evident for those serving low-incidence disability populations, such as those children with visual impairment. There are unique challenges in providing support to students and their families with visual impairments in rural areas of the country. Those challenges included need for additional supports in technology, internet infrastructure, funding, and full access to accessible materials. Concerns over the health and well-being of teachers and students with visual impairments were also expressed as concerns but was not unique for teachers of students with visual impairments in rural areas.

Students who are educated by schools in rural areas experienced challenges around the world even before the COVID-19 pandemic, such as lack of resources and inadequate infrastructure (Çiftçi & Cin, 2018; Dube, 2020). The COVID-19 pandemic drew attention to the inequities of the conditions facing students in rural areas (EDC, 2020). Schools closed to prevent the spread of the COVID-19 pandemic around the world in 2020, and both teachers and students were required to abruptly transition to online teaching and learning in many places. According to World Bank (2020), most teachers were not able to make the transition to online learning without assistance; they needed

to be trained and supported. Moreover, rural students were sometimes excluded from online learning due to shortage of devices for online learning, lack of access to the internet, lack of computer skills by rural teachers, and the expense related to internet access (Dube, 2020) as well as lack of ability to access educational programming (EDC, 2020).

Padilla Rodriguez et al. (2021) conducted online surveys with 75 rural teachers who taught at the K-12 and/or university levels in Mexico during the COVID-19 pandemic. The most commonly cited challenge was a deficient or non-existent infrastructure. The teachers reported that 87% of their students did not have an adequate internet connection, 79% did not have electronic devices available for learning, and 73% did not have sufficient skills to learn online. Furthermore, teachers in rural Mexico had challenges related to the internet. For example, 59% of teachers did not have broadband internet access, and 20% of teachers were limited to their mobile phone for internet access. Five percent of the teachers had no internet connection in their homes. Moreover, 64% of teachers believed that the COVID-19 pandemic had a positive impact on their professional development because they improved their computer skills.

Teachers in Romania experienced similar struggles. Tunegaru (2021) conducted interviews and questionnaires with rural Romanian teachers to explore their experiences with online learning during the COVID-19 pandemic. These teachers experienced a similar lack of digital devices and low-quality internet connectivity which ultimately impacted access to material resources for both the teachers and their students. Poverty and deprivation of basic necessities in rural areas also negatively affected students' schooling during the COVID-19 pandemic.

In order to gauge the impact of COVID-19, White et al. (2022) conducted interviews with school principals in the United States and Australia to explore the challenges and successes of rural school leaders. The principals stated that they had worked hard to create suitable teaching and learning environments for students and staff in rural areas. Leaders allowed their students and teachers flexibility to provide different learning experiences as the pandemic continued beyond the initial shutdown.  Leaders also used a variety of tools, social networks and partnerships to provide teachers training and resources for online learning.  It was noted that during a crisis, such as the pandemic, it is important that leaders give teachers the ability to "…make decisions in-the-moment" that best served their students and their families during the pandemic." (White, 2022, p. 57)

## Experiences of Professionals Teaching Students with Visual Impairments

In April-May 2020, a large-scale survey was completed by 1,028 professionals serving students with visual impairments in North America (Rosenblum et al., 2020). Eighty-one percent of these professionals reported that they were given less than one week to prepare for a shift to online learning (Rosenblum et al., 2020). Slightly more than 50% of the professionals reported that they had at least one family they could not get in contact with, and 85% had one or more students in general or special education classes who had experienced an accessibility issue. Almost all (95%) of the professionals continued working on IEP goals. Additionally, the teachers reported a lack of access to materials, including technology and braille. However, this data did not specify the settings in which the professionals worked or the students lived.

In the fall of 2020, 470 professionals serving students with visual impairments in North American completed a survey about their experiences as the pandemic continued. Fifty-two percent of professionals shared that the beginning of their school year had been delayed, and 67% had made changes in one or more Individualized Education Plans (IEP) due to the pandemic which

most often included reduction in direct service time and increase in consultation time with other team members (Rosenblum et al., 2021). Family members who completed a parallel survey reported issues with bandwidth, accessibility issues with educational content, and challenges with assessments (Rosenblum et al., 2021). They also reported changes in safety protocols for their children such as wearing a mask or face shield, maintaining social distance, and meeting only when activities had to be in person.

## Purpose

There was no research in the literature about the experiences of rural teachers of students with visual impairments (TSVI) during the COVID-19 pandemic. Similarly, the work of Rosenblum et al. (2020, 2021) provided a broad picture of experiences of teachers of students with visual impairments during the pandemic, but the data did not delineate between settings in which the professionals worked or the students lived. When reading about internet bandwidth issues and lack of materials, researchers began wondering about the experience of rural TSVIs. Specifically, researchers wanted to know:
1) What was the experiences of TSVIs serving in rural settings?
2) Did the TSVIs in rural settings experience any unique challenges not previously reported?

## Methodology

Four researchers, all of whom were a sub-group of the original Access and Engagement report team (Rosenblum et al, 2020; Rosenblum et al, 2021) wrote a survey to document the experience of TSVIs in rural settings. The researchers used their experience in writing survey questions to target questions specifically for TSVIs in rural settings throughout the United States. Both quantitative and qualitative data were collected. The research was approved by the researchers' Institutional Review Board from his/her respective organization or university affiliation.

It is important to note data were collected in the spring of 2022. At this time, there were 78,269,789 cases of COVID-19 confirmed in the U.S. as well as 930,811 deaths (CDC, n.d.). A vaccine had been developed, and 66.3% of females and 62.1% of males were fully vaccinated (CDC, n.d.). During this time, the OMICROM variant of the COVID-19 virus was rapidly spreading in the U.S. This spread led to an upward trend in the number of COVID-19 cases diagnosed, from a low in November 2022. However, the number of new cases were beginning to trend downward as data collection was completed. Simultaneously, news stories were beginning to arise about teacher burnout and staff shortages across the U.S. Major news outlets reported about teachers leaving the field or planning to leave the profession (msn.com, 2022). Students were still absent or quarantined periodically, and there was much debate on the protocols for quarantining and masking. Schools were also shifting from in person and remote learning without much notice.

## Participants

Eighty-five TSVIs completed this survey. Of those, 14% had been teaching in rural areas for 2-3 years, 23% for 2-5 years, 27% for 5-10 years, 16% for 10-15 years, 5% for 15-20 years, and 15% have been teaching more than 20 years. States were represented geographically throughout the US with the largest representation from Indiana and South Carolina. The ages of the participants

ranged from 26-60 years of age with the largest group (19%) between the ages of 51-55 years of age. Ninety-one percent were female, and 98% were licensed teachers of students with visual impairments. It should be noted that some states allow TSVIs to work on either emergency licensure or on another licensure due to the shortage of TSVIs nationwide.

Participants were asked to check all settings in which service delivery was occurring during the pandemic. Not surprisingly, the TSVIs, some of whom were itinerant teachers, reported that they were delivering services in a variety of locations. Six TSVIs taught at a specialized school for the blind. Seventy-three TSVIs provided services in public school settings while six provided services in a private school. Thirteen responded they provided services at educational centers such as a day care or preschool, and 17 participants provided services in a homeschool setting.

The caseloads of participants changed slightly, with the number of students on a given caseload increasing during the pandemic. See Table 1 for specific numbers of caseloads provided by the TSVIs.

**Table 1.  Caseload of Teachers of Students With Visual Impairments**

| Number of Students | Pre-Pandemic (n=79) | Post Pandemic (n=78) |
|---|---|---|
| 1-5 | 20% (n=16) | 20% (n=16) |
| 6-10 | 13% (n=11) | 16% (n=12) |
| 11-15 | 23% (n=18) | 20% (n=16) |
| 16-20 | 22% (n=17) | 16% (n=12) |
| 21-25 | 13% (n=10) | 13% (n=10) |
| 26-30 | 0% | 3% (n=2) |
| 31-35 | 4% (n=3) | 6% (n=5) |
| 36-40 | 0% | 1% (n=1) |
| More than 41 | 5% (n=4) | 5% (n=4) |

*Note*. n= number of responses for the given question

The teachers' travel time to serve students in different locations each day varied.  The majority of teachers (46 or 62%) spent between one and two hours in their car each day.  Only six teachers did not have any drive time because their students were all in one setting.  See Table 2 for drive time in hours.

**Table 2.  Daily Number of Hours Spent in the Car Driving to See Students**

| Number of hours | Number of Responses (n=76) |
|---|---|
| 1 | 24% (n =18) |
| 2 | 38% (n=28) |
| 3 | 25% (n=19) |
| 4 | 3%  (n=3) |
| 5 | 2%  (n=2) |
| N/A because I see all my students in one setting | 8%  (n=6) |

*Note*. n = number of responses for the given question

**Table 3.  Average Time Spent With Students**

| Time | Number of Responses (n=73) |
|---|---|
| 30 minutes | 15% (n=11) |
| 1 hour | 28% (n=20) |
| 2 hours | 18% (n=13) |
| 3 hours | 14% (n=10) |
| 4 hours | 17% (n=12) |
| 5 or more hours | 8% (n=6) |

*Note*. n = number of responses for the given question

## Instrument

Despite the continuation of the pandemic, the researchers wanted to capture the experiences of rural TSVIs at this time, while also asking them to reflect on their overall experiences during the COVID-19 pandemic. A thirty-two-question survey was developed that contained demographic questions, Likert scale statements, open-ended questions, and questions that asked participants to "check all that apply" such as the barriers they encountered in completing their work with students. The questionnaire asked persons to reflect back to the beginning of the pandemic to discuss what was happening and then also commented on what was happening in the spring of 2022.  The last question allowed participants to opt into a drawing for a $50.00 Amazon gift card.

The survey questions were reviewed for readability only. All questions were based upon the previous research on experiences of professionals teaching students with visual impairments (Rosenblum et al., 2020; Rosenblum et al, 2021). Questions focused on the impact of learning, educational service deliver models (i.e., itinerant, specialized schools, educational centers, etc.), caseloads of teachers before and during the pandemic, barriers to service delivery, time for delivery, and time spent to get to the student.  These questions were both open-ended as well as drop-down selection questions including options to "check all that apply".  The survey also included Likert scale questions that focused on beliefs of the teachers of the impact of the pandemic on their students and families.  Specifically, questions focused on communication levels, family involvement, working with general education teachers, access to assistive technology, district policy impacts on learning, support of district personnel, access to educational materials, and internet services.  In addition, the survey allowed an open-response option for participants to share concerns and anything they wanted with the researchers about the impact of the pandemic on learning of students with visual impairments.  Researchers took into account the time that would be needed to complete the survey. This methodology for writing a survey without attention to validity reflects the rapid nature of data collection that was happening during the COVID-19 pandemic in order to capture in real-time the impact of the pandemic on education (Vindrola-Padros, 2020).

## Data Analysis

Descriptive statistics were used to analyze the quantitative data. The qualitative data responses were analyzed using Glasser's Method (Glasser, 1969). This method allowed for data to be

analyzed both individually and across data sets. This method has been used in evaluating the qualitative data collected during the pandemic with research involving the experiences of TSVIs and parents of children and youth with visual impairments (Rosenblum et al., 2020; Rosenblum et al., 2021; Wild et al., 2022; Wild et al., 2023). Three of the four researchers analyzed the data together over Zoom®. No themes were identified prior to the beginning of coding. This allowed researchers to fully analyzing the data without bias and allowed for themes to organically emerge from the data. The method also allowed for a quick analysis of intense working time as has been completed in other research evaluating qualitative data collected during the pandemic (Vindrola-Padros, 2020).

# Results

## Impact on Education of Students with Visual Impairments

During the initial shutdown, several factors impacted the education of students with visual impairments. This question was asked using an open-ended response question. Sixty-six individual responses were provided by the participants.

**Table 4. Common Themes of Impact on the Education of Students With Visual Impairments During the Initial Shutdown**

| Impact | Number of Responses (n = 66) |
|---|---|
| Internet Issues | 21% (n=14) |
| Technology | 15% (n=10) |
| Lack of services for students | 15% (n=10) |
| Parents were teachers | 5% (n=3) |

*Note*. n=66 responses. Only the top 4 were provided in the table. Not all responses were reported.

Common themes that emerged from the data are: 21% (n=14) of the participants indicated that internet issues were a problem, followed by 15% (n=10) responding that technology was an issue. Fifteen percent (n=10) of the participants reported a lack of services for their students with visual impairments and 5% (n=3) indicated they were concerned that parents were acting as teachers of their child(ren). One participant noted "…support from families varied, access to technology and good [Wi-Fi] also varied. These factors affected their [students] ability to participate in continued learning and to receive supports at home."

Additional barriers were identified by the participants as impeding service delivery to students with visual impairments in spring 2022. This question generated 300 responses as participants were able to use a drop-down menu to identify all barriers as well as provide additional answers in an open-ended question.

The most commonly identified barrier was student absences due to illness or quarantine 18% (n=53), closely followed by travel time to serve students 16% (n=48), distances to travel between student visits (n=39), lack of internet services 13% (n=27), a caseload that was too large to spend adequate time with each student 6% (n=19), lack of assistive technology 6% (n=19), and lack of communication with content teachers 6% (n=19). Other answers included lack of communication with parents, lack of communication with teachers, lack of communication with

specialists, lack of support of district administration, lack of access to materials, lack of access to technology and district policies. Other comments were specific to the situation of the educator and were provided in a text box (n=8).

**Table 5. Top Most Identified Barriers to Service Delivery**

| Barrier | Number of Responses (n = 300) |
|---|---|
| Illness or quarantine | 18% (n=53) |
| Travel time | 16% (n=48) |
| Distance between students | 13% (n=27) |
| Caseload too large | 6% (n=19) |
| Lack of assistive technology | 6% (n=19) |
| Lack of communication with content teachers | 6% (n=19) |

*Note.* n=300 responses. Not all responses identified are presented in the table above.

**Table 6. Impact on Time Spent With Students**

| Time | Respondents (n = 73) |
|---|---|
| Increased Time | 7% (n=5) |
| Decreased Time | 26% (n=19) |
| Stayed the Same | 48% (n=35) |

*Note.* n=73 responses. The open responses (n=14) were not recorded in this table. The comments are provided in the narrative below.

When asked specifically about the impact of the pandemic on spending time with students, 48% (n=35) stated that time spent with students had not changed as a result of the pandemic. While 7% (n=5) indicated that time they spend with students had increased, 26% (n=19) indicated that time had decreased. Fourteen participants chose to provide additional information on the topic. Some of the challenges noted by participants were more difficulty in serving students due to lack of internet or absences, time spent with parents about how to complete instructional activities with their children, and difficulty in finding time for services due to the immense amount of time already online. Another teacher commented that daily tasks were taking longer because of technology and internet issues, and they also needed to teach technology before any IEP goals could be met. However, one teacher commented that she was able to spend less time traveling and more time working remotely with their students.

## Impact of the Pandemic on the Job of a TSVI

TSVIs identified several issues that impacted their jobs during the pandemic. When asked "How were your students impacted during the shutdown at the initial stages of the pandemic?" participants provided 131 unique responses to the open-ended question. The majority of participants reported more than one issue in a single response. The most commonly identified issues were the internet 21% (n=28), lack of ability to provide services or parents opting out of services 21% (n=28), issues with technology 12% (n=16), parents acting as teachers 6% (n=7), concerns about a lack of social/emotional support 4% (n=6), and lack of materials for their students

5% (n=6).  One teacher wrote, "Initially, as with all the students, schools and families were not prepared for virtual learning. The first few months of the pandemic very little education was provided to any students. My students were either too young or too low functioning to get much benefit from virtual learning. Parents didn't have access to necessary technology." Another commented:

> Not every student had internet or devices that could access the internet. Our transportation department was delivering actual materials and iPads/laptops
> to students on a daily/weekly basis. Many families with multiple children,
> struggled to get every student on-line for every classroom or special education
> session that was scheduled. Many families opted to complete packets and
> submit work as proof of education. Classroom participation was cut down
> to half an hour a day.

Another TSVI wrote about the issues with initial assignments and communication. This TSVI shared,

> Very few had access to internet or a device to access the internet. Most were
> being sent home paper packets that were not accommodated for their needs
> as they weren't provided to me before distribution. Contact with families was
> a challenge due to many not having phone access even or losing their phone
> access due to loss of wages and inability to pay for needed services.

While these topics were discussed in response to an open-ended question, additional Likert scale questions asked about the impact of the pandemic on their jobs in the spring of 2022. The first series of questions asked specifically about family involvement, communication and supporting general education teachers. When asked if families of rural students have been more involved in student services since the start of the pandemic, 30% (n=21) disagreed or strongly disagreed while 24% (n=17) agreed or strongly agreed.  The remaining 46% (n=33) neither agreed nor disagreed.

When asked about communication with families, 44% (n=31) of the participants agreed or strongly agreed that communication had been impacted. Similarly, 49% (n=34) agreed or strongly agreed that communication with content or general education teachers had also been impacted. When asked about the communication with other specialists or related services, 56% (n=39) agreed or strongly agreed that it was impacted. While communication increased, so did support to others. Seventy percent (n=49) agreed or strongly agreed that during the pandemic, they supported the content/general education teachers in the education of rural students with visual impairments

TSVIs were then asked a series of questions regarding access and use of the internet. Seventy-two percent (n=51) agreed or strongly agreed that internet services in rural settings had impacted their ability to serve rural students. Fifty-six percent of the teachers reported that there were efforts to improve the access to or quality of technology and internet services in their rural areas. Those efforts reported included hotspots (36%, n=21), providing technology to families (19%, n=11), and adding and expanding internet lines (15%, n=9). When asked about efforts used to improve access to or quality of technology and internet, 36% (n=21) of the teachers referenced the use of hotspots, while 19% reported school districts were providing laptops (n=11) and/or additional internet lines were brought to the area (15%, n=9). One TSVI wrote, "Locally, we have internet providers that quickly expanded their service into areas that typically had very slow or no service. Some [families] here joke that it took a pandemic to bring cable here!" Another TSVI stated, "Our district gives hotspots to those who need them but they run off cell towers which do

not pickup in most rural areas. The students have struggled with routine, social interactions, lack of structure, etc."

While internet was an issue, the researchers also wanted to know about assistive technology use and access. Assistive technology is any device or object that can enhance, maintain or improve the life of a person with a visual impairment (braille institute, n,d.). Devices can range from a closed-circuit television that makes print larger for students with low vision, to screen reading software or braille displays attached to computers to allow students to access print on computer screens they are unable to access visually. Prior to the pandemic, 67% (n=47) indicated that they had access to assistive technology for their students to use. However, when asked if the rural setting(s) had an impact on the types of assistive technology used with students, 52% (n=36) agreed or strongly agreed. When asked specifically about the pandemic, 56% (n=39) agreed or strongly agreed to the statement "The pandemic affected access to assistive technology for my students in rural settings."

The TSVIs were also asked about district policies. Fifty-three percent (n=44) agreed or strongly agreed that district policies affected their ability to deliver services in person. Although the policies impacted them, the TSVIs felt supported by district administrators. Seventy-one percent (n=51) agreed or strongly agreed that they were supported as a TSVI by the district and administrators. One form of support came in the form of accessible materials. Fifty-three percent (n=38) agreed or strongly agreed with the statement "I am able to easily access accessible materials to support my student in a rural setting."

## Concerns about Returning to the "New Normal"

TSVI were also asked an open-ended question regarding concerns as we return to normal. The biggest concern reported by 37% (n=23) of participants was students who had fallen behind or regressed in their academic skills, including braille readers. Other concerns of 8% (n=5) of participants, centered around regression in social/emotional or behaviors during the pandemic. One TSVI said, "Students are learning all over again how to be students, what classroom expectations are, how to manage their time and complete work." While academics and social skills were of concern, technology skills of their students seemed to have improved. Eleven percent (n=7) of the TSVIs reported they were happy with the technology progress that had been made during the pandemic. Another TSVI wrote, "Their tech skills have substantially improved overall. However, progress in the grade level curriculum did not keep pace as expected, as was true for many of their sighted peers." Concern over low vision students' keeping pace on small Chromebooks and medical appointments missed were of concern by two TSVIs."

## Discussion

Similar to previous work examining rural special education around the globe (Dube, 2020; Panilla Rodriguez et al., 2021; Tunegaru, 2021), teachers of students with visual impairments serving in rural areas experienced challenges with internet accessibility and infrastructure support. While many participants reported unique ways in which their communities were responding to the need for additional infrastructure such as the use of hotspots, there were still students without internet connections in their homes. Students sometimes completed their assignments in parking lots or other locations. This poses a challenge to both students and their teachers in providing meaningful educational experiences and services specifically for students with visual impairments.

The findings of this research are in contrast to the Rosenblum et al. (2020) report that included TVIS, from 49 states in the US and 5 providences in Canada. While the report does not delineate data based upon location, it can be assumed that this survey reached teachers from urban, rural, and suburban settings due to the large number of responses (n = 710) from TVIs to the survey. It does not appear that internet accessibility was as widespread a problem as it was for the rural educators. In the larger survey, the top method reported of meeting educational needs of students involved sending resources such as websites, videos, and video blogs to family members to help with their child's instruction. Other methods on that list included meeting online with families, sending videos to family members to watch different methods that could be used to educate their child in their home and meeting online with students to discuss issues of accessibility. The majority of methods reportedly used involved online methods.

Similarly, Rosenblum et al. (2020) reported that TVIS stated their students were attending classes online. Specifically, the TVIs reported that using technology to connect with students and families was positive and allowed for sharing or resources and progress of the students. The widespread use of digital tools in instruction is drastically different from the experiences of those teachers in rural settings. Only a small percentage of TVIs from the original survey expressed some frustration with technology.

Communication with parents and general education teachers was another concern for the participants of the study. While communication increased with some families, communication seemed to decrease with others. This could be due to the lack of ability to communicate digitally, however specific data on reasons for the decrease were not collected.

Communication with parents did not seem to be as challenging for TVIs in the larger 2020 survey. Participants commented on a variety of methods that were used to communicate with their parents and shared that they were in contact with the majority of their students on their caseloads.

Student absences and concerns about illness as well as regression of skills, both academically and socially, were concerns for teachers of students with visual impairments who participated in this study. These concerns reflect the concerns of teachers of students with visual impairments that were part of the larger Rosenblum et al. (2020, 2021) studies. While some students with visual impairments thrived in the online environment and improved technology skills, others did not. The research did uncover some unexpected positive experiences of rural teachers that did not reflect previous research. Participants stated that their students had access to assistive technology, including equipment that often comes with a hefty price tag for schools. However, there were issues with access to the equipment during the pandemic.

White and colleagues (2022) reported that administrators reflected about providing positive environments for teachers and students, and the rural teachers of students with visual impairments participating in this study also reported positive interactions with district administration. This support came in the form of accessible materials and technology. The teachers of students with visual impairments recognized the important work of both administration and community leaders to decrease the digital deficiencies during the pandemic.

What became evident through this data collection was the need to advocate for rural teachers of students with visual impairments. There are unique challenges in providing support to students and their families with visual impairments in rural areas of the country. The field needs to come together to advocate for additional supports in technology, internet infrastructure, funding and full access to accessible materials. Concerns over the health and well-being of teachers and students with visual impairments should also be addressed, not only for our rural teachers but for all educators.

As one participant shared, "There have been many positives that have come from the pandemic in terms of my knowledge and skills the students had to learn to be successful. It's been encouraging to see those continue to benefit students as they've returned to in-person learning. Certainly, there were negatives too, but the positives have carried us through." It is with this optimism, that the field of visual impairments can move forward, beyond the pandemic, and continue the essential work of serving students with visual impairments. While research regarding the ongoing impact on students both socially and academically should continue, it is with renewed hope that we as a field will continue to support students with visual impairments and their families post-pandemic with renewed learning and reflections of the past.

## Limitations

The findings of this study are limited to the opinions of the participants and cannot be generalizable to all TSVIs in rural settings during the pandemic. This study was designed to give a glimpse into the experience of rural TSVIs, their students and their families for who they serve.

Furthermore, the study is limited by the questions that were asked. This study could not capture all aspects of life for those in rural settings at the time of the pandemic. The survey was designed with the participants' time in mind and therefore, researchers limited the questions to those presented in this study. Likert scaled questions that provided a statement for participants to respond did not provide clarification or additional information beyond the sentence provided for response. Therefore, the results can only be interpreted based upon the declarative nature of the statement and cannot be analyzed further regarding intent or interpretation of participant when responding.

Demographic questions such as setting, and travel time were not specified to be answered by participants based upon pre or lived experiences during the pandemic. Only those questions specifically asked of participants with wording specific to a timeline of the pandemic can be used to ascertain differences before and during the pandemic of experiences of teachers. Therefore, demographic data cannot be assumed to reflect pre or lived experiences of the pandemic by rural TVIs.

## Future Research

Future research on this topic should continue to examine the long-term impacts of the pandemic on learning of students with visual impairments. Anecdotally, professionals keep referring to the changes in social behaviors and academic behaviors of students. Research should continue to track the impacts and compare this data to pre-Covid levels of learning.

In addition, additional data should be collected about the professional lives of TVIs after the pandemic and how their caseloads, communication levels, and access to materials. In addition, an examination of the impact of district policies that may have changed due to COVID should also be considered.

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