ACCESS AND ENGAGEMENT

RESEARCH REPORT | OCTOBER 2020

Examining the Impact of COVID-19 on Students Birth-21 with Visual Impairments, Their Families, and Professionals in the United States and Canada

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Expanding possibilities for people with vision loss

ACCESS

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The research team worked tirelessly and included the following authors: Dr. L. Penny Rosenblum (Director of Research, American Foundation for the Blind), Dr. Tina S. Herzberg (Professor, University of South Carolina Upstate), Dr. Tiffany Wild (Associate Professor, The Ohio State University), Dr. Kathryn D. Botsford (President, Vision Education Research, LLC), Dr. Danene Fast (Clinical Assistant Professor, The Ohio State University), Dr. Justin T. Kaiser (Clinical Assistant Professor, University of Kentucky), Leanne K. Cook (TVI, Portland Public Schools-Columbia Regional Program), Michelle A. C. Hicks (Doctoral Student, Virginia Commonwealth University), Jasamyn N. DeGrant (Graduate Student, University of Kentucky), and Dr. C. Rett McBride (Assistant Professor, Georgia State University Perimeter College).

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COLLABORATORS

The following 20 organizations, companies, and universities collaborated with the Access and Engagement survey. Through their commitment to this project, we were able to widely share information about the study.



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TERMINOLOGY

The following terms are used in the report:

(Note: These definitions are not comprehensive but cover the ways the terms are used in this report.)

- 504 Plan: Plan that outlines the accommodations or supports students in the U.S. education system receive based on their specific needs. A 504 Plan does not provide for specialized instruction or consultation in the same way an Individualized Education Program (IEP) does.
- Accessible information: Information that can be accessed via screen reader software, magnification, braille, audio description, captioning, sign languages (e.g., ASL, Signed English), visual interpreters, and support service providers. For example, maps, charts, and images may be accessible if they include a text description of visual content, large fonts, and high-contrast colors in the design.
- Expanded core curriculum (ECC): A framework that includes nine areas of instruction in which many students with visual impairments require direct instruction. Areas of the ECC include compensatory skills, orientation and mobility, social interaction, independent living, recreation and leisure, sensory efficiency, assistive technology, career education, and self-determination.
- Family member: Family member refers to the person completing the survey responsible for the care of the child. In the survey, the term family member/guardian was used.
- Orientation and mobility (O&M): One's ability to travel safely and efficiently through one's environment.
- Orientation and mobility (O&M) specialist: A trained professional who teaches travel skills to individuals who are visually impaired.
- School-age student: Students in kindergarten through 12th grade as well as students in transition programs who may have graduated or received a certificate of completion but are still eligible for services under IDEA in the United States or their provincial authority in Canada.

- Screen magnification software: Software that allows low vision users to adjust the size of the screen content and select alternative background/font combinations to make viewing content easier.
- Screen reader software: Software that converts text to speech and allows the individual to use keyboard commands when using a mouse is not possible or efficient.
- Social or physical distancing: The practice of maintaining at least 6 feet between one's self and others to minimize COVID-19 spread.
- Visually impaired (VI): Description applied in this report to individuals who are blind or have low vision unless specific information is provided related to either blindness or low vision.

ABBREVIATIONS

The following abbreviations are used throughout this report:

- AFB: American Foundation for the Blind
- APH: American Printing House for the Blind
- CVI: cortical visual impairment
- ECC: expanded core curriculum
- El: early intervention
- IDEA: Individuals with Disabilities Education Act
- IEP: Individualized Education Program
- IFSP: Individualized Family Service Plan
- O&M: orientation and mobility
- PS: preschool
- SA: school-age
- TVI: teacher of students with visual impairments
- VI: visually impaired

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ACCESS AND ENGAGEMENT

EXECUTIVE SUMMARY | OCTOBER 2020

Examining the Impact of COVID-19 on Students Birth–21 with Visual Impairments, Their Families, and Professionals in the United States and Canada

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The Access and Engagement survey investigated the impact of the COVID-19 pandemic on the education of students with visual impairments, including those with additional disabilities and deafblindness, and their family members in spring 2020. The study also examined the experiences of teachers of students with visual impairments (TVIs), orientation and mobility (O&M) specialists, and dually certified professionals during this time when education quickly shifted from in-person to remote instruction.

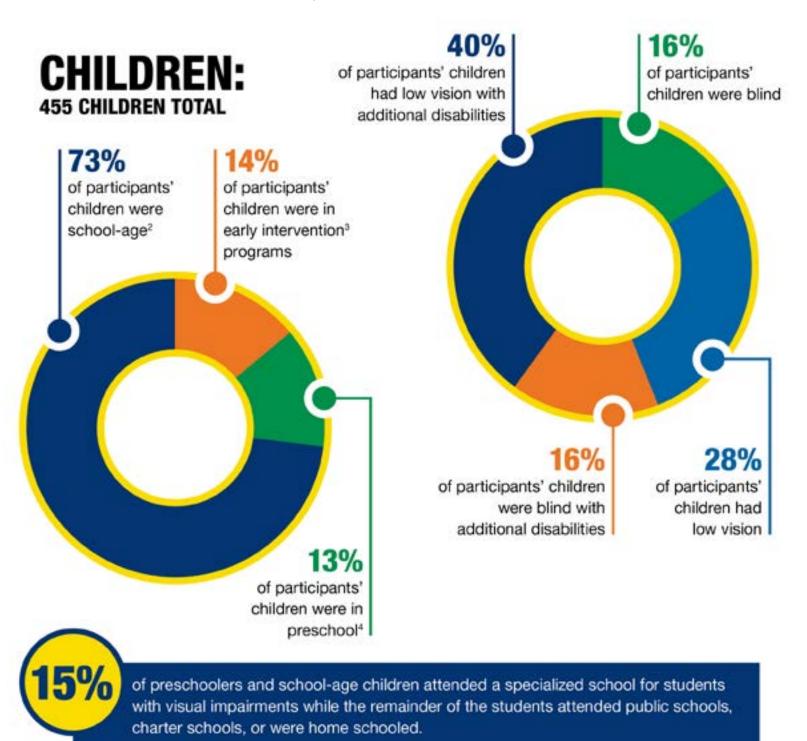
AFB.org/AccessEngagement





PARTICIPANT SNAPSHOT¹

 All 50 U.S. states, the District of Columbia, and Puerto Rico were represented as well as six Canadian provinces



- ¹ Please see the full report to assist in interpreting the percentages provided in this summary as the number of participants who answered any one question varied.
- $^2\,54\%$ of students were 5–12 years old and 46% were 13–21 years or older.
- ³ 61% of children receiving early intervention were between 2 and 3 years of age.
- ⁴ 15% of preschoolers were 3 years old, 47% were 4 years old, and 38% were 5–7 years old.

CHILDREN

Children in Early Intervention:

- Before COVID-19, 88% of children received early intervention services at home or in day care
- During COVID, 34% of family members were meeting online with professionals, 31% were receiving recommendations of online resources, and 24% were receiving emails with ideas
- Following a change in how early intervention was delivered, 46% of family members reported the same level of communication with educational team members and 27% reported increased communication
- 48% of family members experienced the same level of support and 26% experienced increased support from educational team members

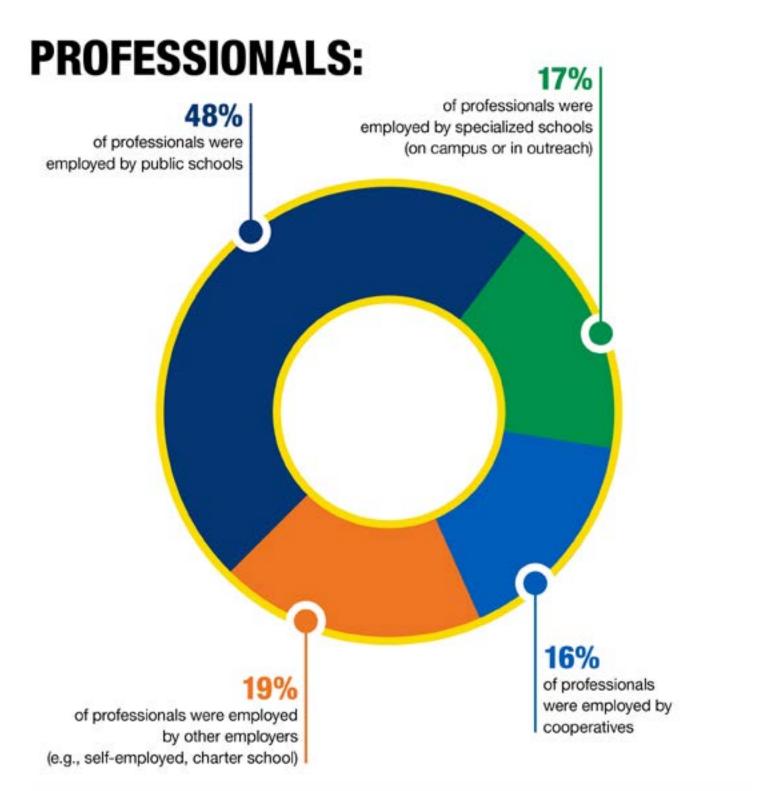
Preschool Children:

- Prior to COVID-19, 33% of preschoolers attended a class with typically developing peers, 23% attended a special education preschool class, 18% attended a specialized school, and the rest attended preschool in other settings
- Most preschoolers who used a cane or tablet at school had access to those tools at home
- Not all families could be contacted once schools shifted to remote learning; of the professionals who established contact with families, 59% of preschool teachers, 69% of TVIs, and 60% of O&M specialists were working with preschoolers during the COVID-19 pandemic
- 40% of family members whose child was being educated during the COVID-19 pandemic were asked to show evidence their child had completed assignments

School-Age Children:

- 13% of students did not receive educational services during the COVID-19 pandemic, 61% attended school online, and 43% of students attending online had difficulty or were unable to access online programs because of their visual impairment
- Students had tools at school they did not have access to at home: 17% did not have tablets, 21% did not have laptops, 18% did not have Perkins braillers, 55% did not have large print books, 50% did not have screen reader software, and 28% did not have recreational braille books
- 75% of family members were concerned about their child's progress after schools shifted to remote learning





1,028 professionals:			
710	138	180	
TVIs	O&M specialists	Dually certified professionals	

PROFESSIONALS

- TVIs had an average of 10 direct service students, O&M specialists had an average of 15, and dually certified professionals had an average of 12
- 81% of professionals were given less than one week to prepare for the shift to online or remote education due to the COVID-19 pandemic
- 52% of professionals had at least one family they were not able to reach after the shift to remote learning
- 85% of TVIs who had students in a general or special education online class described having at least one student with an accessibility issue
- O&M specialists reported they were only working with 45% of their students in early intervention, preschool, and/or those with additional disabilities
- Although teaching remotely, O&M specialists were working with 95% of their students who had IEP goals for learning to travel on the school campus, in the neighborhood/residential area, in business/commercial environments, or using public transit, though activities they did with students had to be modified due to the shift caused by the COVID-19 pandemic



OUR RECOMMENDATIONS

Promoting Success of Families and Professionals Working Together

- Educators must have time to communicate and plan with families
- Children's educational teams must coordinate services and requests of families, including limiting the number of online sessions, documenting progress, and providing for services from braille transcribers, interveners, and other related service personnel so students have what they need to succeed

Policies and Practices that Promote Student Success

- As appropriate, extend early intervention eligibility for children beyond their third birthday, allow preschoolers an additional year of preschool services, and permit students graduating or aging out of special education who have not achieved their Individualized Education Program (IEP) goals to participate in extended school-year services or remain in school an additional year
- Provide professionals with support to find and implement service delivery models and tools to meet the unique needs of students, especially those with additional disabilities or deafblindness
- Establish policies that outline best practices for professionals to conduct evaluations and assessments⁵

Access to Mainstream and Assistive Technology Is Key

- Ensure learning platforms and tools are accessible and reliable for students, professionals, and family members
- Allocate time for professionals to teach families and students how to use both mainstream and assistive technology
- Provide accessibility training to general education and special education teachers

Delivering O&M Instruction During the Pandemic

- O&M specialists must provide clear and consistent modeling of O&M skills that are appropriate for the family to reinforce with the student
- Administrators should work closely with their legal department and O&M specialists to ensure there is a clear understanding of the O&M specialist's liability coverage and what is permissible for the O&M specialist to do when not meeting in person with the student
- As soon as health department officials permit, O&M specialists must adapt hands-on instruction that meets social-distancing and safety guidelines
- ⁵ Dr. Yue-Ting Siu of San Francisco State University and colleagues have developed the document Comprehensive Evaluation of Blind and Low Vision Students During COVID-19: A Guidance Document that can serve as a blueprint. https://docs.google.com/document/u/1/d/1IZsOFKIJrLcHKRzVQVSkPRPII26iezV-fcfvQZQRIKc/copy

INTRODUCTION

"I'm grateful that there are researchers out there with the foresight and compassion to focus on the unique needs of our special needs children during the pandemic. This is obviously hugely disruptive and hard for all children, but I believe the negative impacts for my child will be more far-reaching than [for] typically developing children. [My child] requires more instruction time to progress, and she is less able to adapt to virtual learning. I think there is greater stress on the family system as well simply because having a child with special needs is stressful, even more so if you're worried [about] developmental/educational regression and their medical vulnerability/fragility if they were to become infected with the virus."—White female family member of a child with low vision with additional disabilities, 7 years old



INTRODUCTION

In late February 2020, the COVID-19 pandemic began to affect Americans and Canadians. The Access and Engagement survey was conducted in the early stages of the United States and Canadian response to the pandemic. The purpose of the survey was to answer the question:

How is the COVID-19 pandemic impacting the education of students with visual impairments, their families, TVIs, and O&M specialists in the United States and Canada?



In late February 2020, the COVID-19 pandemic began to impact American and Canadian adults and in late March 2020 it began to impact children in both countries. The Access and Engagement survey began on April 22 and closed on May 13, 2020. Therefore, the survey results captured what was happening in our educational systems while both countries were in the early response efforts to COVID-19. According to the American Academy of Pediatrics⁶, as of September 24, 2020, there were 5,965,268 total confirmed cases of COVID-19 in the United States, of which 624,890 of those cases were children. On September 30, 2020, the Centers for Disease Control reported a total of 194,091⁷ deaths in the United States of which 113 were children between 0 and 18 years of age⁸. According to the Government of Canada⁹, on September 30, 2020, there were a total of 148,547 COVID-19 Canadian cases and 9,297 deaths. Of those cases, 16,555 were children 19 years and under with no reported deaths¹⁰.

⁶https://covid.cdc.gov/covid-data-tracker/#cases_totalcases

⁷https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html
 ⁸https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/past-reports/05292020.html
 ⁹https://www.google.com/search?q=canada+covid+19+cases&rlz=1C1GCEA_enUS817US817&oq=Canada+COVID&aqs=chrome.0.69i59j69i57j0I6.4152j0j15&sourceid=chrome&ie=UTF-8
 ¹⁰https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310078501

Although COVID-19 was impacting the lives of those in the United States and Canada during the survey window of April 22 to May 13, 2020, the numbers of COVID-19 cases and deaths both in the United States and Canada were not as high when compared to the number of cases and deaths reported in September 2020 when this report was being finalized. Readers of this report should keep this in mind as they review the information presented. It is probable that if the surveys were conducted again this fall, for example, concerns about the impact of COVID-19 on the education of students with visual impairments, including those with additional disabilities and deafblindness, could be very different. This data reflects those first few weeks of a sudden school closure, for many, and the quick response by educators and their families.

SURVEY DESIGN AND ANALYSIS

The primary collaborators in the development of the survey were Dr. L. Penny Rosenblum, Dr. Tina S. Herzberg, and Dr. Tiffany Wild.

The survey consisted of eight sections:

- 1. Family member of a child, birth to 3 years of age, receiving early intervention
- 2. Family member of a student, 3 to 7 years of age, enrolled in a preschool program
- 3. Family member of a school-age student in K-12 or transition program
- 4. TVI employed for the 2019-2020 school year
- 5. O&M specialist employed for the 2019-2020 school year
- 6. Dually certified professional (TVI and O&M specialist) employed for the 2019-2020 school year
- 7. Demographic information, United States
- 8. Demographic information, Canada

The first six sections were dedicated to the different categories of survey respondents. Sections one through three were for family members of children of different ages. Participants were asked if they were the family member of a child with a visual impairment in the specified group. If they selected "yes," they were asked a series of questions about their and their child's experiences.

Sections four through six were for professionals. Participants were asked if they were employed as a TVI, O&M specialist, or dually certified professional for the 2019-2020 school year. If they selected "yes," they were asked questions specific to their work.

Sections 7 and 8 gathered demographic information about the participants.

Sections 1 to 3 and sections 7 and 8 were made available in Spanish. The survey was also made accessible for users of screen readers (e.g., JAWS, NVDA, VoiceOver).

Only adult family members and professionals completed the survey; no children were invited to participate in the study. Professionals provided their own demographic information; family members provided demographic information for themselves and their child(ren).

PARTICIPANT RECRUITMENT AND LIMITATIONS

Survey participants were recruited through the efforts of the sponsoring organizations and companies that emailed, blogged, tweeted, and posted information about the study both in English and in Spanish. The survey was made available to families in English and Spanish and for professionals only in English. Despite recruitment efforts, only five usable surveys were completed by monolingual Spanish-speaking family members of school-age students in the United States.

Due to a problem with the survey logic, not all participants were given the opportunity to answer demographic questions about themselves. Of the 1,264 participants who provided ethnicity information, 1,000 (79.11%) were White. Of the 1,260 participants who provided gender information, 1,099 (87.22%) were female. Readers must keep in mind that the sample is not diverse in ethnicity or gender representation. The lack of diversity in this study sample is not unique to the field of visual impairment, but it does warrant mention. As a field, we must work together to be more inclusive and diverse in recruitment of participants for future research.

Because the survey was only available online and advertised primarily through email and social media, individuals who have no or limited online access or who are not connected with one of the 20 organizations or companies that collaborated to advertise the survey may not have been aware of the survey.

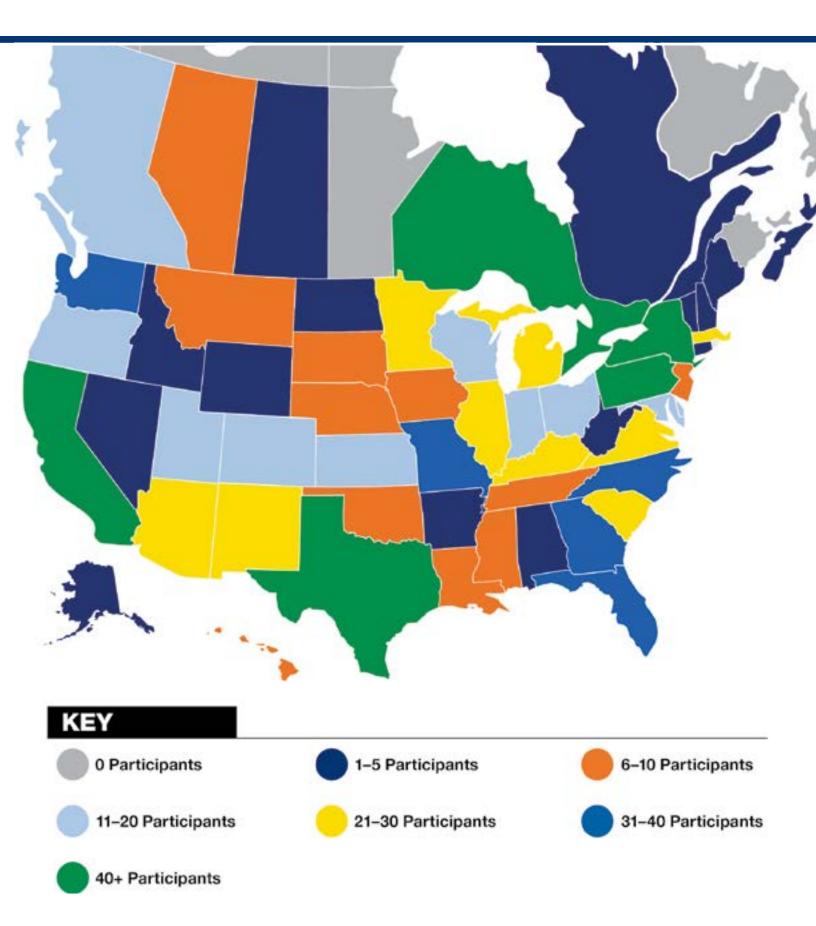
The 1,432 participants in the study sample provided insight into how the COVID-19 pandemic was impacting the education of students with visual impairments, including those with additional disabilities and deafblindness, their families, and the experiences of TVIs, O&M specialists, and dually certified professionals. The data gathered from the participants provided documentation on how the shift was made from education in brick and mortar buildings to education occurring—or in some cases not occurring—during stay-at-home orders in most states and provinces. Both successes and challenges were shared by participants, and their insights were used to shape the recommendations provided in this report.

DEMOGRAPHIC CHARACTERISTICS OF ADULT PARTICIPANTS

In this section, demographic data for each study participant will be presented. Twenty-three participants provided information about their child and their professional role, two participants provided information about their two children and their professional role, and one participant provided information about their three children and their professional role. Additionally, 12 family members each provided information for two children and one family member provided information for three children.

INTRODUCTION

The map shows where the participants live. The U.S. participants resided in all 50 U.S. states, the District of Columbia, and overseas at a U.S. school on a military base. The Canadian participants resided in six provinces.



INTRODUCTION

Tables 1 and 2 report the demographic information on the participants. There were 1,027 (87.4%) participants from the United States who were female, and just over one-third of those participants reported that they had a disability. In addition, 936 (79.6%) of the U.S. participants were White, and 242 (20.4%) were Black, Indigenous, and People of Color (BIPOC). There were 72 (84.7%) participants from Canada who were female, and almost 40% of those participants reported that they had a disability. In addition, 64 (74.5%) of the Canadian participants were White, and 21 (25.5%) were BIPOC. There were 3 Canadian participants who identified themselves as an Aboriginal person (First Nations, Metis, or Inuit). The United States and Canadian participants were very similar from a demographic perspective.

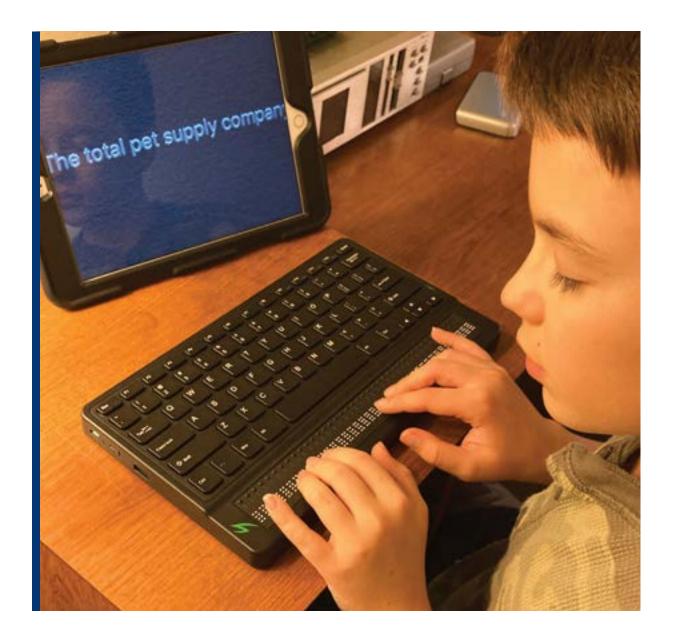


TABLE 1:

Demographic Data on Participants Residing in the United States

Characteristic	n	Percentage			
Gender* (n=1,175)					
Male	100	8.5			
Female	1,027	87.4			
Gender non-conforming/Non-binary	2	.2			
Personally identified or culturally defined identity	1	.1			
Chose not to provide	45	3.8			
Race/Ethnicity* (n=1,178)					
African American/Black	31	2.6			
Asian	14	1.2			
Hispanic/Latinx	77	6.5			
Multiracial	14	1.2			
Native Alaskan or American Indian	10	.8			
Native Hawaiian or Pacific Islander	4	.3			
White	936	79.6			
Other	13	1.1			
Chose not to provide	79	6.7			
Disability (n=1,091)					
Yes	385	35.3			
No	706	64.7			

*Gender and ethnicity categories are only included if they had one or more participant(s).

TABLE 2:

Demographic Data on Participants Residing in Canada

Characteristic	n	Percentage		
Gender (n=85)*				
Male	8	9.4		
Female	72	84.7		
Chose not to provide	5	5.9		
Race/Ethnicity (n=86)*				
East Asian	5	5.8		
South Asian	2	2.3		
West Asian	1	1.2		
Black	3	3.5		
Indigenous People	2	2.3		
White	64	74.5		
Other	2	2.3		
Chose not to provide	7	8.1		
Disability (n=74)				
Yes	29	39.2		
No	45	60.8		

*Gender and ethnicity categories are only included if they had one or more participant(s).



Some family members reported having one or more disabilities. Many shared information about how their own disability affected their children's education.

"I'm frustrated, though, that our district and our state [early intervention providers] had zero plan[s] for doing remote instruction for VI kids. It feels like they were guessing at what to do. Plus, no one considered the needs of blind parents at all. Basically, none of the apps and websites that are out there that our district has shared with families work with screen readers. As for accessible learning apps/websites, like ObjectiveEd¹¹, Bookshare¹², etc., I've had to tell the public school TVI about them, not the other way around." *—White female family member of a child with low vision with additional disabilities, 1.5 to 2 years old, and a child with low vision, 6 years old*

DEMOGRAPHIC CHARACTERISTICS OF CHILDREN

In the early intervention, preschool, and school-age sections of the report, we provide information about the children's descriptive characteristics and ages. Family members were asked to select one of the following four statements that best described their child's characteristics:

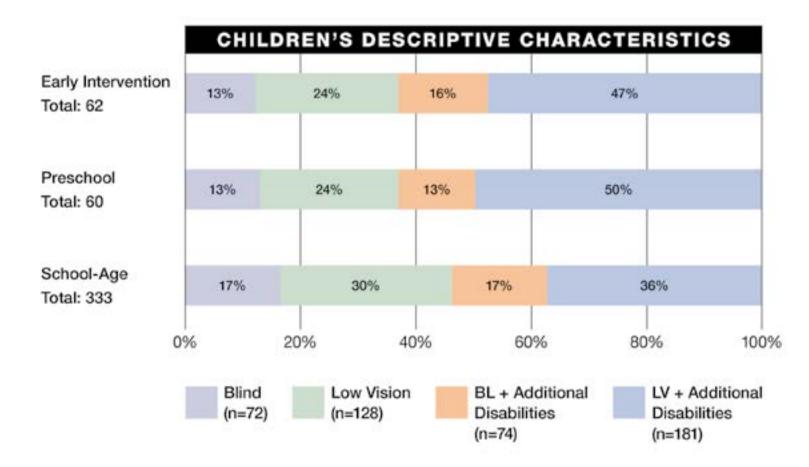
- My child is blind (cannot see more than light and large objects) and has no other learning and/or medical challenges.
- My child has low vision (some usable vision) and no other learning and/or medical challenges.
- My child is blind (cannot see more than light and large objects) and has other learning and/or medical challenges (e.g., a hearing impairment, motor delays).
- My child has low vision (some usable vision) and/or medical and/or other learning challenges (e.g., a hearing impairment, motor delays).

For ease of reference in this report, the terms blind, low vision, blind with additional disabilities, and low vision with additional disabilities are used.

¹¹https://www.objectiveed.com/ ¹²https://www.bookshare.org/cms/

Descriptive Characteristic of Children by Group

The bar graph below shows the number of children by child-descriptive characteristic in each group. The percentages of children with additional disabilities were 62% (n=39 early intervention), 63% (n=38 preschool), and 53% (n=178 school-age) for a mean for all children of 56% (n=255).



EXPERIENCES IN THE HOME DURING THE COVID-19 PANDEMIC

There were 1,249 participants who were given the opportunity to answer questions in this section. Ninety-six percent (n=1,197) of participants reported having Internet access at home on March 1, 2020. It is important for readers to recognize that most of the participants in this study had access to the Internet at home and that data were collected over the Internet. It is probable that if there were participants who did not have access to the Internet at home, their responses may have varied from that of participants in this sample.

Participants were asked to select all the statements that described their household's experience with COVID-19 and their employment status. In the United States and Canada, participants who were balancing work and childcare/education faced similar challenges, including difficulty finding balance, establishing new routines, and supporting children who were not able to participate in virtual instruction without adult support.

"As a healthcare worker, I am exhausted and stressed working. So, coming home to work with my son is a difficult balance....It has made our playtime more education-focused (fine motor skills) and less lazy family fun—something my son has noticed and dislikes....Communication with my [educational] team has been essential during this time, even if it can't be face to face." —White female family member of a child who is blind with additional disabilities, 6 years old

There were 290 family members who provided information about their current employment status. Forty-seven family members were essential workers, 121 were working remotely from home, and 100 were not working. Additionally, 22 family members reported other ways in which they were working, with the most common response being "providing home care for a disabled child" (n=7).

"We struggle—demanding jobs where you have to be online with all the extra needs [our child] has in general (e.g., feeding and hygiene) plus the expectations the school has is hard. We are choosing family over the school demands... so that we can keep [our child] engaged and happy and grocery shop and keep jobs and cook and clean."—White female family member of a child who is blind with additional disabilities, 7 years old

In the United States, 696 professionals were working remotely from home; none were doing so in Canada. Ten professionals in the United States reported that they were no longer employed after March 1, 2020. No Canadian professionals reported that they were no longer employed. Of the 696 professionals working from home, 317 professionals reported that they were also caring for children.

When asked how COVID-19 directly affected those in their household, 1,243 participants responded (U.S. n=1,159, Canada n=84), with 88.17% (U.S. n=1,020, Canada n=76) participants reporting no experiences directly related to COVID-19. There were participants who chose not to answer the question and some who wrote in their own answers. Participants reported the following:

- Someone in the household had symptoms but had not been tested (U.S. n=52, Canada n=4)
- One or more person in the household had symptoms and had tested negative (U.S. n=21, Canada n=3)
- Someone in the household had tested positive but had not been hospitalized (U.S. n=6, Canada n=1)
- They were assisting in the care of a family member or friend who had contracted COVID-19 (U.S. n=5, Canada n=1)
- One U.S. participant had been hospitalized with COVID-19
- One U.S. participant had someone in the household die from COVID-19

"I'm very worried [children birth to 3] are all falling through the cracks during this time." —*Multiracial male family member of a child with low vision with additional disabilities,* 2.5 to 3 years old





In the United States under the IDEA Part C, children from birth until age 3 years with disabilities who meet specified criteria are entitled to early intervention services. The IFSP is the document developed to serve as a blueprint for the information, supports, and services the child and family receive from members of the educational team. IDEA stipulates that early intervention services are to be delivered in the natural environment, typically the home or day care center. In Canada there is no equivalent national law to IDEA that regulates the provision of early intervention services. Decisions for how, if at all, early intervention services are delivered are made at the provincial level.

There were 62 children (U.S. n=56, Canada, n=6) in the survey who were receiving early intervention services. In this section, data are not broken out by country of residence. The children's ages and descriptive characteristics are reported in Table 3.

TABLE 3:

Ages and Descriptive Characteristics of Children Receiving Early Intervention

AGE:	Total (n=62)	Blind (n=8)	Low Vision (n=15)	BL + Additional Disabilities (n=10)	LV + Additional Disabilities (n=29)
Birth-1 Year	11	5	2	1	3
1 Year +1 Day- 2 Years	14	1	5	3	5
2 Years +1 Day- 3 Years	37	2	8	6	21

Family members were asked about the early intervention services received by their children prior to the COVID-19 pandemic, using March 1, 2020 as the start date for the pandemic. Prior to this date, children were receiving between 1 and 9 early intervention services. The most frequently received service was from a TVI (n=48), followed by an early intervention specialist/development specialist (n=38), an occupational therapist (n=32), a physical therapist (n=32), and a speech therapist (n=26).

Sixty-two family members reported multiple ways in which their child received early intervention services from educational team members before changes due to the COVID-19 pandemic. These included having an early intervention team member:

- Come to the home or the home of the person caring for the child (n=43)
- Come to the child's day care (n=12)
- Meet with the family member and child at a location where the child attended an individual session (n=9)
- Provide services to the child during a group session (n=8)
- Meet with the family member and child through tele-intervention (n=3)

Fifty-six family members reported the frequency with which their child received early intervention services prior to March 1, 2020. Twenty-seven families received services two or more times a week, 13 families received services once a week, 7 families received services twice a month, 6 families received services once a month, and 3 families reported other schedules.

CHANGES IN EARLY INTERVENTION SERVICES AND THE IMPACT ON CHILDREN AND FAMILIES

Twenty-nine family members described how the frequency of the early intervention services changed for their family during the COVID-19 pandemic. Fourteen family members reported no change in service time. Fifteen family members reported a decrease in services. Fourteen family members described changes in service delivery, for example, changing to online or phone service. For the 31 family members whose child was continuing to receive early intervention services, the five most common ways services were delivered were:

- Meeting with educational team members online, for example, through Zoom or Google Hangouts (n=21)
- Receiving recommendations of websites, videos, or other online resources (n=19)
- Receiving emails with ideas and activities (n=15)
- Receiving materials or toys through the U.S. Postal Service/Canada Post or by an educational team member delivering them (n=19)
- Receiving telephone calls from educational team members (n=7)

Family members were asked about the level of communication they had with their child's educational team members. Of the 52 family members who responded, 2 had no communication, 12 had little or limited communication, 24 had the same level of communication, and 14 had increased communication.

For some family members, the shift to online service delivery allowed them to spend more time with their child. In addition, they were able to see firsthand the positive effect of therapy and instruction on their child.

"[D]oing this virtually is hard; my son is normally seen in day care. It's nice that they 'see' him in my home....[N]ew ideas for old problems in my home are created. LOVE my team."—*Black or African American female family member of a child with low vision with additional disabilities, 2 to 2.5 years old*

> A shift in early intervention service delivery meant an adjustment not just for adults, but for children, too. Not all children had a positive reaction to the changes in how they received early intervention services.

"Without [a] structured schedule and activities, it's been difficult to motivate learning. Keeping her attention span and focus has also been a problem." *—White female family member of a child with low vision with additional disabilities, 2.5 to 3 years old*

Some family members had children who were being evaluated by one or more educational professionals. Due to the COVID-19 pandemic, evaluations ceased, and this caused stress and uncertainty for family members.

With some therapies stopped due to COVID-19, family members were concerned about their child's developmental progress.

Family members were asked to select their level of agreement with the statement: I believe my child is continuing to make developmental progress in the same way they would if there had not been a change in how early intervention services have been provided to our family. Of the 54 family members who responded, the mean was 3.35 (SD=1.28)¹³. The level of agreement family members had with this statement fell between "Neither agree nor disagree" and "Agree." Two months into the pandemic, it is positive to see that many family members believed their child was progressing in their development.

"All outpatient therapies have been canceled until further notice. I feel my son is falling behind in speech, which he only receives as [an] outpatient."—White female family member of a child with low vision with additional disabilities, 2.5 to 3 years old

Many family members were unsure of the impact the changes in service delivery due to COVID-19 would have on their child's development long term.

"I am also concerned about the social development that she is not getting with age-appropriate peers due to stay-at-home orders." *—Hispanic or Latina female family member of a child with low vision with additional disabilities, 2.5 to 3 years old*

¹³The mean (M) is derived by averaging the participants' ratings—from "Strongly disagree" (1) to "Strongly agree" (5). The larger the standard deviation (SD), the greater the spread from the mean of the participants' ratings.

A key tenet of early intervention is to provide family members with support as they learn to navigate having a child with a disability. Support necessitates communication between family members and early intervention providers. Family members were asked about the level of support they were receiving from their child's educational team members. Of the 54 family members who responded, 3 had no support, 11 had little or limited support, 26 had the same level of support, and 14 had increased support. Support also means that families receive the services stipulated on the IFSP. This was not always the case according to a few family members.

"[W]e have not been provided with services promised before the pandemic. I am being expected to provide four therapies on top of everything else."—*White female family member of a child who is blind, 6 months to 1 year old*

Yet, other families felt supported through online service delivery to their family.

"There is more focus on what I can be doing as a parent to support my child, which is appropriate and appreciated. I think this is the way services should be happening ongoing. Previously our services were taking place at day care so we were not as involved, so telehealth has given us more opportunities to connect with our child's provider."—*White female family member of a child with low vision, 1.5 to 2 years old, and a child with low vision with additional disabilities, 6 years old*

BALANCING MULTIPLE ROLES

For many family members, the challenge of balancing multiple roles was at times overwhelming. Family members who were employed had to balance their professional work with the new role of teacher/therapist. When families had more than one child in the home, the stress was compounded.

Online instruction was challenging for many families. Family members reported that it was not always easy for them to make the time for meetings, young children were not accustomed or capable of participating in screen time, work schedules were in conflict with educational schedules, and other family demands competed with educational demands.

"It's been really hard as my son can be loud. I schedule all the virtual lesson[s] during my lunch hour or after I get off work. I've been amazed that the team is ok meeting at 5 sometimes. I try to work only in one room of the apartment, so the rest of the apartment is family time."—*Black or African American female family member of a child with low vision with additional disabilities, 2 to 2.5 years old*

Family members were asked to rate their level of agreement with the statement: I believe that I am not living up to the expectations of my child's early intervention team because I cannot complete everything they are asking me to do with/for my child. Of the 52 family members who responded, the mean was 3.02 (SD=1.28). Most family members rated this statement as "Neither agree nor disagree." The uncertainty many family members had about the expectations of educational team members is concerning and points to the importance of the need for clear communication.



ACCESS TO RESOURCES

Most family members turn to professionals for guidance with their child since few family members have any experience with children who have visual impairments and/or additional disabilities. It is essential for family members to have access to resources, supplies, and information on the best way to support their child's development. Many family members reported that the educational team members were not able to provide the support, resources, and information their family needed during the pandemic.

"I think this is especially more of a challenging time for visually impaired students. For kids like mine, distance or online learning is just not the same or comparative to in-person learning. I don't think there are enough resources for children with visual impairments."—*White female family member of a child with low vision with additional disabilities, 2 to 2.5 years old*

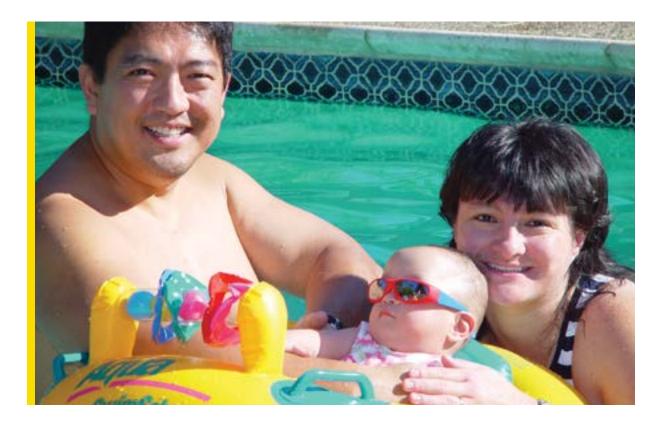
Children with visual impairments benefit from access to specialized materials designed to meet their unique needs. There were a few family members who did not have the materials they had been told they would receive prior to the COVID-19 pandemic.

"We were supposed to be provided with some tools for our son such as a resonance board and a 'little room'. They said due to COVID these things will not be provided and [they] offered some ideas to make things from stuff we have at home. I have three kids and my husband is still working. I did not have the time to build anything suggested to me. We were really counting on the provided materials."—*White female family member of a child who is blind, 6 months to 1 year old*

TRANSITION TO PRESCHOOL

There were 20 family members who had a child over 2.5 years of age, the time at which transition to preschool typically ramps up. Before March 1, 2020, 16 of the 20 family members indicated that a plan was in place to begin the transition of their child to preschool. When asked if they had concerns about their child's transition to preschool, 5 family members did not have any concerns about the transition, 6 family members were unsure about how the transition would occur if schools were closed, 1 family member tried to contact someone about the child's transition with no success, and 1 family member was unsure who to contact. Four family members selected "other" and described feelings of uncertainty and anxiety in their written explanations.

"My daughter was supposed to begin preschool at a local children's school for visually impaired children. Due to COVID-19, she will not be attending for many months as they are closed to in-person school. I'm concerned she is going to fall even further behind her same age peers now."—White female family member of a child with low vision with additional disabilities, 2 to 2.5 years old



RECOMMENDATIONS

Early intervention services are designed to provide families with supports, resources, and guidance as well as direct instruction to enable children to learn and grow. With the quick shift in the way early intervention services were provided from in-person interaction to virtual supports, it is not surprising that many family members raised concerns. The following recommendations should be considered as providers, administrators, policymakers, and most importantly, families, support the growth of children with visual impairments during their first 3 years of life.

Family Support

- Family members of children receiving early intervention services would benefit from an online community that allows them to connect with each other for support, sharing of resources, and problem-solving how to balance all the demands placed on them. Such a community needs to be accessible, ensure privacy, promote respect, and provide accurate information.
- Professionals can invite families to join support groups that meet virtually. Providing both online and telephone access can enable families without Internet access or an available device to have the option to call in and equally participate.

Role of Professionals

- Professionals must establish clear communication and timelines so families are informed and assured of how evaluations, IFSP meetings, and/or transition planning for preschool will occur, including information on the correct individual to contact for each service.
- To best serve children and families, professionals must establish the most effective way to communicate with each family, demonstrate and model techniques, assess the child's growth, and offer supports. Clear communication includes stating expectations for what can and cannot be delivered remotely and what role the family members may assume.
- In selecting resources to share with families, professionals should review the resources to ensure that the information they contain is up to date, model best practices, and are family friendly. Consideration must also be given to the family member's reading level and attention span, in addition to ensuring materials are inclusive of diverse family values and perspectives.
- Professionals should communicate with families to address their concerns and fears regarding their child's progress and the effect of the change to remote instruction.

Considerations for Administrators

- Administrators must ensure that professionals have the capacity, resources, and tools to evaluate children, hold IFSP meetings, and plan for transition of children to preschool.
- Administrators must be flexible in allowing service providers to adjust their schedules to enable them to meet with families in the evenings or on weekends when many families are more available and children may be more receptive to intervention.
- Administrators need to allow time and provide encouragement to staff, so they can
 establish open communication between themselves and family members. This will
 allow professionals to support the development of infants and toddlers with visual
 impairments more effectively.
- Many children require access to equipment such as specialized seating, pre-braille materials, or adaptive mobility devices. Mechanisms must be set in place so that families can have access to necessary materials whether this be through staff making contactless deliveries, families being asked to pick up items from a centralized location, or materials being sent via U.S. Postal Service, Canada Post, or another delivery service. The purchase of additional materials may be required if they were previously shared between students.

Considerations for Policymakers

- Recognizing that there are many uncertainties for the 2020–2021 school year, U.S. state and Canadian provincial policymakers may wish to extend early intervention eligibility for children beyond their third birthday. This will allow service providers who know the child and family to continue providing support and services without introducing a new educational team to the child and family.
- Funding must be allocated to allow for the establishment of a one-stop shop for resources for both families and professionals. For example, the website, WonderBaby, previously provided resources to family members and professionals and focused on children with visual impairments receiving early intervention services.
- Future budget requests must include adequate money for early intervention providers' salaries, equipment, and programming for children and families.
- When early intervention services are moved from in person to online, the platform used must be fully accessible to families, which may include a member with a disability.

PRESCHOOL

"I feel lucky I have so much experience in adapting the world for my daughter given what the past four years have been for us, but still I feel overwhelmed. I really empathize with those who do not have the knowledge, bandwidth, resources, materials, etc., to take this on. I still feel like I am never doing enough. We are always wearing many hats as special needs parents, but this honestly feels like a bit much to take on even for the strongest and most determined parents."—White female family member of a child with low vision with additional disabilities, 6 years old



In the United States beginning at the age of 3 years, children move from early intervention services to school-age services under IDEA Part B. The IEP is the legal document that stipulates the child's educational goals for a one-year period, the accommodations the child receives, and the amount of time educational team members provide instruction and/or consultation. In Canada there is no equivalent to IDEA. Special education services are regulated at the provincial level.

There were 60 children (U.S. n=56, Canada n=4) in the survey who were receiving preschool services. In this section, data are not broken out by country of residence. Children's descriptive characteristics and ages are reported in Table 4.

TABLE 4:

Ages and Descriptive Characteristics of Children Receiving Preschool Education

AGE:	Total (n=60)	Blind (n=8)	Low Vision (n=14)	BL + Additional Disabilities (n=8)	LV + Additional Disabilities (n=30)	
3 Years Old	9	2	1	1	5	
4 Years Old	28	4	6	5	13	
5 Years Old	19	2	7	1	9	
6–7 Years Old	4	0	0	1	3	

Family members selected one of seven settings to describe where their child was receiving preschool education prior to the COVID-19 pandemic. Table 5 shows the educational settings for the 60 preschoolers.

TABLE 5:

Educational Settings of Students Based on Their Descriptive Characteristics

AGE:	Total In Setting	Blind (n=8)	Low Vision (n=14)	BL + Additional Disabilities (n=8)	LV + Additional Disabilities (n=30)	
Preschool class with typically developing peers	20	3	5	3	9	
Special education preschool class	14	2	2	3	7	
Specialized school	11	1	1	1	8	
Day care or faith-based class	6	0	3	1	2	
Homeschool	3	0	1	0	2	
Preschool class with typically developing children taught by TVI	1	1	0	0	0	
Child not enrolled in a preschool program	5	1	2	0	2	

PRESCHOOL EDUCATION OF PRESCHOOLERS PRIOR TO THE COVID-19 PANDEMIC

Family members reported that depending on their IEP goals and the setting in which their education was delivered, preschoolers had between one and 14 educational team members working with them prior to COVID-19. Three children had 10 or more team members supporting their education while five children only had one team member supporting their education. For preschoolers with low vision, the mean number of educational team members was 3.14 (SD=2.14); for preschoolers who were blind, the mean was 4.25 (SD=2.71); for preschoolers with low vision with additional disabilities, the mean was 6.90 (SD=2.73); and for preschoolers who were blind with additional disabilities, the mean was 5.38 (SD=3.16).

Although the survey was open from April 22 to May 13, 2020, the researchers opted to use March 1, 2020 as the date to mark the shift in educational delivery from school buildings to other delivery models. There were 45 family members who reported the number of hours per week during which their child attended preschool prior to March 1, 2020. Fourteen children attended preschool less than 10 hours a week, 14 children attended 11-20 hours a week, 8 children attended 21-30 hours a week, and 9 children attended 31 or more hours a week. Prior to March 1, 2020, 45 (75%) of the children attended preschool either 4 or 5 days each week.

ACCESS TO EDUCATIONAL MATERIALS

Preschoolers with visual impairments use a wide array of materials to access and participate in instruction. Many of the materials used by children are specific to their level of visual impairment, the needs necessitated by their additional disabilities (if present), the educational curriculum, and their IEP goals and accommodations. Because the shift from attending school in a building to attending school remotely happened very quickly, the researchers wanted to understand if preschoolers had the materials they needed for their education at home. Family members were provided an extensive list of materials and asked which materials their child used at school prior to the COVID-19 pandemic. They were then presented the same list and asked to indicate which materials their child did not have at home which impacted their child's ability to learn. Eighteen family members reported that their child had all the materials their child was using at school that their child did not have at home. Materials that family members reported which their child did not have at home. Materials that family members reported which their child did not have at home. Materials that family members reported which their child did not have at home. Materials their child was using at school that their child did not have at home. Materials their child was using at school their child did not have at home included:

- Materials for tactile graphics (n=12)
- Handheld magnifier (n=11)
- Large print books (n=11)

- Adapted books (n=9)
- Perkins braillewriter (n=9)
- Communication device (n=8)
- Handheld monocular (n=7)
- Electronic magnifier/CCTV (n=8)
- Braille recreational books (n=7)
- Victor Reader Stream or another device for listening to books (n=7)

It is noteworthy that 25 family members reported that their child used a tablet at school. Only 5 family members reported their child did not have access to one at home. Twenty-three family members reported their child used a white cane at school; only 3 reported their child did not have access to a white cane at home.

PRESCHOOL EDUCATION DURING THE COVID-19 PANDEMIC

Families were typically given little notice that there was going be a shift in how preschool education was to be delivered. Of 48 family members who responded, 16 were given a one-day notice that there was to be a change in the way their child typically attended school, 5 were given two days, 8 were given three days, and 19 family members reported receiving a week or more notice that school buildings would be closing.

With the closure of school buildings, many educational team members began providing instruction online. Forty-one family members reported on the frequency of their child's online instruction. Thirteen preschoolers were not receiving online instruction, 21 were receiving 1-3 hours of online instruction per week, and 7 preschoolers were receiving between 4-12 hours of online instruction per week.

PRESCHOOL TEACHERS WHO ARE NOT TEACHERS OF STUDENTS WITH VISUAL IMPAIRMENTS

When asked if they had been contacted by their child's preschool teacher after the school building was closed, 32 family members responded "yes," while 5 family members said "no." Of the 32 family members who had been contacted by the preschool teacher, only 19 reported that the preschool teacher was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways in which the preschool teacher might be working with their child, family members reported that preschool teachers were:

- Recommending websites, videos, or other online resources (n=15)
- Sending via email ideas and activities that the child does at preschool (n=14)
- Meeting online with small groups of students to deliver instruction (n=10)

"The group class meetings are on Google Meet which my daughter doesn't like the screen size on. She says she can see people better on Zoom, but the district won't use Zoom. I find it hard to complete the suggested activities the teacher gives us because they always seem to require materials or a setup that we don't have at home. Sometimes the [materials to be printed] she sends don't work for my daughter as a low vision child, or me as a blind mom. I work full time from home and none of my daughter's schoolwork...she [can] do independently. So, we just aren't able to get to all of it each week. Plus, my daughter needs hands-on experiential stuff, and a lot of what the teacher sends is pictures/videos/websites."—White female family member of a child with low vision, 6 years old

Family members were asked about the level of communication they had with their child's preschool teacher. Of the 17 family members who responded, 1 reported having no communication, 2 had little or limited communication, 3 had the same level of communication, and 11 had increased communication.

Family members were also asked about the level of support they were receiving from their child's preschool teacher. Of the 18 family members who responded, 3 had little or limited support, 5 had the same level of support, and 10 had increased support.

TVIS NOT AT SPECIALIZED SCHOOLS

Among children who did not attend a specialized school, 39 family members reported that their child had worked with a TVI, 1 was unsure if their child had worked with a TVI, and 3 reported their child had not worked with a TVI before the COVID-19 pandemic. When asked if they had been contacted by their child's TVI once the school building closed, 32 family members reported "yes," while 5 reported "no." Of the 32 family members who had been contacted by the TVI, only 22 reported that the TVI was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the TVI might be working with their child, family members reported that TVIs were:

- Meeting online individually with a family member and/or the child (n=14)
- Recommending websites, videos, or other online resources specific to children with visual impairments (n=13)

- Sending via email ideas and activities that the child does with the TVI (n=10)
- Meeting online with small groups of students to deliver instruction (n=10)

Family members were asked about the level of communication they had with their child's TVI. Of the 21 family members who responded, 3 had little or limited communication, 9 had the same level of communication, and 8 had increased communication.

Family members were asked about the level of support they were receiving from their child's TVI. Of the 22 family members who responded, 1 had no support, 3 had little or limited support, 12 had the same level of support, and 6 had increased support.

"Once a week [we join a] joint Zoom for 20 mins that is the same one as with her preschool teacher. [We receive a] massive list of things to do on an app which we either can't do or don't have the massive list of supplies that they require. Again, we are her parents not trained teachers and the task list or the visual schedule or the 100 things they want done does not work at home in a home environment. We are trying but there are limits."—*White female family member of a child who is blind, 7 years old*

O&M SPECIALISTS

Before the COVID-19 pandemic, 31 families reported that their child had worked with an O&M specialist, 5 were unsure if their child had worked with an O&M specialist, and 14 reported their child had not worked with an O&M specialist. When asked if they had been contacted by their child's O&M specialist once the school building closed, 20 family members reported "yes," while 9 reported "no."

Of the 20 family members who had contact with the O&M specialist, only 12 reported that the O&M specialist was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the O&M specialist might be working with their child, family members reported that O&M specialists were:

- Sending via email ideas and activities that the family can do to reinforce or build the child's O&M skills (n=7)
- Meeting online individually with a family member and/or the child (n=5)

 Recommending websites, videos, or other online resources specific to children with visual impairments (n=5)

Family members were asked about the level of communication they had with their child's O&M specialist. Of the 12 family members who responded, one reported having no communication, one had little or limited communication, 7 had the same level of communication, and 3 had increased communication.

Family members were also asked about the level of support they were receiving from their child's O&M specialist. Of the 12 family members who responded, 1 had no support, 2 had little or limited support, 7 had the same level of support, and 2 had increased support.

"[Not] receiving help on O&M and braille instruction are a big loss for our child. We can provide story time or worksheets, but we do not have the experience to provide her with the knowledge/skills of what was being provided through O&M, low vision, etc."—*White female family member of a child with low vision with additional disabilities, 6 years old*

TEACHERS AT SPECIALIZED SCHOOLS

Eleven family members reported that their child had attended a specialized school before the COVID-19 pandemic. When asked if they had been contacted by any of the teachers from the specialized school once the school building closed, 8 family members reported "yes," while one family member reported "no." Of the 8 family members who had been contacted by a teacher from the specialized school, only 6 reported that a teacher was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the teacher might be working with their child, family members reported that teachers were:

- Recommending websites, videos, or other online resources specific to children with visual impairments (n=6)
- Meeting online with small groups of students to deliver instruction (n=5)
- Sending via email ideas and activities that the child does with the teacher (n=5)
- Meeting online individually with a family member and/or the child (n=4)

PRESCHOOL

Family members were asked about the level of communication they had with their child's teacher from the specialized school. Of the 6 family members who responded, 3 had the same level of communication, and 3 had increased communication.

Family members were also asked about the level of support they were receiving from their child's teacher from the specialized school. Of the 6 family members who responded, 3 had the same level of support, and 3 had increased support.

"My child attends two different preschools [one at a center for people with visual impairments and one at] our local church. From [professionals at the center], we receive weekly emails with the daily plans for the week and we're supposed to have our child attend Zoom sessions twice a day, morning and afternoon, although we are only able to attend one daily because we are also trying to work from home with no childcare. Her two teachers at the church preschool are not trained in teaching visually impaired children. They have reached out twice via email just to check in and initially sent home a packet of worksheets and craft ideas when the quarantine began." *—White female family member of a child with low vision, 6 years old*

THE ROLE OF FAMILY MEMBERS

Balancing family life, their child's education, and in many cases, work responsibilities, puts a lot of stress on families. Twenty family members reported that they were currently working, with 15 working remotely from home and 5 working outside the home as essential workers. Fourteen family members reported that they were not employed.

Family members were asked their level of agreement with the statement: I believe that I am not living up to the expectations of my child's educators because I cannot complete everything they are asking me to do with/for my child. Of the 55 family members who responded, the mean was 3.28 (SD=1.25)¹⁴. Most family members rated this statement between "Neither agree nor disagree" and "Agree." Educational team members need to ensure that their expectations for families are realistic and that they are not adding to the family's stress level.

¹⁴The mean (M) is derived by averaging the participants' ratings—from "Strongly disagree" (1) to "Strongly agree" (5). The larger the standard deviation (SD), the greater the spread from the mean of the participants' ratings.

"[W]hile I appreciate the teacher's efforts to keep the class as connected and engaged as possible, it is very logistically challenging to participate fully when I have another child, a job I'm trying to do at home, and my child doesn't like the virtual classroom. I wish I felt more capable as the parent to support my child's total involvement in the virtual classroom, but I'm often feeling like we're stressed and I'm not sure how much she is benefiting from any of it."—White female family member of a child with low vision with additional disabilities, 7 years old

Educational team members have a responsibility to prepare lessons for their students. When asked if they received lesson plans from teachers or therapists electronically (e.g., via email, Google Drive), 50 family members responded. Thirty-five family members reported that they received lesson plans, while 15 reported that they did not. Thirty-five family members shared how often they were sent lesson plans each week. Seventeen reported that they received lesson plans 1-2 times per week, 4 received them 3-4 times per week, 7 received them 5-6 times per week, 1 received them 7 or more times a week, and 6 reported that the number of times per week varied.

For some educational team members, having documentation to show the child has completed assigned work is important. Collected data can be used to plan future lessons, document progress towards IEP goals, or serve as evidence that the educational team member is providing instruction. Twenty of 50 family members reported they were asked by at least one teacher or therapist to send evidence that the child had completed an assignment such as by uploading a video or sending an email. Some family members reported they were encouraged to share photos or videos through a private Facebook group, for example, or during a small group or class Zoom meeting. A few family members found it stressful or challenging to be required to document their child's progress. "It's hard to do teaching and then stop to take proof pictures and still keep my child engaged in learning."—White female family member of a child with low vision with additional disabilities, 6 years old

Yet, for a few family members, the time taken to document their child's learning gave them an opportunity to view their child's progress and receive feedback from educational team members.

"My child is receiving work to do at home in some [educational] websites proposed by his teacher. He also has videos or video meetings with his teachers and therapists. All these keep him in the learning path and connected in a school spirit with his teachers and peers."—*Black or African American female family member of a child with low vision, 6 years old*

Not all activities that were typically part of a child's preschool day translated into a practical and/or meaningful activity at home.

"This [home] environment does not work for kiddos with VI. Our teacher tries, but nothing translates at all. [Child] needs the hands-on tactile learning. And school circle time with a schedule book is quite frankly not how you live at home."—White female family member of a child who is blind with additional disabilities, 7 years old Family members were asked their level of agreement with the statement: I believe my child is continuing to make progress in the same way they would if there had not been a change in where and how my child is receiving educational services. Of the 53 family members who responded, the mean was 2.51 (SD=1.27). Most family members rated this statement between "Disagree" and "Neither agree nor disagree." As we move into the 2020–2021 school year, educational team members will want to check in with family members to gather informal input from them about their child's progress and together design a plan that works for the child to ensure the child is progressing in their learning.

MOVING INTO THE 2020–2021 SCHOOL YEAR

The Access and Engagement survey was open from April 22 to May 13, 2020 as the end of the 2019–2020 school year approached.

Family members were asked their level of agreement with the statement: Because of the changes in my child's education, I do not believe my child will be ready for the next school year. Of the 55 family members who responded, the mean was 2.94 (SD=1.20). Most family members rated this statement as "Neither agree nor disagree." For many family members, there was considerable uncertainty about the level of preparedness their child would have for the following school year.

Family members were also asked if their child would transition from preschool education to kindergarten and/or a special education classroom that is not a preschool classroom for the 2020–2021 school year. Twenty-five of 55 family members indicated their child would transition and 6 family members were unsure.

When asked to select a statement that described their feelings about their child's upcoming transition out of preschool, 26 family members selected a statement that described their feelings. Six family members had no concerns, 12 were unsure how the transition would happen since schools were closed, and 2 were unsure who they should speak to about the upcoming transition. Six family members provided written responses in which they expressed concern about the upcoming transition.

"[COVID-19] has greatly impacted my feelings about [my child's transition out of preschool]. I am nervous and anxious. He needed more time in the preschool class to prep[are] him for Kind[ergarten]. This was his 3rd year of pre-kindergarten but still I feel he is not ready."—*White female family member of a child with low vision with additional disabilities, 7 years old*

RECOMMENDATIONS

The challenges presented by not having preschoolers in their typical educational setting with trained professionals presents a burden on many families. It also places professionals in the position of having to develop strategies to teach young children with limited attention spans and ability to learn when they are not in direct contact with professionals. The following recommendations can assist families, professionals, administrators, and policymakers as they consider how to best meet the complex educational needs of preschoolers with visual impairments, especially those with additional disabilities or deafblindness.

Family Support

- Families need clear and consistent communication that allows for both short-term and long-term planning for the child's education throughout the 2020–2021 school year. Misinformation or lack of information adds to the stress families are experiencing.
- Many family members appreciate the opportunity to connect with other families through formal means such as support groups and less formal means such as Facebook groups or periodic online sessions led by a family member without professional staff present. Professionals can encourage the development of support groups and less formal connections, then distance themselves once these are established.

Role of Professionals

 Members of a child's educational team must coordinate services and requests of families. Limiting the number of online sessions, lesson plans, requests to document progress, and resources so that families do not feel overwhelmed is imperative. Coordination will also result in a more cohesive program for the preschooler that is focused on the child's IEP goals and developmental needs.

PRESCHOOL

- Most family members are not trained educators or therapists. They require clear directions and modeling with continued monitoring and praise. Professionals must recognize that families have many responsibilities in addition to the education of their child. Requests for documentation of child progress need to be realistic and fit with the family's available time and resources.
- In planning their sessions with preschoolers, professionals must keep in mind the developmental level and attention span of the student. For many preschool-age students, lessons that are 10-15¹⁵ minutes maximum are appropriate. Rarely is a one-hour long session appropriate at this level.
- Preschool-age children benefit from social opportunities. Professionals may
 want to schedule brief online sessions for singing, dancing, story time, and other
 activities in which they can engage children with each other and take the focus
 off the adults leading the interactions. Involving siblings or other children in the
 household, if present, may be one way to support family members and model
 desired behaviors.
- While O&M is much more difficult to provide through remote instruction, professionals can support families with ideas for creating safe and easily explored environments. Children learn through movement and interactions with their environment, which can be facilitated in the home with support and opportunities for independence. For example, children can learn the route from the front door to the mailbox and can explore the block around their home.

Considerations for Administrators

- Administrators must provide professionals time to plan for students transitioning from early intervention to preschool services. This includes time for conducting assessments, developing IEPs, obtaining materials, meeting with the new educational team members, and supporting family members.
- Administrators should support professionals in searching out and implementing service delivery models and tools that allow for meeting the unique needs of students, especially those with additional disabilities or deafblindness.
- In the rush to deliver educational and therapeutic services to children, oftentimes, multiple platforms are being used by professionals. Administrators need to ensure platforms are streamlined, so that families and professionals have ideally one or two tools that they must learn to use. All platforms must be fully accessible to family members, professionals and, when appropriate, students.

¹⁵https://day2dayparenting.com/childs-attention-span-long-able-focus/

 Literacy skills development, whether traditional or using more of an individualized or functional approach, is a priority during the preschool years. Some families do not have readily available access to print books, braille books, teacher-made books designed to meet the child's individual learning needs, or the accommodations/devices for children with low vision to access print materials. To assist these students, administrators may want to support professionals in setting up a lending library within the district, school, county, state, or province so resources can be shared.

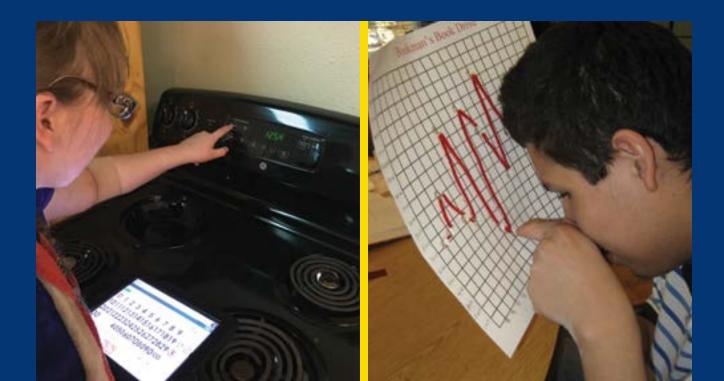
Considerations for Policymakers

- For students, families, and professionals to engage in online learning, everyone involved in the students' education must have equipment that is accessible and reliable in addition to broadband Internet connectivity.
- No student with a visual impairment should be denied advancement to kindergarten or the next educational placement solely on the basis of the interruption COVID-19 has caused in the delivery of services.
- In addition, no student with a visual impairment should be advanced to kindergarten or the next educational placement without all the assessments, IEP development, and accommodations in place that would be there if it were not for COVID-19.
- Policymakers must ensure that ongoing child assessment and instruction occur throughout the school year so that students do not regress and are making adequate progress in their educational program in spite of changes in educational service delivery due to the fluidity of the COVID-19 pandemic.
- In the United States, policymakers must adequately fund preschool services at appropriate levels to allow for the purchase of necessary materials, technology, and additional resources needed by educational staff and preschool children.



SCHOOL-AGE STUDENTS

"[Special education] children are stuck between a rock and a hard place. We need the hands-on services of professionals. Virtual support is great, but it isn't enough. The mental toll on parents is high. And I don't think the students are faring much better."—White female family member of a child with low vision, 8 to 10 years old



In the United States, the age at which students complete their education under IDEA varies. Some students earn a diploma or a certificate of completion at the same time as their sighted peers. Under IDEA, some students move into transition programs and complete their education when they reach their 21st birthday, though some states and school districts allow students to remain in school beyond this date. There is no equivalent legislation in Canada.

Three hundred thirty-three students (U.S. n=296, Canada n=37) whose family members participated in the survey were in school-age programs. In this section, data are not broken out by country of residence, with the exception of one question about IEPs and 504 Plans. Students' descriptive characteristics and ages are reported in Table 6.

TABLE 6:

Ages and Descriptive Characteristics of School-Age Students

AGE:	Total (n=333)	Blind (n=56)	Low Vision (n=99)	BL + Additional Disabilities (n=56)	LV + Additional Disabilities (n=122)	
5–7 Years Old	43	6	12	4	21	
8–10 Years Old	88	17	34	10	27	
11–12 Years Old	49	9	19	7	14	
13-15 Years Old	69	11	18	18	22	
16-18 Years Old	67	11	15	9	32	
19–22 Years or Older	17	2	1	8	6	

Table 7 provides the educational setting where students attended school prior to March 1, 2020.

TABLE 7:

Educational Setting by Descriptive Characteristics for School-age Students

Where Student Received Education	Total (n=333)	Blind (n=56)	Low Vision (n=99)	BL + Additional Disabilities (n=56)	LV + Additional Disabilities (n=122)	
General education classroom for the full day with TVI and/or O&M services	87	17	49	2	19	
General education classroom with 1-2 periods of special education services and with TVI and/or O&M services	81	20	25	11	25	
Center-based special education school with TVI and/or O&M services	11	0	1	2	8	
A special education classroom with 1-2 periods in the general education classroom with TVI and/or O&M services	62	2	2	20	38	
Specialized school	47	11	8	18	10	
Homeschool with TVI and/or O&M services	22	2	3	3	14	
Charter or private school with TVI and/or O&M services	23	4	11	0	8	

In the United States, students with visual impairments either have an IEP or 504 Plan. There are no 504 Plans in Canada. Two hundred ninety-three family members reported that their child had an IEP (U.S. n=259, Canada n=34), 10 U.S. family members reported their child had a 504 Plan, and 23 U.S. family members were not sure if their child had an IEP or 504 Plan.

EDUCATION OF SCHOOL-AGE STUDENTS PRIOR TO THE COVID-19 PANDEMIC

As with preschool students, 319 family members reported that prior to the COVID-19 pandemic, their school-age children had between one and 13 educational team members working with them. Twenty-two students had 10 or more team members supporting their education, while 15 students only had one team member supporting their education. For students with low vision, the mean number of team members was 3.69 (SD=1.75); for students who were blind, the mean was 4.48 (SD=2.31); for students with low vision with additional disabilities, the mean was 5.95 (SD=2.77); and for students who were blind with additional disabilities, the mean was 6.61 (SD=2.99).

ACCESS TO MATERIALS USED FOR EDUCATION

To access and actively participate in their education, school-age students use a wide array of tools. Some tools are specific to the student's individualized learning needs such as an augmentative communication device or a monocular that has been prescribed by an eye care specialist. As the shift away from attending school in a building to attending school in other formats happened very quickly, it was important to understand if students had access at home to the tools they had previously used at school. Family members were provided an extensive list of tools and asked which tools their child used at school prior to the COVID-19 pandemic. They were then presented the same list of tools and asked to indicate the tools their child did not have at home which affected their child's ability to participate in instruction.

One hundred thirty family members reported that their child had all the tools at home they needed for learning, and 25 family members reported they were unsure if there were tools that their child was using at school that their child did not have at home.

"I am working with my child 2-3 hours per day to help him complete his online assignments. I also am in frequent contact with his classroom teacher and TVI and they provide support and encouragement as I try to help him. His TVI has mailed him braille copies of the books the class is reading, and we also use audio book resources."—*Family member of a child with low vision, 8 to 10 years old*

SCHOOL-AGE STUDENTS

Family members were provided a list of 21 items routinely used by students for education. They were asked which of the items their child used at school prior to March 1, 2020. They were then provided the same list and asked which of the items their child needed for educational purposes, but did not have access to at home.

The 10 most common items family members reported their child used at school but did not have at home are listed below in the order used by the most students. The percentage following each item represents the percentage of students, based on family report, who did not have the item at home but needed it for education.

Readers are cautioned to remember that data were collected in spring 2020 when the shift from attending school in brick and mortar buildings to remotely had just occurred. It is probable some students received needed materials later in the spring.

- Tablet (e.g., iPad, Android Tablet) (17%)
- Laptop (e.g., Windows, Chromebook, MacBook) (21%)
- Perkins braillewriter (18%)
- Cane/Long cane/ White cane (8%)
- Large print books (55%)
- Screen reader software (e.g., JAWS, NVDA, VoiceOver) (50%)
- Braille recreational books (28%)
- Math manipulatives (e.g., Counting Bears, Digi-Blocks) (36%)
- Electronic magnifier/CCTV (56%)
- Materials for tactile graphics (e.g., Draftsman, textures, tactile graph paper) (49%)

"She is missing out on the opportunity to be with peers. While her teachers are doing an amazing job, as am I, the quality of education is decreased as compared to what is available through a brick and mortar approach." *—White female family member of a child who is blind, 5 to 7 years old*

EDUCATION OF SCHOOL-AGE STUDENTS DURING THE COVID-19 PANDEMIC

Although the survey was open from April 22 to May 13, 2020, in the survey, the researchers opted to use March 1, 2020 to mark the day on which educational delivery from school buildings to other delivery models shifted. Families were typically given little notice that there was to be a shift in how education was to be delivered. Of 232 family members who responded, 71 were given a one-day notice that there was to be a change in the way their child typically attended school, 38 were given two days, 23 were given three days, 7 were given 4 days, 52 were given a week's notice, and 41 family members reported receiving more than a week's notice that school buildings would be closing.

Forty-two family members reported that their child was not currently receiving educational services, and 235 family members reported the different ways in which the educational team members from their child's school were working with their child, including:

- Meeting online with children and/or family members (n=135)
- Creating packets of materials for family members to pick up (n=77)
- Calling students or family members on the telephone (n=66)
- Sending materials to the home (n=32)

Two hundred four family members reported that their child attended school online using tools such as Zoom or Google Hangouts. The number of hours students were online varied, with 100 students meeting online 1-3 hours per week, 49 students meeting online 4-6 hours per week, 17 students meeting online 7-9 hours per week, 33 students meeting online 10-18 hours per week, and 5 students meeting online for over 18 hours per week.



REGULAR OR SPECIAL EDUCATION CLASSROOM TEACHERS

"Classroom teachers are expecting classroom context. It doesn't work that way at home. Deafblind students are not remote learners. Period. Communication from teachers that don't understand this is very frustrating and weighing heavily on my mind as a parent. It's not helping an already stressful situation."—White female family member of a child who is blind with additional disabilities, 13 to 15 years old

The majority of family members (n=219) selected at least one way in which their child was getting instruction from the regular or special education classroom teacher(s). These ways included:

- Classroom teacher(s) sent family members/students ideas of websites, videos, or books to use as part of instruction (n=108)
- Classroom teacher(s) recorded videos for the class, including the student with a visual impairment, to watch (n=99)
- Classroom teacher(s) met online with the entire class, including the student with a visual impairment, to deliver instruction (n=95)
- Classroom teacher(s) met online with small groups of students, including the student with a visual impairment, to deliver instruction (n=84)
- Classroom teacher(s) emailed family members materials to print and have the student use (n=69)
- Classroom teacher(s) assigned projects for students to do on their own that were not typical of what would have been assigned before the COVID-19 pandemic (n=49)
- Classroom teachers telephoned individual students and/or family members.
- Family members picked up packets from the classroom teacher(s) (n=40)
- Classroom teacher(s) mailed materials to the student (n=28)
- School buses or other groups delivered packets from the classroom teacher(s) (n=11)

SCHOOL-AGE STUDENTS

The researchers anticipated that family members would report that their child was having challenges with their classroom teachers. Forty-nine of 208 family members reported that their child did not have any challenges. There were 159 family members who selected at least one challenge including:

- Paraprofessional support was not available for the child to access and complete assigned classwork. (n=75)
- The online program(s) used by the classroom teacher(s) was not accessible to the students due to their visual impairment. (n=68)
- The TVI did not prepare all the materials the child needed to use to access the material used by the classroom teacher(s). (n=50)
- The child had difficulty getting online for the classroom teachers' live class sessions. (n=45)
- The child was not able to access the information in the packets being sent home due to their visual impairment. (n=42)
- The child was not able to view the pre-recorded video for the class. (n=31)
- The child did not have the necessary technology at home to complete assigned work. (n=11)

Some classroom teachers did not understand what the student needed in order to access the class materials. In some cases, there was miscommunication about whose responsibility it was to ensure the materials were accessible, retrievable (e.g., able to be downloaded from the online learning platform), and available for the student to use at the same time as classmates. Some misunderstandings turned into positive outcomes for students as they were allowed to pursue more accessible means of learning that proved to be overall beneficial for their progress. In other instances, family members and students felt frustrated when the student could not participate fully in the class.

"Their lack of awareness around accessibility practices for formatting documents has been very frustrating for me. From misuse of color contrast, to font, to crowding on PPT slides, it's just another thing I have to do. The technology has not worked properly for most of the school year and the troubleshooting hasn't always worked. This has made my son even more frustrated than usual in completing schoolwork. He strongly dislikes online learning."—*Hispanic or Latina female family member of a child with low vision, 13 to 15 years old* Family members were asked about the level of communication they had with their child's classroom teacher(s). Of the 219 family members who responded, 8 reported having no communication, 47 had little or limited communication, 90 had the same level of communication, and 74 had increased communication.

Family members were asked the level of support they received from their child's classroom teacher(s). Of the 219 family members who responded, 15 had no support, 44 had little or limited support, 102 had the same level of support, and 58 had increased support.

TVIS NOT AT SPECIALIZED SCHOOLS

"[The TVI] has been the most stable aspect. She has worked out lessons, weekly drops off materials, and has met with us regularly four days a week, twice each day. She is the glue holding my son's education together."—*White female family member of a child who is blind with additional disabilities, 5 to 7 years old*

Before the COVID-19 pandemic, 207 family members whose children did not attend a specialized school reported that their child had worked with a TVI, 5 family members were unsure if their child had worked with a TVI, and 30 family members reported their child had not worked with a TVI. When asked if there had been contact from their child's TVI once the school building was closed, 172 family members reported "yes," while 33 reported "no." One hundred twenty-three family members reported the TVI was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the TVI might be working with their child, family members reported that TVIs were:

- Meeting online (e.g., via Zoom) with a family member and/or my child (n=88)
- Meeting via telephone with a family member and/or my child (n=58)
- Recommending websites, videos, or other online resources (e.g., posts on Paths to Literacy, Virtual ExCEL Academy, accessible iPad apps, sites to download audio books) (n=57)
- Sending via email ideas and activities that the child does with the TVI (n=50)
- Mailing or delivering toys or materials to our home (n=38)
- Meeting online with the child in a small group of students or with the entire class (n=34)
- Sending home packets of materials for the child to complete (n=23)

Family members were asked the level of communication they had with their child's TVI. Of the 121 family members who responded, 1 had no communication, 14 had little or limited communication, 47 had the same level of communication, and 59 had increased communication.

Family members were asked the level of support they received from their child's TVI. Of the 121 family members who responded, 1 had no support, 18 had little or limited support, 52 had the same level of support, and 50 had increased support.

0&M SPECIALISTS

"They are honestly doing the best they can give that you cannot teach [with] orientation and mobility without being beside the child. Phone calls and emails don't do this as well as in person."—*Female family member of a child with low vision with additional disabilities, 16 to 18 years old*

Before the COVID-19 pandemic, 203 family members reported that their child had worked with an O&M specialist, 13 were unsure if their child had worked with an O&M specialist, and 65 reported that their child had not worked with an O&M specialist. When asked if there had been contact from their child's O&M specialist once the school building was closed, 140 family members reported "yes," while 61 reported "no."

Of the 139 family members who had contact with the O&M specialist, 78 reported the O&M specialist was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the O&M specialist might be working with their child, family members reported that O&M specialists were:

- Meeting online (e.g., via Zoom) with a family member and/or my child (n=48)
- Sending via email ideas and activities that the child does with the O&M specialist (n=35)
- Meeting via telephone with a family member and/or my child (n=29)
- Recommending websites, videos, or other online resources (e.g., posts on Paths to Literacy, Virtual ExCEL Academy, accessible iPad apps, sites to download audio books) (n=24)
- Meeting online with the child in a small group of students or with the entire class (n=16)
- Mailing or delivering toys or materials to our home (n=9)
- Sending home packets of materials for the child to complete (n=6)

SCHOOL-AGE STUDENTS

Family members were asked the level of communication they had with their child's O&M specialist. Of the 77 family members who responded, 1 reported having no communication, 11 had little or limited communication, 45 had the same level of communication, and 20 had increased communication.

Family members were asked the level of support they were receiving from their child's O&M specialist. Of the 77 family members who responded, 1 had no support, 12 had little or limited support, 47 had the same level of support, and 17 had increased support.

TEACHERS AT SPECIALIZED SCHOOLS

Before the COVID-19 pandemic, 47 family members reported that their child had attended a specialized school. When asked if there had been contact from any of the teachers from the specialized school once the school building was closed, 38 family members reported "yes," while 2 family members reported "no." Of the 38 family members who had contact with a teacher(s) from the specialized school, 33 reported a teacher was continuing to work with their child during the COVID-19 pandemic. When provided a list of possible ways the teachers might be working with their child, 31 family members reported that teachers were:

- Meeting online with the child in a small group of students or with the entire class (n=22)
- Meeting online (e.g., via Zoom) with a family member and/or my child (n=20)
- Sending via email ideas and activities that the child does with the TVI (n=19)
- Recommending websites, videos, or other online resources (e.g., posts on Paths to Literacy, Virtual ExCEL Academy, accessible iPad apps, sites to download audio books) (n=14)
- Sending home packets of materials for the child to complete (n=13)
- Meeting via telephone with a family member and/or my child (n=12)
- Mailing or delivering toys or materials to our home (n=8)

Family members were asked the level of communication they had with their child's teacher(s) from the specialized school. Of the 31 family members who responded, 4 had little or limited communication, 11 had the same level of communication, and 16 had increased communication.

Family members were asked the level of support they were receiving from their child's TVI. Of the 31 family members who responded, 1 had no support, 4 had little or limited support, 13 had the same level of support, and 13 had increased support.

"Initially, [the specialized school] did not know how to do online teaching. They gave families resources/links and then cut off all communication. They tried to use [their internal website] but it did not work well. They switched to Google Classroom but many students cannot use it and it requires the parents to be the middle person. My son always did email and normally receives assignments via email. They did not get that they were already doing online teaching. They have to use software to document for home districts. This really caused a lack of teaching during the first few weeks. Things have fallen into place now but it was a rough first few weeks."—White female family member of a child who is blind with additional disabilities, 16 to 18 years old

THE ROLE OF FAMILY MEMBERS

Although there are some school-age students who have a high level of independence when attending school outside of the school building, there are many students who need support from family members. In addition to supporting their school-age child with a visual impairment in learning, family members often have a job and/or other children to care for. One hundred thirty-one family members reported they were working, with 92 working remotely from home and 39 working outside the home as essential workers. Ninety-two family members reported they were not employed.

Family members were asked their level of agreement with the statement: I believe that I am not living up to the expectations of my child's educators because I cannot complete everything they are asking me to do with/for my child. Of the 300 family members who responded, the mean was 3.00 (SD=135)¹⁶. Most family members rated this statement as "Neither agree nor disagree." As the 2020–2021 school year gets underway, it is important that family members and educators establish what expectations are realistic and reasonable for each student and family.

¹⁶ The mean (M) is derived by averaging the participants' ratings—from "Strongly disagree" (1) to "Strongly agree" (5). The larger the standard deviation (SD), the greater the spread from the mean of the participants' ratings.

SCHOOL-AGE STUDENTS

It was very clear from the responses of family members that when they were informed of the expectations and education plans made for their child that their stress level was typically lower. When educational team members did not clearly communicate expectations, both the stress of the family member and that of the child were reported to increase.

For some family members, lesson plans from educational team members were helpful. One hundred sixty-eight family members reported that they received lesson plans from teachers or therapists electronically (e.g., via email, Google Drive), while 86 family members reported that they did not. In addition, 167 family members shared how often each week they were sent lesson plans, with 82 reporting 1-2 times per week, 20 reporting 3-4 times per week, 28 reporting 5-6 times per week, 6 reporting 7 or more times a week, and 31 reporting that the number of times per week varied. For some family members, knowing how to support their child in their education was a challenge.

One hundred thirty-seven of 252 family members reported they were asked by at least one teacher or therapist to send evidence that the child had completed an assignment, for example, by uploading a video or sending an email.

"This has been strictly optional, but teachers and therapists have asked us to take pictures and/or videos to show what our child has been working on. In many cases, therapists have been able to provide better guidance and helpful feedback to us as a result of having viewed the videos we send."—*Family member of a child with low vision with additional disabilities, 8 to 10 years old*

Family members were asked their level of agreement with the statement: I believe my child is continuing to make progress in the same way they would if there had not been a change in where and how my child is receiving educational services. Of the 303 family members who responded, the mean was 2.54 (SD=1.23). Most family members rated this statement between "Disagree" and "Neither agree nor disagree" indicating that the majority of the family members did not feel their child was progressing in their education.

Some family members found an upside to the quick shift away from children attending school in a building to being at home. They were able to see firsthand what their child was learning, gather ideas from educational team members to implement at home, and watch their children problem-solve and develop independent skills.

"I am very happy with how everything is going. The silver lining is my son has been forced to become independent and really learn technology which in the end is only going to make life easier."—*White female family member* of a child who is blind, 5 to 7 years old

MOVING INTO THE 2020–2021 SCHOOL YEAR

The survey was open as the 2019-2020 school year was ending. The researchers wanted to understand what family members anticipated will occur for their child at the start of the 2020–2021 school year. Seventeen family members were unsure. Three hundred family members shared that they anticipated their child will:

- Attend the same school as the previous year (n=219)
- Transition from one public school to another public school, e.g., elementary to middle school (n=39)
- Continue to be homeschooled (n=14)
- Attend a transition program, typically for those 18 years or older (n=9)
- Graduate from high school and receive a diploma (n=6)
- Transition to a college or university (n=5)
- Transition from public school to a specialized school (n=2)
- Receive a certificate (n=1)
- Transition from a specialized school to public school (n=1)
- Transition from homeschool to public school or a specialized school (n=1)
- Be too old to attend school (n=1)

When asked to select a statement that described their feelings about their school-age child's upcoming transition or return to school, of 72 family members, 23 family members had no concerns; 32 were unsure how the transition or return to school would happen since schools were closed; 3 were unsure who they should speak to about the upcoming transition or return to school; and 3 had tried to contact someone about their child's transition or return to school, but no one had gotten back to them.

Family members were asked their level of agreement with the statement: Because of the changes in my child's education, I do not believe my child will be ready for the next school year. Of the 304 family members who responded, the mean was 2.75 (SD=1.27). Most family members rated this statement between "Disagree" and "Neither agree nor disagree," indicating that they had considerable uncertainty about their child's readiness for the 2020–2021 school year.

RECOMMENDATIONS

Students who are receiving school-age through transition services can range in age from 5 to 22 years, depending on the policies of the entity providing their educational services. Educational programs can be academic, community based, or functional in nature, depending on the student's individual needs and IEP goals. Post-secondary education plans can be varied from college to trade school to day programs. This tremendous variability requires that families, professionals, and administrators work together to ensure that the student's education is comprehensive and appropriate. Policymakers must recognize the importance of having policies in place so that U.S. students receive all services they are entitled to under IDEA and Canadian students receive all the services they are entitled to under their provincial governments' laws.

Family Support

 The quick shift for many students to online learning presents families with an opportunity to support their child in developing self-advocacy skills. Families can encourage their child to advocate for their educational needs with teachers and therapists. For example, children can meet with their teachers to request that their materials are accessible, that they be provided 1:1 instruction of concepts that are difficult for them to learn in a group setting, or that their IEP goals be modified due to their current learning needs. As a member of the educational team, family members can call a team or IEP meeting to discuss their child's progress to date. They can use these meetings to share with team members what is and is not working for their child and their family. For example, many professionals may not be aware that four different team members are each requesting the family to log in to a different system and document child progress in a different way.

Role of Professionals

- The ECC is a framework for providing instruction to students with visual impairments. TVIs and O&M specialists can design lessons and share resources with families to promote growth in the ECC areas. For example, students can build independent living skills by assisting with meal preparation or develop O&M skills by exploring the neighborhood with a family member.
- Self-advocacy, an area of the ECC, is an important skill for all students to develop. Professionals can discuss and model for families and students how students can self-advocate. For students who are academic learners, self-advocacy may take the form of calling a technology company to request assistance, letting a general education teacher know that a video is not accessible and working out an alternative assignment, or giving directions to a sighted reader on what information is needed. For a student who has additional disabilities, self-advocacy may include selecting a toy to play with, deciding what to have for lunch, or planning the family's route for an evening walk around the neighborhood.
- Professionals cannot assume that students and family members have both the mainstream and assistive technology skills that are essential to access education. Time must be allocated for professionals to teach these skills to students and family members and to troubleshoot technology challenges.
- Most families have limited time and technology skills. Therefore, professionals need to carefully consider requests they are making of families when it comes to accessing multiple platforms, carrying out lessons, and documenting their child's progress through emails, texts, photos, and/or videos.
- Professionals require additional time to collaborate with other members of the educational team to help them understand the effect of the student's visual impairment when accessing material presented online. Allowing professionals to schedule blocks of time into their schedule for collaboration would facilitate students having a more accessible and richer educational experience.
- Many educational team members are not familiar with the needs of students with visual impairments when it comes to accessing the curriculum, demonstrating a new concept, or making simple accommodations that promote inclusion such as having everyone stating their name before speaking. Professionals need time to meet with other educators to share specific strategies for the student.

Considerations for Administrators

- Administrators should support professionals in finding ways to empower families to learn from each other. Families need mechanisms, both virtually and in person using social distancing, to socialize and share information. Any online platform used must be private, accessible, and available to those who do not have access to the Internet or a device.
- Communication between students, professionals, and family members is essential to student success. Administrators must allow educational teams time to meet to build communication and supports that will allow students to make progress. Teams need time to plan and problem-solve on behalf of their students.
- Students must have access to all mainstream and vision-specific materials and devices that allow them to access and participate in education. In school buildings some devices are shared among more than one student, for example, instructional kits or iPads. In these cases, administrators must work to find additional funding and allow professionals the time to research and develop alternative solutions.
- Administrators can encourage professionals to bring students together virtually so that they can socialize and share common experiences.
- As the end of the school year approaches, if students are not able to physically preview their new school, plans need to be put into place to acquaint the student and family members with the new building and educational staff.

Considerations for Policymakers

- Planning for and carrying out instruction takes considerable time for professionals.
 Policymakers can provide financial compensation to professionals who work beyond their paid school day.
- Students need the same equipment and supports at home that they have available to them in the school building. Policymakers can work to secure additional funding for necessary equipment and staff that will allow each student to have the needed resources available to them when learning remotely.
- Policymakers should provide resources to students, families, professionals, and administrators so that they have up-to-date technology and curricula that will enable professionals to plan for and carry out instruction and allow students and families to access the instructional content.
- Policymakers must ensure that students who are making a transition out of public school education have received the same quality and quantity of education they would have received prior to COVID-19. If students have not received this level of education, consideration should be given to allowing students extended school-year services or an additional year of public school education.

PROFESSIONALS

"At first it was chaotic and awful and a lot of time was lost as states, districts, and teachers tried to figure out what to do. This isn't a criticism; everyone just needed to figure out a whole new way. Now that things are up and running a little more, it is rewarding to do some work with students. However, it is clear that the impact of so much missed school will be significant. I do also feel like this situation has sparked creativity in our field and good things will come out of it, including possibly more connection and enjoyment with families."—*White female TVI*



PROFESSIONALS

There were 710 TVIs, 138 O&M specialists, and 180 dually certified professionals who reported that for the 2019-2020 school year they were employed. Table 8 provides data regarding employment type of the professionals. Most professionals (n=932) selected a single employer, but 93 professionals had multiple employers. Additionally, 120 professionals selected "other" as one of their employers, which included: government division employee, private school employee, and adult-service agency employee. Most professionals were employed full time; fewer than 10% of professionals were either part-time or contract employees. Table 9 reports the professionals' mode of service delivery. Most professionals provided services in multiple modes of service delivery (n=744), but 277 professionals provided services in multiple modes of service delivery. Seventy-seven percent of the professionals worked as itinerants and 14% worked on the campuses of specialized schools. Not surprisingly, more professionals were employed by school districts in itinerant positions. In both Tables 8 and 9, the total number of employees per category is larger than the sample size.

The number of school districts served by professionals varied with a mean of 2.53 (SD=2.19) for TVIs, a mean of 3.31 (SD=2.48) for O&M specialists, and a mean of 3.16 (SD=2.33) for dually certified professionals. The number of school buildings where professionals served varied with a mean of 6.85 (SD=4.70) for TVIs, a mean of 8.39 (SD=5.33) for O&M specialists, and a mean of 8.99 (SD=4.17) for dually certified professionals.



TABLE 8:

Frequency of Professional Setting by Professional Type

	Total	TVIs (n=708)	O&M Specialists (n=137)	Dually Certified Professionals (n=180)
Employer (n=1025)	43	6	12	4
Public School District	506	364	43	99
Cooperative	140	92	13	35
Specialized School—Campus	116	92	18	6
Specialized School—Outreach	59	43	5	11
Contractor Through Company	83	43	20	20
Self-Employed	105	45	29	31
Other	120	77	28	15

PROFESSIONALS

Although the researchers recognized that students with visual impairments are a heterogenous group, for the purposes of collecting and reporting the data, the professionals were asked to think about their students in three broad categories.

- Academic blind students. These are students who are primarily included in the general education classroom, whose primary literacy medium is braille, and who are able to read on or close to grade level.
- Academic low vision students. These are students who are primarily included in the general education classroom whose primary literacy medium is print, and who are able to read on or close to grade level.
- **Students with additional disabilities.** These are students who may spend part, if not most, of their day, in special education classrooms. They typically are two or more grade levels below nondisabled peers. Their educational programs are very individualized.

Using the provided definitions, professionals were also asked to think about the way in which they delivered services to each of their students.

- **Direct service students** refer to students who professionals meet with regularly to provide instruction in the ECC. TVIs likely adapt materials for these students as well as ensure they have what they need in their classrooms to succeed. O&M specialists provide service to address specific travel-related goals.
- **Consultative students** refer to students who professionals monitor or check in with periodically. Professionals may consult with the student and/or other members of the educational team.

TABLE 9:

Frequency of Mode of Delivery by Professional Type

Mode of Delivery (n=1021)	Total	TVIs (n=705)	O&M Specialists (n=137)	Dually Certified Professionals (n=179)	
Itinerant	794	516	112	116	
Resource Room	116	89	8	19	
Early Intervention/ Preschool	224	138	28	58	
Specialized School	145	105	25	15	
Other Including Private School	224	138	28	6	

Table 10 reports mean and standard deviation for the number of students on the caseloads of itinerant professionals. As some professionals reported, they delivered services in more than one mode (e.g., itinerant and resource room), all professionals who selected "itinerant" are included in Table 10. Although professionals had more direct service students than consultative service students on their caseloads, there was considerable variability in the range of students on the caseloads of professionals.

TABLE 10:

Frequency of Students Receiving Direct and Consultative Services from Itinerant Professionals

	TVIs (n=489)		O&M Specialists (n=95)		Dually Certified Professionals (n=159)	
	М	SD	М	SD	м	SD
Direct Service	10.43	7.62	15.21	11.55	11.97	6.69
	n=472			n=90		n=154
Consultative	8.44	10.89	4.10	4.60	7.88	10.89



Table 11 reports the percentage of students on professionals' caseloads for each of the student groups by student descriptive characteristic. Less than 10% of professionals' caseloads included children in early intervention while more than 75% of professionals' caseloads included school-age students. There was little variation in caseload composition across the three groups of professionals and in the student descriptive characteristics.

TABLE 11:

Percentage of Students on Professionals' Caseloads by Student Group

	TVIs (n=665)		O&M Specialists (n=119)			Dually Certified Professionals (n=171)			
	EI	PS	SA	EI	PS	SA	EI	PS	SA
Blind	6	11	83	5	11	84	9	13	78
LV	6	13	81	4	13	83	6	13	81
AD	8	16	77	4	15	81	7	16	77

Professionals were asked if the number of direct service students on their caseloads had changed because of the COVID-19 pandemic. For 203 of 643 TVIs, 40 of 106 O&M specialists, and 66 of 161 dually certified professionals, there was a change in the number of direct service students on their caseloads. Some professionals reported they had offered to work with students or family members and the family members had declined because they were overwhelmed; they did not have access to technology; or since no grades were associated with instruction, they wanted to opt out.

Some professionals also noted challenges with contacting students and family members and the shift to working with family members as they carried out the instruction for their child. Professionals reported delays in starting online instruction as schools and teachers shifted to remote-learning platforms. Some professionals were told by their administrators that they would no longer be able to provide direct service to their students. "I am not providing direct support to any [students] except those with the most significant vision needs (blind, academic braille-using students) during learn[ing] at home. For all others, I have checked in with family and/or staff, and I am available for troubleshooting issues as they arise or [to] disseminate information, suggestions, [and] videos for some."—*White female TVI*

Professionals were asked if the number of consultative students on their caseloads had changed as a result of the COVID-19 pandemic. For 105 of 634 TVIs, 17 of 106 O&M specialists, and 38 of 159 dually certified professionals, there was a change in the number of consultative students on their caseloads. The professionals reported ways in which services to their consultative students had changed, including for some students, who professionals had stopped seeing either because of the request of family members or a district directive. TVIs described how they provided consultative services including sharing information with family members and case managers or advocating with the administration to get students access to materials or equipment.

"Our classrooms [for students with additional disabilities] are operating on a schedule of 9 am-12 pm Monday through Friday. Some of the students that have complex needs are not attending due to [the fact that the] parents [are] working and [there is] no facilitator that knows how to work with the child or the student just has behaviors and [the] parents choose to not attend classroom sessions. My role with some of these students is on a consultative basis. I help support tactile communication and pictorial communication in formats that the student needs. I work very closely with the speech teachers in these classrooms. Some of the students do not have the appropriate communication platform in their home due to COVID and school closures."—White female TVI

TRANSITION FROM DELIVERING SERVICES PRIOR TO COVID-19 TO DELIVERING SERVICES DURING COVID-19

There was a short time frame during which schools and agencies were forced to make the switch from their traditional way of delivering face-to-face educational services to remote service delivery. Professionals were asked how much notice they were given by their administration of the switch. The shift came quickly with 81.57% of professionals given less than a week to prepare for the shift.

The professionals were provided a list of options their administration might have requested of them during the service delivery shift. They could select more than one option including:

- Preparing packets of materials for students, getting technology training, securing materials, etc., with less than 1-week notice (n=411)
- Finding they were no longer permitted to go on site (n=410)
- Preparing packets of materials for students, getting technology training, securing materials, etc., with 1-2 weeks' notice (n=349)
- Being allowed to go on site on an as-needed or limited basis (n=165)
- Being required to continue to go to their office or school site even though the schools had closed (n=8)

Many of the professionals shared comments about how the change in service delivery was affecting both them and their students. A problematic issue raised by many professionals who served multiple school districts and/or buildings was the conflicting demands placed on them by administrators and the number of online tools they were required to use. Some administrators were not allowing professionals to communicate with family members, provide materials to students, or access materials needed in school buildings that had been closed. Other administrators were requiring educators to use specific platforms for online instruction that were not accessible to students with visual impairments. Professionals reported that some administrators were requiring a certain number of communication contacts with family members each week while others were requiring that only one professional from the educational team be in contact with the family. Consequently, TVIs and O&M specialists who wished to initiate communication with family members were not allowed to do so.

"Some districts do not have clear policies in place, while other agencies already had policies in place and were committed to keeping teachers aware. It is very much up to the itinerant to advocate for themselves within each school district....Some district teachers have joined my online teaching to see how I teach since they have not had training due to the short notice of their school 'soft closure.' Different school districts are using different Internet platforms, therefore, needing me to learn the different platforms in addition to providing materials to students and families and planning lessons or coaching strategies."—*White female TVI*

There was no guidebook for professionals to consult as they made the quick transition to delivering services during the COVID-19 pandemic. By nature, special educators are problem-solvers and resource users, so it is not surprising that the professionals who completed the survey used multiple ways to prepare themselves to continue educating their students. When given a list of eight possible options, 872 professionals on average reported they were doing 3.59 (SD=2.07) of the options. The ways in which professionals prepared for the transition included:

- Seeking out online resources to share with students and family members (n=749)
- Reaching out to other professionals (e.g., online meetings, Facebook groups) to find out how they were meeting the needs of their students (n=635)
- Seeking out free resources to share with students and family members (e.g., ObjectiveEd¹⁷, Vispero offering JAWS and ZoomText for home use¹⁸) (n=625)
- Being required to contact family members to find out what technology they had at home (n=411)
- Choosing to participate in an offered training on how to teach online (n=376)
- Choosing to contact family members to find out what technology they had at home (n=372)
- Signing up for the Virtual ExCEL Academy¹⁹ for themselves, their students, and/or their students' family members (n=198)
- Being required to attend training on how to teach online (n=146)

¹⁷https://www.objectiveed.com/

¹⁸https://support.freedomscientific.com/About/News/Article/208 ¹⁹https://www.aph.org/join-virtual-lessons-for-at-home-education/

"Since we were given so little notice and because the rules keep changing about what we need to do/are allowed to do, this has been extremely frustrating. I'm concerned that my students are not getting what they need from this time and in some cases will not recoup those lost skills." *—White female TVI*

In open-ended responses, professionals described their efforts to reach out to family members to provide support, collaborate with other educational team members, prepare materials and resources for students to use at home, and put in place mechanisms to support their students' online education (e.g., setting up Google Classroom, learning to use Zoom).

DISTRICT POLICIES IMPACTING PROFESSIONALS' ABILITY TO SERVE THEIR STUDENTS

Professionals were asked to explain how, if at all, district policies impacted their ability to serve their students. With so many districts throughout the United States and Canada, it was not at all surprising to have professionals share a wide array of responses to this question.

Of 943 professionals, 31 reported that they were not serving students when they took the survey (TVIs=12, O&M specialists=12, dually certified professionals=7). The reasons they gave for not serving students varied and included the fact that districts and/or teachers were in the process of transitioning to remote learning for all students/family members. Students were hard to reach to schedule instruction and because states classified teachers as nonessential employees, they were not able to work.

"We were deemed nonessential employees. I am not happy with the students not receiving services because many of the students are on the autism spectrum, and there is a high chance that they are traumatized by the change. I am also concerned that the students will regress because they are not receiving services in home."—*Female, dually certified professional*

STUDENTS AND FAMILIES WHO COULD NOT BE REACHED

Although 332 professionals were able to contact all their students or students' family members, unfortunately, there were professionals who reported that there were students and family members who could not be reached. Three hundred sixty TVIs, 73 O&M specialists, and 99 dually certified professionals could not contact at least one student or student's family member on their caseloads. Four hundred eighty-seven professionals reported that they were continuing to try and contact their students, 27 reported that they had tried without success and had ceased trying, and 18 professionals were told by administrators to stop trying to contact their students. The professionals had concerns about not being able to contact their students and their family members.

"The concern is that the families are overwhelmed. Perhaps they have not been responding to teachers because they are embarrassed that they have not been able to do the work. Families are currently being bombarded with communications from dozens of school professionals at a time....While I would love to be able to connect with families right now, I have chosen to limit adding to the bombardment of communications at this time for families who are unresponsive."—White female TVI

STUDENT PROGRESS AND PREPAREDNESS FOR THE 2020–2021 SCHOOL YEAR

Thinking about the students on their caseloads, professionals were asked to provide their level of agreement with a statement about student progress. Table 12 reports their ratings. Note that the "n" in the table refers to the number of professionals providing the rating and not the number of students. Many of the ratings provided by professionals fell between 2.00 and 3.00, indicating that responses fell between "Disagree" and "Neither agree nor disagree." Professionals believed that their students with additional disabilities were making less progress than their academic students. Table 13 reports the level of agreement professionals had with a statement about how ready students will be for the 2020–2021 school year. As with Table 12, the "n" represents the number of professionals rating the statement. Professionals believed that most of their students would not be ready for the 2020–2021 school year, though their students who were academic learners would be slightly better positioned for the start of the new school year than students with additional disabilities.



TABLE 12:

Professionals' Ratings of Statements About Their Students' Progress

Student Category	n	М	SD		
My students are continuing to make progress in the same way they would if there had not been a change in where and how my students attend school.					
Direct Service Student, Academic	602	2.68	1.20		
Direct Service Student with Additional Disabilities	603	2.29	1.03		
Consultative Service Student, Academic	559	3.19	0.96		
Consultative Service Student with Additional Disabilities	548	3.62	0.95		

TABLE 13: Professionals' Ratings of Statements About Their Students' Preparation for the 2020-2021 School Year

Student Category	n	М	SD			
Because of the way services are being delivered, I believe the majority of my students will be ready for the next school year.						
Direct Service Student, Academic	599	3.03	1.04			
Direct Service Student with Additional Disabilities	605	2.71	0.98			
Consultative Service Student, Academic	553	3.27	0.86			
Consultative Service Student with Additional Disabilities	551	2.87	0.91			

RESEARCH REPORT I ACCESS AND ENGAGEMENT

BALANCING ONE'S PROFESSIONAL AND PERSONAL LIFE

Although much of this report focuses on the education of children with visual impairments from early intervention through transition, the effect on the TVIs, O&M specialists, and dually certified professionals who serve them cannot be overlooked. Of 633 professionals, 232 (169 TVIs, 21 O&M specialists, and 42 dually certified professionals) reported that they were responsible for the education of their own children or grandchildren during the COVID-19 pandemic. Balancing education of children in the home and work responsibilities was challenging for participants. Many professionals believed they were putting their students' education before the education of children in their home.

"[Educating my own children and my students] is near impossible! I am trying to set specific hours I support my children's learning and hours I support my students. However, it is not always feasible. I am spending a lot of time working from 8-12 at night to create lesson plans, materials, etc. for students [in order] to provide for more time working with my children during the day."—*White female TVI*

There were professionals who spoke of perseverance and hope. Some participants felt they were getting a handle on working from home as they developed time management strategies and established routines for themselves and their own children.

"[Things I am doing include] keeping good time management (developed a schedule after a very unsuccessful first week), setting realistic expectations for everyone, enlisting and sharing responsibilities with other family members and colleagues, allowing room for mistakes (both personally and professionally), educating myself and others in order to adapt to this change, strong faith, and positive thinking."—*Hispanic or Latina female TVI*

TEACHERS OF STUDENTS WITH VISUAL IMPAIRMENTS

"Many problems are simply exacerbated by distance learning. Those with visual impairments need in-person and often hands-on instruction. It takes a village, and many students don't have a village to support them."—*White female TVI*



There were 710 professionals who reported that they only worked in the role of TVI during the 2019-2020 school year and 180 dually certified professionals who worked both as a TVI and an O&M specialist during this school year. Unless otherwise specified in this section, the researchers have opted to combine the data of these two groups and refer to these 890 professionals as TVIs.

DELIVERING TVI SERVICES OUTSIDE A SCHOOL BUILDING

Across the United States and Canada, there is variability in how TVIs were providing services in spring 2020 during the COVID-19 pandemic and what their administrators were or were not allowing them to do. From a list of four choices, TVIs were asked to select all the ways in which they were serving students and their families. At least one choice was selected by 765 TVIs. TVIs were:

- Given the option to decide how they provided services (e.g., delivering packets, phone calls, meeting online) (n=560)
- Given the choice about how much service time to provide each student on their caseload (n=248)
- Told they had to continue to provide the same number of minutes of service to their students as specified on each student's IEP (n=122)
- Only providing support to their students in their general education classes (n=94)

The TVIs were asked what percentage of their direct service students and/or their family members they were currently meeting with online. The question did not refer to service hours on the IFSP or IEP. Of 890 TVIs, 237 TVIs reported that they provided services in more than one mode (e.g., as an itinerant and early intervention/preschool teacher). Table 14 presents the data by setting in which the TVIs worked. Between 10% to 15% of TVIs were not meeting with any of their students, while 50% to 60% of TVIs were meeting with more than 50% of their direct service students online. Some TVIs provided reasons why they were not meeting with their students and/or family members online. These included the fact that the district did not allow for online meetings, students and family members did not have the technology to meet online, and family members could not be reached once the school building closed.

TABLE 14:

Percentage of TVIs by Setting, Who Reported They Were Meeting Online with Direct Service Students

Percentage of Direct Service Students	Itinerant (n=618)	Resource Room (n=91)	Specialized School (n=102)	Early Intervention/ Preschool (n=179)	Private School (n=33)	Other (n=58)
No students	8	10	17	6	15	14
Less than 25% of students	20	10	12	18	20	14
26% to 50% of students	18	24	10	8	13	19
51% to 75% of students	18	16	18	25	18	10
76% to 99% of students	19	16	18	24	18	10
All students	17	24	25	19	16	33

The TVIs reported that using technology to connect with their students and their family members was often positive. The technology allowed them to see how their students were progressing, share resources with family members, and provide family members with ideas for instruction. For academic students, technology allowed the TVIs to ensure students had the materials they needed to participate in their classes, to answer questions, to introduce new material, and to troubleshoot with students and/or family members. However, interactions via technology also caused some TVIs to express frustration and/or concern for their students.

"The human touch is so important and difficult to duplicate with tech[nology]. The importance of relationships between educators and their students' parents is huge and needs to be nourished, especially after this."—*White female TVI*

ACCESS TO MATERIALS

Both teachers and students must have access to materials for students to actively participate and be engaged in learning. The TVIs were asked if they had all the materials they needed at home to serve their three types of direct service students. Table 15 shows the percentage of TVIs who reported that they had the materials they needed to meet their students' needs. The number of TVIs providing responses varied, and therefore is not included in Table 15. In all employer categories, more TVIs reported having materials for their academic students with low vision compared with students who were blind or had additional disabilities.

TABLE 15:

Percentage of TVIs Who Reported They Had All the Materials Needed to Support Students

EMPLOYER	Blind Academic Students	Academic Low Vision Students	Students With Additional Disabilities
Public School District	48	71	54
Cooperative	47	52	48
Specialized School—Campus	52	68	56
Specialized School—Outreach	59	86	68
Contractor Through a Company	50	79	63
Self-employed	44	73	51
Other	53	63	60

TEACHERS OF STUDENTS WITH VISUAL IMPAIRMENTS

A limitation of the survey was that TVIs were not also asked if their students had all the materials they needed to take part in education. When asked to describe what materials were not available to them at home to support their students who were blind and participate in academic curriculum, TVI responses primarily focused on materials to prepare hard copy braille for their students, materials to adapt academic subject content, and hands-on learning materials their students did not have at home. For example, TVIs reported that their students did not have access to hands-on manipulatives for science or math instruction (e.g., APH products such as the Draftsman or materials in Math Builders kits).

"At the school, if a particular lesson required the use of an APH item (say, the fractions kit), I would pull it off the shelf and use it. Most of that material is still at the school and even if we could pick it up, the families neither have the space or inclination to try to keep up with all of that 'stuff.' Lessons are put up with no lead time to adapt and in week 4 we are still trying to work out the logistics."—*White female TVI*

Materials TVIs reported they needed to serve their students with low vision included the tools their students used to access print such as computers with screen magnification software, video magnifiers/CCTVs, reading stands, and lighting. Some TVIs did not have access to a copy machine so they were not able to enlarge materials provided by classroom teachers for their students. TVIs reported that the Chromebooks provided to some of their students by the school district were not accessible to the students because they lacked the features that allowed their students to access content on the screen. TVIs worked to find ways in which they could support their low vision students who did not have needed accommodations at home.

"The students and I do not have access to their low vision devices so we cannot do the lessons we normally would. I am creating some materials and emailing them or doing a porch drop for those who have no access to technology....I am joining...[others]...in their digital classrooms to see how they are doing and offer suggestions to the staff."—*White female TVI*

TEACHERS OF STUDENTS WITH VISUAL IMPAIRMENTS

When asked about materials they did not have at home that they needed to serve their students with additional disabilities, TVIs reported that many of the materials they needed were designed for a specific student (e.g., experience books, calendar systems). They described augmentative or alternative communication tools students did not have at home such as switches. In some cases, TVIs were able to send home these materials ahead of time, mail them, or drop them off to the family. Many TVIs reported that online instruction was not appropriate for their students with additional disabilities who required one-on-one hands-on instruction.

"Working with students who have multiple impairments requires one's 'presence.' I cannot do that online. Some of my students struggle to maintain alertness. We typically use materials that promote orientation and on good days, activity. IEP objectives have to be tweaked to the point they no longer resemble the original. Sorry—you hit a sore spot."—*Female TVI*

METHODS USED TO MEET STUDENTS' EDUCATIONAL NEEDS

TVIs are trained to provide their students individualized instruction and support based on their visual, tactile, and auditory abilities; their IFSP or IEP goals; the accommodations they need to access instructional materials, and their learning style, among other characteristics. The TVIs were provided an extensive list of ways in which they could meet their students' needs. TVIs selected between 1 and 21 options with a mean of 5.20 (SD=4.78). The 10 options selected most by TVIs include:

- Sending resources to students' family members (e.g., websites, videos, blog posts) (n=454)
- Calling on the telephone and speaking with family members (n=448)
- Texting with family members (n=398)
- Meeting online with family members (n=370)
- Meeting online (e.g., through Zoom) with students and/or family members to watch students complete a task (e.g., reviewing a tactile daily schedule) (n=345)
- Having students complete TVI-created assignments that target students' IEP goals (n=289)
- Preparing braille materials for students (n=267)

- Sending family members videos to watch with their child (e.g., family-friendly videos for a child with CVI, how to fold money) (n=254)
- Meeting online with students to provide them access to materials used by their classroom teachers (n=237)
- Meeting with students to review assignments that their classroom teachers have provided (n=236)

WORKING WITH GENERAL OR SPECIAL EDUCATION CLASSROOM TEACHERS

Four hundred eighty-five TVIs reported that they had students who were currently attending general or special education classes online. Four hundred fourteen TVIs reported having at least one challenge with classroom teachers. Their responses included that classroom teachers were:

- Using websites, apps, or online programs that were not accessible to students (n=200)
- Recording videos that were not accessible to students (n=91)
- Not having time to meet with the TVI to discuss accommodations needed by students (n=72)
- Not providing students work or only providing "busy work" (n=47)
- Focusing instruction, as per administrator directive, on students without IEPs or 504 Plans (n=11)

In addition to selecting one of the provided responses, when asked what other challenges they were experiencing related to classroom teachers, 228 TVIs shared details about how they were working to ensure that their students had success in their general or special education classes.

"Trying to help my academic blind students keep up with work when all teachers are using Google Classroom in different ways and much of the work given is in inaccessible forms has been very challenging. I worry most about the students with multiple disabilities because my instruction needs to be hands on. But so many have health issues, there is really no way around this." *–White female TVI*

SUPPORTING THE EDUCATION OF PRE-BRAILLE OR BRAILLE READERS

TVIs often meet daily with students learning braille to provide individualized instruction as specified through their IEP goals. Young children who are in the emergent literacy stage need systematic instruction to build both skills with the code and the ability to read and write (Chen & Dote-Kwan, 2018)²⁰. As children acquire braille literacy skills, it is imperative that they receive appropriate instruction and adequate time with the braille code to yield the most positive outcomes for their future (Penava et al., 2017)²¹. TVIs incorporate time into their weekly schedule to instruct lessons, adapt printed material, and support students to ensure they can access the curriculum.

Four hundred thirty-five TVIs reported that they served at least one student who was a pre-braille or braille reader. Thirty-two TVIs indicated that due to COVID-19, they were no longer allowed to prepare braille materials for their students. When asked how they were supporting their braille readers during COVID-19, 417 TVIs selected at least one option. TVIs were:

- Preparing braille materials and either delivering them to students' homes or having a family member pick up the materials (n=138)
- Preparing braille materials and mailing them to students' homes (n=160)
- Enlisting the help of others to assist in the preparation of braille materials (n=103)
- Preparing braille materials and sharing them electronically with students (n=96)
- Having students prepare their own braille materials as someone read aloud to them information that was not accessible (n=61)

It was clear from the comments of the TVIs that some of their students had access to braille materials while other students did not. TVIs were also often unable to provide hard copy braille to their students because they did not have access to an embosser and/or braille translation software, were not allowed to take materials to students' homes, or their students lived at a distance from them.

"Braille provision and instruction in other tactile methods of learning, like abacus, has been quite challenging. My students using braille are averse to braille displays and strongly prefer paper braille."—No ethnicity or gender provided, Dually certified professional

²⁰Chen, D., & Dote-Kwan, J. (2018). Promoting emergent literacy skills in toddlers with visual impairments. *Journal of Visual Impairment & Blindness*, *112*(5), 542–550. https://doi.org/10.1177/0145482X1811200512

²¹Penava, V., Bilić Prcić, A., & Ilićić, L. (2017). The influence of braille literacy programme length on frequency of braille usage. *Hrvatska Revija Za Rehabilitacijska Istraživanja, 53*(Supplement), 152–162.

RECOMMENDATIONS

Teachers of students with visual impairments serve a wide range of students both in age and ability. Most work as itinerant teachers going from school to school and often from district to district. In their role as TVIs, they are responsible for conducting assessments, two of which are specific to their professional role, the functional vision assessment and the learning media assessment. They are responsible for developing IFSPs for children under 3 years of age and IEPs or 504 plans for all other children on their caseloads. Supporting students in their general or special education classes is a cornerstone of their responsibilities, requiring them to produce materials, make accommodations, and teach skills in the ECC. To do their job effectively, TVIs need access to resources that enable them to support their students' learning. The quick shift in how education is being delivered during the COVID-19 pandemic has caused challenges for TVIs. Administrators and policymakers can work with TVIs to develop strategies that will promote the success of students with visual impairments including those with additional disabilities and deafblindness.

Supporting Families

- Many families have had to make difficult decisions due to COVID-19. These range from deciding if they can take time away from work to meet with educational team members, whether their child should attend general education classes online when the materials are not accessible and their child is frustrated, or whether the discontinuation of educational services or therapies can be remedied through contacting administration and explaining their child's needs.
- TVIs should acknowledge the realities of current and diverse home life situations. They must set appropriate but realistic expectations and goals for families and students that meet families where they are.
- Many families benefit from meeting other families whose children also have visual impairments and/or additional disabilities or deafblindness. During the unique situation COVID-19 has created, many families feel unsure and alone. TVIs can facilitate the introduction of families so they can support each other and share resources.
- Most family members are not familiar with the assistive or augmentative technology their child uses at school. They need instruction, support when there are problems, and suggestions on how to encourage their child in using the technology in the home and/or in the online environment.

Maintaining One's Health and Professional Skills

- TVIs are dedicated professionals who were working hard and spread thin prior to the COVID-19 pandemic. It is important that they and others are permitted time and opportunities for self-care. This may include ensuring that TVIs and all educators/ service providers get enough sleep, monitoring their mental health, and ensuring they obtain necessary healthcare.
- There are many ways for professionals to share and learn from each other. Websites, such as Paths to Literacy²², collaborative and informative gatherings, such as the weekly TSBVI Outreach Coffee Hour²³, and additional professional development opportunities are important and vital resources that are continually needed in the profession.

Having Resources and Tools to Provide Accessible Instruction

- Students with visual impairments who are braille readers must have access to both hard copy (paper) braille and electronic braille. This often necessitates that someone prepare the braille materials (e.g., a braille transcriber, paraprofessional). Those preparing braille must have the tools they need to do so efficiently.
- Without accessible technology, curricula, and learning materials, students with visual impairments will not be able to progress in their learning. It is imperative that students, professionals, and family members have accessible materials in all facets of instruction.
- Many students are experiencing social isolation as a result of COVID-19. TVIs can bring students together online or over the telephone. Planning times when students can engage with others is important for their mental health. Professionals must provide a free, private, safe, and accessible venue for such meetings.

Considerations for Administrators

- Recognizing that some students may not meet all their IEP goals in the 2020–2021 school year and/or TVIs may not be able to deliver all the hours of service, administrators should plan for services to be delivered to students during the summer through Extended School Year (ESY).
- If administrators become aware that there are students or professionals whose tools and materials are in a locked school building or office, they need to provide access to the building so those tools and materials can be retrieved and used.

²²https://www.pathstoliteracy.org/²³https://www.tsbvi.edu/coffeehour

TEACHERS OF STUDENTS WITH VISUAL IMPAIRMENTS

- Administrators must allow for TVIs to arrange for students to get materials, such as hard copy braille needed to access a class or a communication book developed for the student. Not all TVIs will have the time, willingness, and/or transportation to deliver materials to a student's home. Options need to be provided to families and professionals such as allowing families to pick up materials from a centralized location, delivering materials via school bus, or mailing of materials.
- Administrators must ensure all members of the educational team are available to students during the time when instruction is not occurring in brick and mortar buildings. This includes the braille transcribers, for example, who prepare braille materials for students, or intervenors who support deafblind students by facilitating their communication and assist them in understanding what is happening around them.
- Administrators should allow time for educational team members, including family members and the student when appropriate, to meet to problem-solve, plan, and develop strategies so the student can fully participate in all areas of instruction. During meetings, team members can clearly delineate needed responsibilities and the individual(s) who are tasked with carrying them out.
- To ensure that all IFSP and IEP goals are monitored and progress documented, administrators must work with TVIs and other educational team members to set up realistic, simple, accessible methods to document student progress. They must ensure their staff do not place an unnecessary burden on families and students.
- Students who typically have one-on-one assistance during the school day generally are not going to be able to attend online classes without some level of family support. In some instances, this is not possible as family members have work or childcare responsibilities. Administrators, TVIs, and other educational team members must work together to develop creative solutions in these situations.
- Administrators must make digital accessibility a priority. Instructional technology, learning platforms, and materials must be accessible to students with visual impairments as well as the rest of the student population with and without disabilities. Nonvisual accessibility should be a priority. Additionally, administrators should provide general education teachers with training on accessibility, such as how to create accessible videos in order to deliver services to students and their families more appropriately.
- Administrators should work with TVIs and other educational team members to ensure that professional development opportunities are available and appropriate to new teaching practices, including online and hybrid instruction.

 Administrators and TVIs must work together to develop guidance on how evaluations and assessments, including the functional vision assessment and the learning media assessment, should be completed during the COVID-19 pandemic. Dr. Yue-Ting Siu of San Francisco State University and colleagues have developed the document *Comprehensive Evaluation of Blind and Low Vision Students During COVID-19: A Guidance Document*²⁴ that can serve as a blueprint for other groups.

Considerations for Policymakers

- Policymakers must ensure that students with visual impairments are not forced to leave school at the end of the 2020–2021 school year because of their age without receiving the services they are entitled to on their IEPs. If goals have not been met and/or service time has not been provided, students should be able to receive ESY services or continue into the 2021–2022 school year if the educational team determines this is in the student's best interests. The same considerations will need to occur as the end of the 2020–2021 school year approaches.
- In evaluating the impact of COVID-19 on the education of students with significant disabilities or deafblindness, policymakers should allocate additional funding and service time to address any regression in skills students have experienced as a result of the COVID-19 pandemic.
- Assistive and augmentative technology provided at school must be available to students at home. Policymakers must ensure that funding and policies are in place to provide students with the necessary tools they need in order to access and participate in their education.
- It is not reasonable to expect every student, family, and professional to have Internet access that allows them to fully participate in all aspects of education.
 Funding and availability of Internet is essential in our education system.
 Policymakers must allocate sufficient funding to ensure all students can access online education and resources.
- There will be some professionals who are unable to maintain their caseload for many reasons including personal choice to leave their job as a TVI, health concerns for themselves or a family member, or lack of support from administration.
 Policymakers must have a plan in place to ensure qualified individuals are available who can step in and maintain the students' educational program.

²⁴https://docs.google.com/document/u/1/d/1IZsOFKIJrLcHKRzVQVSkPRPII26iezV-fcfvQZQRIKc/copy

ORIENTATION AND MOBILITY SPECIALISTS

"It has been very frustrating. It has taken a great deal of time to learn how to work remotely. I have enrichment activities for O&M students that can participate independently but we can only do that for so long before it simply becomes 'busy work.' I am trying to be sensitive to all that is required of academic students and their parents. Many of my younger students require significant supervision for outdoor travel. Until just recently families were not leaving their yards."—White female O&M specialist



ORIENTATION AND MOBILITY SPECIALISTS

There were 138 professionals who reported that they only worked as O&M specialists for the 2019-2020 school year and 180 dually certified professionals who worked both as a TVI and an O&M specialist during this school year. Unless otherwise specified in this section, the researchers have opted to combine the data of these two groups and refer to these 318 professionals as O&M specialists.

DELIVERING O&M SERVICES OUTSIDE A SCHOOL BUILDING AND TRAVELING TOGETHER IN THE COMMUNITY

The O&M specialists were provided an extensive list of ways they could provide support and services to their students during the COVID-19 pandemic. They were asked to select as many options as applied to them, with 192 O&M specialists selecting between 1 and 17 options. There was a mean of 3.94 (SD=4.51) options selected. The 10 most common methods used by O&M specialists were:

- Sending resources to students' family members (e.g., websites, videos, blog posts) (n=132)
- Calling on the telephone and speaking with family members (n=118)
- Providing assignments created by the O&M specialist that targeted IEP goals and having students complete them (n=113)
- Meeting online with family members (n=108)
- Texting with family members (n=106)
- Sending family members videos to watch with their child (e.g., cane technique) (n=79)
- Having students compare functionality of different map applications (e.g., Google Maps, Apple Maps) (n=71)
- Meeting with students online and looking together at websites and apps (e.g., Google Earth) to increase students' understanding of communities (n=67)
- Providing students or family members activities to build students' monocular skills (n=59)
- Building students' understanding of numbering systems (n=43)

"I think [working as an O&M specialist] is one of the most difficult jobs to have as a service provider. We have such a wide range of students and trying to ensure that they have online access to the curriculum is overwhelming." *—White female O&M specialist*

The 318 O&M specialists were asked about online service delivery, including the percentage of online services they were providing to students and/or their family members. One hundred thirteen O&M specialists reported that they provided services in more than one setting (e.g., as an itinerant and in early intervention/preschool). The question did not refer to service hours on the IFSP or IEP.

Table 16 presents the data, by setting, in which the O&M specialists worked. Six percent of itinerant O&M specialists were not serving any students, while 44% were meeting online with 50% or more of their direct service students. Some O&M specialists provided reasons they were not meeting with their students and/or family members online, including the fact that some districts did not allow for online meetings, students and family members did not have the technology to meet online, and family members could not be reached once the school building closed.



TABLE 16:

Percentage of O&M Specialists, by Setting, Who Reported They Were Meeting Online with Direct Service Students

Percentage of the Direct Service Students That O&M Specialists Were Meeting Online	Itinerant (n=86)	Resource Room* (n=8)	Specialized School (n=24)	Early Intervention/ Preschool (n=22)	Private School (n=4)	Other (n=11)
No students	6	0	4	0	0	0
Less than 25% of students	29	25	21	23	0	9
26% to 50% of students	21	37	22	23	25	28
51% to 75% of students	15	13	12	23	25	9
76% to 99% of students	16	25	29	22	25	38
All students	13	0	12	9	25	18

*The O&M specialists group included 138 O&M only professionals and 180 dually certified professionals.

EARLY INTERVENTION CHILDREN, PRESCHOOLERS, AND STUDENTS WITH ADDITIONAL DISABILITIES RECEIVING 0&M INSTRUCTION

"[The change due to COVID-19] has made it more difficult to provide services in the same way, especially for students with multiple disabilities who require much repetition and hands-on instruction."—*White male O&M specialist*

One hundred fifty O&M specialists reported serving students in early intervention and preschool settings, as well as students with additional disabilities. One hundred forty-five O&M specialists identified ways they were working with these students including:

- Giving family members suggestions on how they can encourage the child to explore the environment (n=81)
- Encouraging family members to point out auditory sounds (n=75)
- Giving family members ideas on how to use descriptive language within routine environments (n=72)
- Giving family members ideas for encouraging skill development while using toys (n=69)
- Suggesting ways family members can encourage sound localization (n=67)
- Sharing terms that family members can use to encourage skill development, for example, "sweep your cane" (n=60)
- Having family members read stories that emphasize concepts (n=53)
- Having family members interact with the child using songs and/or play to emphasize concepts (n=52)
- Sharing cane techniques that family members could have the child do with an ambulatory device such as a walker (n=42)
- Asking family members to work on self-determination skills (n=37)

TEACHING TRAVEL ON THE SCHOOL CAMPUS

"My students are missing their time at school and saying that they are allowed to be much more independent at school. They are bored at home and needing more guidance from me and other teachers as to what kinds of things to do."—*Female dually certified professional*

One hundred twenty-nine O&M specialists indicated that they had at least one student on their caseloads with campus travel goals on their IEPs. Of these O&M specialists, 123 reported they were assisting their students to build these skills during the pandemic by:

- Giving family members ideas for practicing body concepts, visual concepts, or other skills (n=72)
- Having students create and share a map of the school or routes (n=43)
- Providing family members examples of different types of maps they can use to assist the child in creating a map of a familiar location (n=40)
- Having family members develop a map of the home (n=34)
- Using social stories (n=20)

In addition, 42 O&M specialists shared other activities they were doing with their students, including meeting with students and having them verbally describe routes, reviewing schedules with students and the location of classrooms, and discussing with students the location of landmarks in relation to classrooms.

TEACHING NEIGHBORHOOD/RESIDENTIAL TRAVEL

"Many of my students were traveling in residential areas or being introduced to/developing cane skills which I feel requires hands-on or direct supervision for safety purposes."—*White female O&M specialist*

ORIENTATION AND MOBILITY SPECIALISTS

Of the 318 O&M specialists, 149 reported they had at least one student on their caseloads learning neighborhood/residential travel skills.

One hundred forty-three O&M specialists reported how they were assisting their students to build these skills during the pandemic by:

- Providing family members ideas to practice concepts, such as comparing a square to a residential block (n=79)
- Having students create and share a map of the students' home neighborhood (n=62)
- Providing family members pictures or examples to use when helping children develop a neighborhood map (n=44)
- Asking family members to assist children to develop a neighborhood map (n=35)
- Using social stories (n=22)

Forty-seven O&M specialists shared other ways in which they were helping their students build neighborhood/residential travel skills. These included having students use apps from Objective Ed²⁵, having students listen to Homebound for Adventure podcasts²⁶, and designing activities to have students work on skills to prepare for community travel. One of the most creative ways an O&M specialist was working on neighborhood travel skills was through a game she had created, as described in the following quote.

"I [have] enjoyed creating meaningful activities the students can do by themselves and feel successful completing. The 'Car-Stalker O&M [Specialist]' has been hugely successful. I provided a satellite map of the student's block.... I instructed the student and a parent which part of the route we would address....[I met the student and parent in my car outside their home with the student wearing a headset and connected to me via phone.] As the student walked the route, I instructed, observed, provided feedback, and collected data!"—White female O&M specialist

²⁵https://www.objectiveed.com/²⁶https://homeboundforadventure.podbean.com/

TEACHING BUSINESS/COMMERCIAL TRAVEL

"O&M [instruction involves] a lot of hands-on, teachable moments, and feelings. O&M goals cannot be met virtually. Especially in the city schools where movement is so important. Trying to get students who are visually impaired or blind interested in talking, listening, or making things without my assistance has been difficult. Their sleep schedules are very messed up. Technology is all over the place along with Internet reliability. They get bored fast and trying to stay with the goals in their IEP is not realistic." *—White female O&M specialist*

One hundred seven O&M specialists reported that they had at least one student on their caseload learning to travel in business or commercial environments. One hundred one O&M specialists reported how they were assisting their students to build these skills during the pandemic by:

- Asking students to design routes in unfamiliar environments (n=59)
- Asking students to plan routes in familiar commercial/business environments (n=57)
- Having students use Google Earth or another map tool to analyze intersections (n=54)
- Having students draw or create and then share a map of the business/commercial area (n=33)
- Having students make a video of themselves using their cane or other tools and then share and discuss it with the O&M specialist (n=13)
- Having students watch a video of someone demonstrating a technique (e.g., traveling through an airport) and analyze the video content (n=24)

O&M specialists described other activities they had their students complete, including having students identify characteristics of intersections from online images and apply for a fare reduction card.

TEACHING TRAVEL USING PUBLIC TRANSIT OR RIDESHARE SERVICES AND/OR EXPLORING LOW VISION DRIVING

"The most challenging aspects of providing O&M services is coming up with ideas where liability will not play a role when giving advice to parents." *—White female O&M specialist*

Due to COVID restrictions, IEP goals addressing public and shared transportation were especially challenging. One hundred four O&M specialists had students who had IEP goals that included developing skills in traveling by public transit, rideshare services, and/or exploring low vision driving. Ninety-nine O&M specialists reported that they were assisting their students to build these skills during the pandemic by:

- Having students compare the costs of different forms of travel (n=52)
- Guiding students to learn about paratransit and if they might qualify (n=34)
- Having students review maps and use these as they role played scenarios, for example, interacting with employees (n=24)
- Designing role-play scenarios for students to use to practice travel skills (n=23)
- Having students compare layouts and amenities in airports, bus stations, etc. (n=16)
- Requesting students to explore the costs of low vision driving (n=15)
- Having students research low vision driving requirements (n=14)
- Asking students to research regulations (n=7)

RECOMMENDATIONS

O&M specialists teach a unique set of skills to students with visual impairments from infancy through adulthood. Each student's O&M goals are individually designed to promote their ability to learn to travel safely, gracefully, and efficiently. From body awareness to home, school, and then community travel, O&M specialists spend much of their instructional time with their students engaged in the development of travel-related skills. The quick transition from brick and mortar school buildings to virtual instruction that prevents hands-on learning has challenged O&M specialists, administrators, and policymakers in considering how to deliver this hands-on service during the COVID-19 pandemic.

Supporting Families

- In most cases, the COVID-19 pandemic has caused families to experience significant stress. Like other educational team members, O&M specialists need to work to strengthen communication with families, support families as appropriate with their priorities, and provide resources that will enable families to help their child continue to develop during these challenging times.
- Family members may not have a strong awareness of their child's O&M goals or where in the learning sequence their child is with mastering a goal. O&M specialists can schedule meetings with family members and students, when appropriate, to review progress towards their goals, and develop relevant strategies to implement so the student continues to work towards mastery of O&M goals.
- Because most family members are sighted, they may not be aware of the many opportunities available within the home, neighborhood, or broader community for their child to develop O&M skills. O&M specialists can support families to incorporate O&M learning opportunities into daily routines. For example, a trip to the mailbox or a walk around the block present learning experiences for many students.

Promoting O&M Instruction and Supporting Students

 Prior to COVID-19, O&M specialists were often challenged to explain their discipline and its importance to families, educators, and administrators. During COVID-19, educating others about the importance of this discipline is paramount.
 O&M specialists can schedule virtual in-services, share resources that explain the discipline and skills the students are learning, or have their students design presentations to inform their family, educational team, and others about the O&M skills they are learning.

ORIENTATION AND MOBILITY SPECIALISTS

- Recognizing that family members are not trained professionals, O&M specialists must be strategic when they involve them in coaching the student. It is the responsibility of the O&M specialist to provide clear and consistent modeling of O&M skills that are appropriate for the family to reinforce with their child.
- The nature of COVID-19 has many families, students, and professionals feeling isolated and potentially having mental health challenges. O&M specialists often get to know their students well because they typically work one-on-one with students. If they note that a student is having mental health challenges, they should document their observations and discuss them with a family member and/or educational team members, so a plan can be implemented to support the student.
- O&M specialists may wish to bring a group of students together virtually so they can socialize in addition to working on O&M goals that may be similar. For example, a group of high school students who are each preparing to attend college can come together for a lesson on how one might orient oneself on a college campus.

Considerations for Administrators

- Administrators must recognize that although O&M is a related service, it is an essential service for students with visual impairments. O&M instruction is equally as important for students as instruction in academic subjects.
- Allowing O&M specialists the time to research methods of service delivery and to collaborate with other O&M specialists to explore options is necessary. Across the United States and Canada, O&M specialists and administrators are working together to explore options that ensure safety, liability protection, and implement best practices for instruction.
- Liability is a concern for O&M specialists since the skills they are teaching involve travel. Administrators should work closely with their legal department and O&M specialists to ensure there is a clear understanding of the O&M specialist's liability coverage and what is and is not permissible for the O&M specialist to do if not meeting with the student in person in the same physical space.
- O&M specialists need administrator support and guidance as they conduct assessments and evaluations during COVID-19. In addition, they need recommendations of how to collect and use data to guide their work in these unprecedented times. Dr. Yue-Ting Sui and colleagues have made available the document. *Comprehensive Evaluation of Blind and Low Vision Students During COVID-19: A Guidance Document*²⁷ that is a valuable resource.

²⁷https://homeboundforadventure.podbean.com/

ORIENTATION AND MOBILITY SPECIALISTS

- As soon as permissible by health department officials, O&M specialists must be permitted to adapt hands-on instruction that meets social distancing and safety guidelines. Administrators need to recognize the importance of O&M, providing flexibility and guidance that allows O&M specialists to provide meaningful service as determined by the student's IFSP or IEP. Administrators should provide appropriate personal protective equipment to facilitate safe hands-on instruction.
- Administrators should provide time for O&M specialists to identify and compile resources, to engage in professional development, and to find other ways to collaborate with other O&M specialists so that they can take advantage of the expertise of others in this unique profession. There is a need for a centralized hub of resources specific to O&M content, virtual instruction, and clear, direct guidance that can be available to both O&M specialists and family members.

Considerations for Policymakers

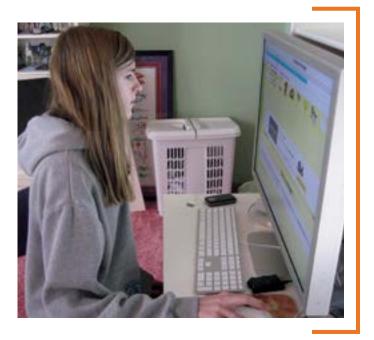
- Time and resources must be allocated to determine which models of service delivery O&M specialists should use to meet the needs of their students. For example, is online service delivery an effective strategy to use with a student who is learning bus routes in the community when neither the student nor the O&M specialist can travel together in the community? It may not be possible to provide remote instruction that is relevant and helpful for the student while also meeting the requirements of IDEA and the student's IEP.
- Policymakers need to carefully consider guidelines for the revision to IFSP and IEP goals when work on some goals may not be possible through online service delivery. At the same time, all education team members, including the O&M specialist, must be accountable to ensure that students are receiving the services that they need and are entitled to under IDEA.



FINAL THOUGHTS

The Access and Engagement survey sought to gather data to answer the question:

How is the COVID-19 pandemic impacting the education of students with visual impairments, their families, TVIs, and O&M specialists in the United States and Canada?



There is no question that the COVID-19 pandemic has challenged students, families, and professionals as we all work together to ensure that children with visual impairments have equal access to education. The participants in the Access and Engagement study shed light on both the challenges and successes that were occurring in the early days of the COVID-19 pandemic. One of the most important takeaways from this report is the need for students, families, educators, administrators, and policymakers to work together to ensure all students with visual impairments have access to appropriate instruction and are engaged in learning so that they continue to develop their skills in the same way they would had COVID-19 not interrupted their education.

"Like any challenge, it is another opportunity to teach my students how to be resilient and flexible in the way they live their lives. It isn't until a challenge is presented that a solution is required, thus building in a natural motivator for seeking new ways of doing things."—*White female dually certified professional*

ACCESS AND ENGAGEMENT



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