Hammill Institute on Disabilities

Rural Special Education Quarterly
1–10

DOI: 10.1177/8756870520982297
journals.sagepub.com/home/rsq
SAGE

A Tale of Two Countries: An International Perspective on Non-Traditional Special Education

Elif Tekin-Iftar, PhD[1], Bree A. Jimenez, PhD[2,3], and Hatice Deniz Degirmenci, PhD[1]

Abstract

A global perspective of education, special education, rural communities, and non-traditional instruction is provided for two countries. Both Turkey and Australia have responded to the COVID-19 global pandemic in similar yet, different ways. Through the tale of two countries navigating the rapid response to school closure for students with disabilities, we all can gain understanding from examining strategies used by national, state, and local governments; school systems; and support agencies. From these strategies, we can determine effective and efficient models moving forward that support all students (e.g., students with mental health and medical needs) through non-traditional education during natural disasters, pandemics, or unexpected events

Keywords

COVID-19 pandemic, rural special education, non-traditional education, students with disabilities

From the beginning of 2020, the world has been dramatically influenced by COVID-19, a novel infectious virus causing severe acute respiratory syndrome. The first COVID-19 reports came from Wuhan, China in late December 2019 (World Health Organization [WHO], 2020a). Since March 11, 2020, the spread of the virus has been officially termed a pandemic. COVID-19 spreads human to human by small air droplets or direct contact (Wang & Du, 2020). Therefore, businesses and other public and private places where people come together were closed temporarily across many countries. In addition, numerous countries closed their borders for travel. As of mid-August 2020, at the time this article was written, there are over 20,000,000 confirmed COVID-19 cases across the world (WHO, 2020b).

International Education

The COVID-19 outbreak created a major educational crisis all over the world, as most governments temporarily closed their educational institutions to in-person learning to prevent spread of the virus. Both nationwide and localized school closures across countries have affected 70% of the world's student population (United Nations Educational, Scientific, and Cultural Organization, 2020). At the time of the writing of this article, with ever changing medical and government guidance, several countries have now begun to reopen their schools. Some countries have partly opened schools by implementing social distancing and requiring individuals to wear face masks as well as decreasing classroom sizes. Others have decided not to physically open schools for the rest of the 2020 calendar year (i.e., virtual education only). One recent news story from the Associated Press reported that upon reopening of schools in France, 70 cases of COVID-19 had been linked to schools (Cole, 2020). This illustrates *the challenges being faced as schools attempt to return to face-to-face instruction*. In addition, meeting the challenges of educating students with disabilities and fulfilling their individualized education programs has become a major issue worldwide.

Providing continuous services to meet the unique and often complex learning needs of students with disabilities is extremely important. With global school closures, there has been discontinuity in the special education and related services of many students, causing hardships within family support systems, such as trying to work while students are at home. Locked down and away from services, students also have lost opportunities for social interaction with peers,

[1]Anadolu University, Eskisehir, Turkey
[2]University of Texas at Arlington, USA
[3]The University of Sydney, New South Wales, Australia

Corresponding Author:
Elif Tekin-Iftar, Research Institute for the Handicapped, Anadolu University, Eskisehir 26470, Turkey.
Email: eltekin@anadolu.edu.tr

increasing their risk of losing acquired skills that were not yet maintained and generalized (e.g., school routines, communication, social skills). Unpredictable changes in students' routines and activities may have strengthened problem behaviors. Moreover, children with disabilities might require physical therapy and other related services, which they could not access during the pandemic (Factor et al., 2016; Toseeb et al., 2020). In addition to domestic responsibilities, many parents must work from home at the same time they had to be the teachers, friends, and caregivers of their children—including their children with disability—during the pandemic. Therefore, it could be easily said that many students with disabilities and their families have been significantly affected by the recent school closures.

Within this unique experience the world has endured together comes the opportunity to review and reflect upon the interventions and practices (i.e., non-traditional education [NTE]) employed in various countries around the world. While NTE has existed in many forms and across the globe for decades, the recent international shut-down of schools has forced educators to act quickly. While the effects of these swift actions have not been evaluated, this article provides a chance to broaden our international scope by looking at two countries in particular: Turkey and Australia. The authors of this article were invited to provide perspective on their country's unique experiences of NTE for students with disabilities. All authors of this article hold PhDs in special education and have extensive experience working with students with developmental disabilities. The first author holds the rank of full professor at a local university in Central Turkey and has nearly 30 years of experience as a researcher. The second author is an associate professor of special education, an honorary research associate at an Australian university, and full-time research consultant in an Australian school. She has more than 20 years experience working with students with disabilities. Finally, the third author is working in special education at the same university with the first author. She has 10 years of teaching experience with students with developmental disabilities.

This article will outline what these countries have done in response to the need for rapid initiation of NTE for students with disabilities, the limitations of NTE, and the lessons learned for future directions as we continue to deal with COVID-19, as well as anticipate the possibility of similar situations (e.g., natural disasters, school closings) in the future.

The Republic of Turkey's Perspective

As a transcontinental country lying in two continents, the Republic of Turkey has a unique geographic position. It is located predominantly in Asia (97% land mass; https://www.nationsencyclopedia.com/economies/Asia-and-the-Pacific/Turkey.html) and partly in Europe on the Balkan Peninsula. Due to its unique location, it has acted as a bridge between Western Asia and Europe located at the crossroads of the Balkans, the Caucasus region, the Middle East, and the Eastern Mediterranean region. Ankara is the capital city and Istanbul is the largest city. It is bounded on the north by the Black Sea, on the northeast by Georgia and Armenia, on the east by Iran and Azerbaijan, on the southeast by Iraq and Syria, on the southwest by the Mediterranean Sea, and on the west by the Aegean Sea. There are seven regions including 81 provinces and 922 sub-provinces in the country. The west and southwest regions of Turkey are more developed, whereas the east and southeast are the less developed regions of Turkey. According to the 2019 census, Turkey's population was 83,154,997 (50.2% male, 49.8% female), which is 1.16% of the total world population. It is the 17th largest country among others by population. The population density in Turkey is 110 people per square km. The total land area is 769,630 square km which is equal to 297,156 square mi. The population in Turkey is young: the median age is 32.4 years. The country's population is 75.7% urban (62,294,388 people in 2019; Turkey: Urbanization from 2009 to 2019 (2020, October 8). The modern secular Turkish Republic was founded in 1923 after collapse of the Ottoman Empire. Turkey is a secular, unitary, formerly parliamentary republic that adopted a presidential system in 2017. The first presidential election was in 2018, and since then, a presidential republic governs the country.

Education in Turkey

The Turkish system includes two education delivery systems: (a) formal education from preschool to 12th grade and (b) non-formal education. Formal education is defined as general education conducted within schools for individuals with a certain age range at the same level with the same objectives. Formal education covers (a) preschool attended by children 3–6 years of age, (b) primary school attended for 4 years for children beginning at 66 months, (c) lower secondary school attended for 4 years by children aged similarly to U.S. middle school students, and (d) higher secondary school attended for 4 years by children aged similarly to U.S. high school students. During the 2018–2019 academic year, 18,108,860 students enrolled in the formal education system. In 2019, a total of 1,416,683 first graders began school life in Turkey. Non-formal education covers academic and vocational training, serving individuals who have never entered into the formal education system or have left the system due to various problems (e.g., family problems, economic difficulties). Both formal and non-formal education systems are public systems following general objectives and basic principles of national education (Ministry of National Education Strategy Development Presidency, 2019). Primary, lower secondary, and higher

secondary schools (12 years in total) are mandatory for all students at no cost. However, students who complete onsite primary school education in formal education can choose to attend the remaining years through distance-non-formal education. Higher education includes all the education institutions based on higher secondary education, similar to colleges and universities in the United States. While the Ministry of National Education (MoNE) is responsible for conducting and regulating preschool and kindergarten-12th grades across the country, the Council of Higher Education (CoHE) is responsible for higher education.

Special education services are covered under formal education. They are organized and coordinated specifically by the Directorate of Special Education, Guidance, and Counseling under MoNE. Under the supervision of this Directorate, Guidance, and Research Centers (GRCs) are responsible for the educational assessment and evaluation as well as placement of students with disabilities in the provinces. Based on the size and population of the province, there is at least one GRC in each province and sometimes more than one in larger provinces. These centers are responsible for the educational evaluation and placement of students with disabilities. Currently, there are 242 GRCs in the country.

In the education system of Turkey, depending on placement decisions made by GRCs, students with disabilities are placed in one of the three different settings: (a) general education classrooms in the general education schools, (b) special education classrooms in general education schools, and (c) special schools designed for various disability types (e.g., students with intellectual disability, students with hearing impairment). Once the need for evaluation for a child arises due to their possible disability or delay in development, families are expected to take their children to be examined by a pediatrician at a public hospital for possible diagnosis. If a diagnosis is given for a child, then the family visits the GRC in their provinces/sub-provinces to be evaluated in terms of eligibility of the child for special education services and placement of the child to the appropriate school settings where they will receive services. Education is a constitutional right for all children in Turkey (Constitution of Turkish Republic, 1982) and free and appropriate education is secured under special education regulations (Regulation of Special Education Services, 2018). Individualized education programs are developed for each student in the educational settings and free and appropriate education is begun accordingly. Once students qualify for special education services and placed within the school system, they also are supported to receive support services from Special Education and Rehabilitation Centers (SERC) in their hometown in the form of after-school care. The government pays the fee for this service (12 hrs per month per child) directly to the SERC. While the number of students receiving special education services in Turkey is increasing, students with disabilities only make up 2.2% of the total school population. This likely indicates many students with disabilities are not currently being educated within the school system. Special education laws and regulations in Turkey emphasize the importance of including students with disabilities in general education settings. However, two main problems still need to be solved in providing special education services: (a) special education teacher shortage (Büyükalan-Filiz et al., 2018) and (b) the lack of knowledge and practice of general education teachers in teaching students with disabilities in general education settings (Tekin-Iftar et al., 2017). Of these students, one-fourth (25.8%) are enrolled in special schools and the remaining (74.2%) are enrolled in the inclusive settings.

Special Education Services During COVID-19

The first confirmed COVID-19 case in Turkey was reported on March 11, 2020. After this case was confirmed, the government decided to move the 1-week regular Spring Break earlier to be held the week of March 16, 2020. Then beginning March 23, 2020, the government closed down the schools and more than 18 billion Turkish students started to receive their education in the form of NTE at home. Similar to parents and caregivers around the globe, the process of providing special education services at home has sometimes been difficult in Turkey. For example, when parents were asked the main difficulties they went through during the school closure, a rural mother F. Baydar (personal communication, May 21, 2020), of a 19-year-old son with a severe intellectual disability from eastern Turkey indicated:

> Yes, I needed teacher support, because my child wanted to be with his friends at school. The home environment was boring for him. Social activities at school were good for him. He felt much better. Without them he had a psychological problem: He became aggressive.

This sudden change in services also has provided serious challenges for teachers. A special education teacher, D. Çiçek (personal communication, May 21, 2020), with 10 years of teaching experience currently working in eastern Turkey stated,

> I prepared 2-week programs for each of my students and communicated with their parents every day on the phone. However, the parents did not show cooperation with me, and when they did, they did not perform teaching activities with their children. I think this is because of the mood of the pandemic. Also, there is no suitable environment for teaching at home and the education level of the parents. I need support to implement remote teaching activities. Almost none of the students has necessary conditions, such as internet access or computers. Their performance and developmental levels are different.

Responses to school closures in Turkey can be grouped into two categories: (a) services provided by MoNE and (b) services provided by nonprofit organizations (e.g., foundations, associations, special education teachers organizations). MoNE planned remote education through MoNE-developed platforms both as TV broadcasting on the government's TV channel, as well as online teaching delivered via web-portals on the Education Information Network (EIN). Prior to the COVID-19 interruption, an earthquake in eastern Turkey occurred in January 2020 and schools were closed in that region. Therefore, soon after the earthquake, a TV broadcasting on a government's TV channel was used to deliver exams (entrance exams) for placements to higher secondary schools and higher education. This experience encouraged MoNE to provide courses on TV broadcasting nationwide during the COVID-19 related school closure. First, they planned general education courses in these two platforms (web-portals at EIN and TV broadcasting) across the nation. Shortly after, they planned some courses guiding parents of students with disabilities during the school closure. In general, courses were broadcast on TV, and at the same time they were uploaded to a web-portal in EIN. The students could watch the courses on their own time and at their own pace. The government has provided up to an 8-GB internet quota to the families who could not afford it to be able to access the web-portal. Although the platforms for remote teaching were available, teachers needed more help and guidance during the delivery of remote teaching in the field of special education. When asked her opinion about remote teaching during school closure, the same special education teacher cited above reported,

> Remote teaching should be individualized, because [sic] the TV programs are not suitable for my students with disabilities. I sent the materials that I already have to the parents. I don't have the means to prepare additional materials. I cannot get in touch because of the pandemic. . . . Even if I manage to send the materials to the families, they will not be used efficiently, so I need support too. And most of all, I need technological support to implement remote teaching. I cannot perform the activities efficiently. I don't use the remote teaching platforms during the pandemic, and I don't have any experience beforehand. I need professional support about how to explain the experiences we have been going through in these days to my students and their parents.

Regarding special education, the government started to provide the following services shortly after school closure:

1. Teaching sessions aiming to teach various target skills (e.g., shapes, colors, concepts) for students with mild to severe intellectual disabilities were broadcast both on EIN-TV and on EIN web-portal.
2. Various videos sharing information about how to implement teaching procedures, video samples for activities that parents could administer with their children at home, and other parent training videos and modules were uploaded in the EIN web-portal and other digital platforms.
3. Books, activities, and support materials were uploaded as resources for parents as well as for teachers under "EIN Library."
4. Daily activities (10 activities per day) aiming to teach several concepts (e.g., shape, numbers) were broadcast on all digital platforms for students with disabilities.
5. An activity pool consisting of adapted teaching plans and video samples for teaching core academic contents (e.g., math, language arts, social studies) to students with disabilities in general education schools was prepared and broadcast digitally.
6. A mobile application "ÖzelimEgitimdeyim," which aimed to provide support (e.g., how to teach various skills such as physical activities, sorting, counting; lesson plans for teaching students with disabilities) to all students, parents, and teachers, was developed and made available on iOS and Android.
7. Sign language books were uploaded on the EIN system.

Beyond the teaching practices, schools took measures to ensure the cleanliness of the schools including disinfecting school buildings as directed by the city and township national education departments even though the students were not present at the schools. Disinfecting processes were followed in cooperation with the local and national education departments. Finally, an e-conference was arranged to inform the administrators of the special education schools about the hygiene and physical standards of the schools.

In addition to the efforts and regulations governed by MoNE, non-profit organizations also provided supports to teachers and parents of students with disabilities. These organizations began to deliver free online classes about various topics (e.g., evidence-based practices, instructional procedures, behavior management). The majority of these classes were presented by university faculty members from special education departments.

An Australian Perspective

In the past year, Australia has been hit by one disaster after the next, significantly impacting communities across the entire nation. Beginning in mid-2019, communities were debilitated by the worse drought conditions, some say to be recorded since European settlement. This forced some families to sell family farms, slaughter livestock, and essentially move and find new ways of income. Beginning in June 2019 and through February 2020, international headlines described bushfires that swept across the entire

country burning an estimated 46 million acres, destroying over 5,900 buildings, and killing at least 34 people. Under multiple states of emergency, hundreds of schools were forced to close their doors to students on and off across the final months of the school academic year (i.e., November and December, 2019) for safety reasons (e.g., potential for fire, smoke inhalation, road closures).

In response to the 2019–2020 bushfire crisis, the Australian Government announced a series of targeted initiatives providing education and mental health support to children, students, families, and communities. In recognition of the vital role schools and early childhood education play in providing safe spaces for children to be in times of crisis, the government committed $8 million to provide mental health liaison officers to work with local schools and early childhood services in bushfire-affected communities, to build capacity and support the health of staff, students, and families. Supports were tailored to help meet local community needs and included specific funds for trauma-informed professional development for educators and other support staff.

Coupled with the trauma of the past year, only 6 weeks into the Australian school year, in mid-March 2020, schools closed their doors to most students due to COVID-19. However, all schools remained open to "vulnerable students" and the children of "essential workers." Therefore, schools had to quickly act to begin providing NTE options for all students, while also remaining open to serving some students face-to-face. In addition, concerns were heightened as educators became "essential workers" required to work or take personal time off.

Education in Australia

The Australian Curriculum (Australian Curriculum, Assessment and Reporting Authority, 2017) is used nationally either in its totality or as a guidance document for state curriculum development (similar to the Common Core State Standards and individual state standards in the United States). Schools in Australia fall broadly into two categories: government schools (those operated by state or territory departments) and non-government schools (those not operated by government department). The schools' categories are based on self-identification of the school's affiliation. Non-government schools are grouped for reporting as Catholic (including Catholic-affiliated independent schools) or independent (other non-government schools). Government schools receive funding from the relevant state or territory government. Non-government schools also receive funding from the Australian Government and relevant state or territory government, but often families are required to make a co-payment for their child's education. As of 2019 across primary and secondary education, approximately two-thirds of all kindergarten-12th grade students attended government schools, with the remaining one-third of students educated in non-government schools (Department of Education, 2019).

Rural and remote. The concerns of Australian schools during the COVID-19 pandemic are not unique; rather they are echoed across the world. All nations have had to investigate internet and information technology (IT) usage across students, households, and their availability to resources. The inequities of poor and disadvantaged communities across Australia and much of the world have remained the same with many exacerbated due to even less access to food and education, with school doors closed. School systems have had to respond with lightning speed to provide professional development to teachers and families in regard to use of technology to support communication with students and families. Within days' notice, many educators engaged in professional development, typically offered by their own schools, on web-based video conferencing tools, operating systems, and file-level storage (e.g., Google drive). Differing from some countries, Australian schools remained open while also trying to build teacher and family capacity to utilize these resources for those students at home.

One particular difference for Australian schools may be their historical need for NTE due to an incredibly vast landscape (see https://www.abs.gov.au/websitedbs/d3310114.nsf/home/remoteness+structure). Australia comprised 29% of the country's population living in rural or remote areas (Australian Bureau of Statistics [ABS], 2017). Therefore, online education and the use of technology to provide educational services is not a new delivery mode. Australia is a unique country in that it is the sixth largest in land mass, yet its population is only comprised of approximately 25 million with a population density of 3.3 people per square km (ABS, 2019), compared to the United States with 36 people per square km. Australia is a sparsely populated country with its population heavily concentrated in a small number of coastal cities and capital cities. More than 80% of Australia's population live within 80 km of the coast. An *Index of Remoteness* is also used within Australia, linked to the Remote, Rural, and Metropolitan Classification (Australian Institute of Health and Welfare [AIHW], 2004) and to Aboriginal communities. This Index of Remoteness draws upon both distance to urban centers and personal distance: the average distance between residents. These Australians face unique challenges due to their geographic isolation, and they often have poorer welfare and educational outcomes than people living in major cities (AIHW, 2019). Therefore, specific educational government services have been developed.

School of the air. Distance education is an equity program for students across Australia who are geographically isolated or whose individual circumstances prevent them

from regularly attending school. Schools of the Air provide for primary (Grades kindergarten-6) and early secondary (Grades 7–10) education of children in remote and outback Australia. In these areas, the school-age population is too small for a conventional school to be viable. Some or all classes were traditionally conducted by radio until 2009, although this has more recently been replaced by telephone and internet technology with lessons delivered via live one-way video feeds and two-way audio. Currently, all states except Tasmania run at least one School of the Air program.

Each student has direct contact with a teacher in an inland town such as Broken Hill or Dubbo. A student will typically spend 1 hr per day receiving group or individual lessons from the teacher and the rest of the day working through the assigned materials with a parent, older sibling, or a hired home-stay tutor. Traditionally students would receive and return their written work to teachers via the Royal Flying Doctor Service (i.e., a rural and remote non-profit air medical service) or postal services. However, with the addition of internet services into the outback, now school work is returned via the internet. Because most children are in isolated situations, the School of the Air also provides a chance for socialization with children outside their immediate family and schools often host mini-schools, cluster days, sports camps, and school visits throughout the year. However, costs associated with travel, accommodations, and food for these trips make it difficult for some children to attend. One School of the Air may provide services across 1.5 million square km (approximately 580,000 mi) educating roughly 100–125 students across grade levels.

Special education services. Remote education also is provided for students with disabilities across rural and remote distance education, with one School of the Air specifically designed for students with intellectual disability and autism. However, the vast majority of students with disabilities are served within government and non-government traditional schools across the country. Annually, the Nationally Consistent Collection of Data on School Students with Disability (Nationally Consistent Collection of Data, 2020) collects information about Australian school students who receive an adjustment to address disability enabling schools, education authorities, and governments to better understand the needs of students with disability and how they can be best supported at school. Adjustments are actions taken to enable a student with disability to access and participate in education on the same basis as other students. Adjustments can be made at the whole-school level, classroom level, and at an individual student level. The NCCD is used by the Australian Government to calculate the number and intensity of needed supports of students with disabilities and used to calculate funding for schools provided by the Commonwealth to states and territories. For non-government schools (e.g., Catholic, Independent, Private), the disability loading (funding) is provided directly in full to schools. For government schools, a proportion of the disability loading is provided by the Commonwealth to state and territory governments. Within both the government and non-government sectors, students with disabilities are served within the general education classroom (67%), special education classroom (19%), or at a special school for specific purposes (14%).

According to the 2017 NCCD, 724,624 Australian students receive educational support adjustments. Of those adjustments, a scale of support (see www.nccd.edu.au/sites/default/files/2018-10/Level%20of%20adjustment%20provided%20to%20the%20student.pdf) is used to determine student funding and guide educational teams, with 81% of students with disabilities supported through the general curriculum, 6.2% supported within quality differentiated teaching practices, 8% supplementary, and 3% substantial. These four levels of supports are used to provide financial support to schools to provide the needed level of scaled support. Extensive supports represent students with the most extensive support needs and has only recently been added to the NCCD guidelines.

Interruptions Related to COVID-19 Pandemic

As previously noted, many of the same issues around supporting students via NTE exist in Australia as elsewhere, with the Australian Government ensuring that every student, including students with disabilities, have access to education in a sustainable and effective manner during the COVID-19 pandemic. Advice was available for schools and parents to ensure students continue to receive reasonable adjustments (see https://www.dese.gov.au/covid-19/schools/support-students-disability) in accordance with the *Disability Standards for Education 2005*. These standards clarify the obligations of education providers for students with disabilities to access and participate in education on the same basis as other students.

Vulnerable populations. Special considerations for evaluating who should remain at schools that were still open were put into place based upon the COVID-19 public statement issued by the Australian Government Department of Health (2020): people aged 70 years and above, people aged 65 years and above with chronic medical conditions, people with compromised immune systems, and Aboriginal and Torres Strait Islander people over the age of 50 years with chronic medical conditions (Advice for People Most At Risk; https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert). Due to the unique medical needs of many students with intellectual and multiple disabilities, additional concerns remained as educators and students continued to attend schools during the COVID-19 outbreak.

In April 2020, The Australian Government commissioned reports on the impact of remote learning on vulnerable children during the COVID-19 emergency. Clinton (2020) specifically addressed the potential effect of the pandemic on Australian students with extensive disabilities. According to the AIHW (2009), approximately just under 200,000 Australian children have a severe disability, with the highest number of students coming from low-income households (29%) and the lowest number of students coming from high-income households (7%). Children with severe disabilities commonly face challenges such as intensified dependence on caregivers, limited mobilities, and heightened sensory stimulation associated with emergencies and disasters (Balbus & Malina, 2009). In addition, Clinton noted that children with learning disabilities and emotional disorders are often impacted by trauma as a consequence of the lack of access to education. Therefore, the author called for increased attention to teacher training related to trauma-informed teacher practice.

Boarding schools. With more than 25,000 Australian students attending boarding schools across the country, the closure of schools created extreme havoc with families trying to get students back home with limited transportation options and even state border closings. Boarding schools are a major provider of education for Indigenous students, with 117 Independent schools serving more than 2,100 Indigenous boarders. Many students come from remote communities where primary level education is the only schooling locally available, so they have to leave their communities in order to undertake secondary studies.

In addition, unique challenges arose for boarding schools, as state border closures have created obstacles for students; Indigenous students from the Northern Territory, for example, did not want to fly to school (e.g., common mode of transportation for boarding students) because they had to stay in isolation for 2 weeks upon their return.

Current Status of Education and Special Education

With state borders closed across the country, limited travel across state lines allowed for greater control and tracking of the virus, essentially allowing some states to begin school earlier than others. For example, students in the Northern Territory were expected back on school grounds beginning April 20, 2020. However, all schools within New South Wales (the state with the highest number of cases) finally returned to full on-campus learning beginning May 25, 2020. By mid-June, with a total of 536 confirmed current positive cases of the virus nationwide, and less than 20 people hospitalized (Australian Government Department of Health, 2020), the risk for transfer of infection was at a low, with declining trends. All school activities and operations were carried out in line with Australian Heath Protection Principal Committee guideline (AHPPC; https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert). School students have been told they do not need to follow strict adult physical distancing guidelines, but should follow good hygiene practices such as regularly washing hands, avoiding sharing drinks or food, and coughing or sneezing into the elbow or a tissue which should be discarded immediately. However, in late July of 2020, numbers in Australia began to rise again, with Victorian schools across the state returning to remote learning while on-site supervision was offered for students who needed it. As of the writing of this article, these schools returned to in-person learning in October, 2020 with phased re-entry and permitted off-site education of vulnerable students.

NTE Reflections and Lessons Learned

Although Australia and Turkey have fundamental differences (i.e., government, population density, education systems), they shared some similarities in response to the COVID-19 school interruption. Both countries adopted NTE (i.e., remote education) during school closures within a relatively short period of time. As mentioned, both countries have experience in providing NTE, although their practices differ in form and intensity. However, recent events have challenged education systems, both government and private, as well as related fields serving education (i.e., technology, informatics, safety).

To meet the idea of an "equal opportunity in education," we make the following recommendations. First, governments and school systems must develop a plan to serve all students and families. Therefore, technological and distance learning readiness should be an important and prioritized agenda for the countries. Rural communities may not have access to the technology needed to immediately access video-based, technology-driven content. For example, one way in which Australian families of students without access to internet or technology (e.g., computer, smart phones, iPads) were supported by the government and schools was through partnerships with local mobile service providers. The National Broadband Network (NBN Co) established a $150 million financial relief and assistance fund to help providers support their customers, including $50 million to support low-income households with school-aged children. Customers in rural and regional Australia also have been supported by NBN Co's measures to increase capacity for satellite services during the COVID-19 pandemic. Globally, access to internet and other communication means should be provided to all, including vulnerable (e.g., Aboriginal, remote, economically disadvantaged) populations to ensure equal educational opportunity.

Second, schools should take into consideration providing distance learning infrastructure, monitoring, and evaluation of teaching/learning procedures, safety, and confidentiality of both students and teachers. The readiness of content to be delivered via NTE has presented a challenge during school interruptions, as in the case of Turkey, where special education services were begun after general education services due to a lack of content for teaching students with disabilities. Therefore, curriculum and instruction surrounding this content needs to be readily available. While not necessarily addressed by either Turkey or Australia, quality NTE also must be followed by quality assessment of student progress. The delivery of instruction seemed to become a focus of a rapidly changing educational systems, with little to no follow through for assessment of student achievement or feasibility for students and families.

Unique Opportunities

Due to the extreme remoteness of the majority of Australia's population, many schools were already accustomed to educational instruction using technology and remote student/family meetings. Recent events have not seemed to affect these areas in the same magnitude as the rest of the country. Even schools that provide rural face-to-face education already had most systems online, with digital system-wide meetings commonly held remotely (only two to three per year in person, due to significant travel restraints). Australia's Schools of the Air may have made Australia's response more seamless than for other countries, with their unique opportunity to use and expand what they have learned to other schools during COVID-19. System-wide support networks (e.g., Catholic School New South Wales) were able to develop resources based upon years of rural distance education and individualized supports for students. Specific to rural special education, further research is needed to identify successful NTE across urban and rural areas during COVID-19 that may support Australian Schools of the Air serving students with disabilities in the future.

During the COVID-19 interruption, a serious need for home-based learning support arose. Parents have had to provide training and support to their children in addition to their other roles and responsibilities. As in the case in Turkey, a mother indicated her need of teacher support. Therefore, online platforms could be an option to provide this support. However, the majority of these platforms are developed with the intention of creating synergy among the parties. Instead of just being information sharing platforms, online learning modules' effectiveness should be tested experimentally and opened to the use of families. In addition, although online alternatives have become a common solution for many countries, they can create some inequalities as many students and families cannot afford to access them.

How teachers are prepared is one of the most important lessons to be learned during the COVID-19 interruption. Teachers and teacher candidates both in special and general education programs should be trained how to react in case of either national (e.g., earthquake, bushfire) or global (e.g., pandemic) interruptions. Teacher training programs should include topics such as non-traditional instruction (i.e., online teaching) for children with disabilities. Teachers should be equipped with all steps of systematic instruction and behavior management from monitoring to providing feedback within this framework. Not only pre-service teachers but also in-service teachers should be provided professional development in regard with the above stated topics. It is well-documented that both teachers in general education settings (Darling-Hammond et al., 2017; Guskey, 2002; Tekin-Iftar et al., 2017) and special education settings (Cooc, 2019; Odom, 2009) need to be supported by professional development.

Jimenez et al. (2016) found online PD without feedback to only increase teacher knowledge, not application of skills. However, professional development delivered online, with embedded coaching and feedback, has been shown effective in increasing both teacher knowledge and application of new skills (Cheek et al., 2019; Degirmenci, 2018).

Conclusion

There is a significant global need for developing strong remote education alternatives to better serve all students and families. COVID-19 is a transformative and adaptive challenge for educators. Therefore, a series of actions should be planned and necessary steps taken accordingly. We suggest the development of global education innovation initiatives for countries to share their experiences to develop a road map for education. An initiative in rural special education would use global data related to what has been effective (both during the recent pandemic and historically) and ineffective for different countries and demographics. Access to resources and strategies must be evaluated by national, state, and local governments and school systems.

In addition to developing remote education alternatives, teacher training models both during pre-service and in-service should be revised. These revisions should include training on NTE, research-based use of educational technology, explicit and systematic instruction, evidence-based practices, and progress monitoring used through remote education. Finally, international collaborations should be made to reveal the best available options and research needed to support continued growth in a new world of NTE and special education.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Bree A. Jimenez https://orcid.org/0000-0003-0837-4587

References

Australian Bureau of Statistics. (2017). *3218.0—Regional population growth, Australia, 2016*.

Australian Bureau of Statistics. (2019). *3101.0—Australian demographic statistics; September 2019*.

Australian Curriculum, Assessment and Reporting Authority. (2017). *The Australia curriculum*. https://www.australiancurriculum.edu.au/

Australian Government Department of Health. (2020). *Coronavirus (COVID-19) health report*. https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert

Australian Institute of Health and Welfare. (2004). *Rural, regional and remote health: A guide to remoteness classifications*. https://www.ruralhealth.org.au/sites/default/files/other-bodies/other-bodies-04-03-01.pdf

Australian Institute of Health and Welfare. (2009). *Measuring the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples* (Catalogue No.: IHW 24). ACT.

Australian Institute of Health and Welfare. (2019). *Rural and remote health*. https://www.aihw.gov.au/reports/rural-health/rural-remote-health/contents/rural-health

Balbus, J. M., & Malina, C. (2009). Identifying vulnerable subpopulations for climate change health effects in the United States. *Journal of Occupational and Environmental Medicine*, *51*(1), 33–37.

Büyükalan-Filiz, S. B., Çelik-Şahin, A. Ç., Tufan, S., & Karaahmetoğlu, B. (2018) *Özel eğitim öğretmenliği lisans programlarının birleştirilmesine ilişkin öğretim üyelerinin görüşleri* [Opinions of faculty members about combining the undergraduate programs in special education]. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *33*(3), 763–775. https://doi.org/10.16986/HUJE.2018036496

Cheek, A., Rock, M., & Jimenez, B. (2019). Online module plus eCoaching: The effects on special education teachers' comprehension instruction for students with severe intellectual disability. *Education and Training in Autism and Developmental Disabilities*, *54*(4), 343–357.

Clinton, J. (2020). *Supporting vulnerable children in the face of a pandemic: A paper prepared for the Australian Government Department of Education, Skills and Employment*. Centre for Program Evaluation, Melbourne Graduate School of Education, The University of Melbourne.

Cole, D. (2020, March 19). *70 cases of COVID-19 at French schools days after reopening*. The Associated Press. https://www.nbcnews.com/health/health-news/70-cases-covid-19-french-schools-days-after-re-opening-n1209591

Constitution of Turkish Republic [Türkiye Cumhuriyeti Anayasası]. (1982). https://www.icisleri.gov.tr/kurumlar/icisleri.gov.tr/IcSite/illeridaresi/Mevzuat/Kanunlar/Anayasa.pdf

Cooc, N. (2019). Teaching students with special needs: International trends in school capacity and the need for teacher professional development. *Teaching and Teacher Education*, *83*, 27–41. https://doi.org/10.1016/j.tate.2019.03.021

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.

Degirmenci, H. D. (2018). *Koçluk içeren ve içermeyen web-tabanlı mesleki gelişim uygulamalarının otizmli öğrencilerle çalışan öğretmenlerin öğretim becerilerini ve öğrencilerinin güvenlik becerilerini edinmeleri edinmeleri açısından karşılaştırılması* [Efficacy of web-based professional development with and without coaching on teaching skills of special education teachers' and their students' outcomes]. [Unpublished doctoral dissertation], Anadolu University.

Department of Education. (2019). *How are schools funded in Australia?* Commonwealth of Australia. . https://www.education.gov.au/how-are-schools-funded-australia

Factor, R. S., Condy, E. E., Farley, J. P., & Scarpa, A. (2016). Brief report: Insistence on sameness, anxiety, and social motivation in children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, *46*(7), 2548–2554. http://doi.org/10.1007/s10803-016-2781-x

Guskey, T. R. (2002). Professional development and teacher change. Teachers and teaching. *Theory and Practice*, *83*(3), 381–391. https://doi.org/10.1080/135406002100000512

Jimenez, B. A., Mims, P., & Baker, J. (2016). The effects of an online data-based decisions professional development for in-service teachers of students with significant disability. *Rural Special Education Quarterly*, *35*(3), 30–40. https://doi.org/10.1177/875687051603500305

Ministry of National Education Strategy Development Presidency [Milli Eğitim Bakanlığı Strateji Geliştirme Başkanlığı]. (2019) *Millî eğitim istatistikleri örgün eğitim 2018- 2019* [National education statistics formal education 2018-2019]. http://sgb.meb.gov.tr/meb_iys_dosyalar/2019_09/30102730_meb_istatistikleri_orgun_egitim_2018_2019.pdf

Nationally Consistent Collection of Data. (2020). *NCCD and supporting students with disability*. https://www.nccd.edu.au/

Odom, S. L. (2009). The tie that binds: Evidence-based practice, implementation science, and outcomes for children. *Topics in Early Childhood Special Education*, *29*(1), 53–61. https://doi.org/10.1177/0271121408329171

Regulation of Special Education Services. (2018). Resmi Gazete. https://orgm.meb.gov.tr/meb_iys_dosyalar/2020_06/24163215_ozel_eYitim_yonetmeliYi_son_hali.pdf

Tekin-Iftar, E., Collins, B. C., Spooner, F., & Olcay-Gul, S. (2017). Coaching teachers to use a simultaneous prompting procedure to teach core content to students with autism. *Teacher Education and Special Education*, *40*(3), 225–245. https://doi.org/10.1177/0888406417703751

Toseeb, U., Asbury, K., Code, A., Fox, L., & Deniz, E. (2020). Supporting families with children with special educational needs and disabilities during COVID-19. *PsyArXiv*. https://psyarxiv.com/tm69k/

Turkey: Urbanization from 2009 to 2019. (2020, October 8). https://www.statista.com/statistics/255487/urbanization-in-turkey

United Nations Educational, Scientific, and Cultural Organization. (2020). COVID-19 educational disruption and response. Retrieved May 25, 2020, from https://en.unesco.org/covid19/educationresponse

Wang, J., & Du, G. (2020). COVID-19 may transmit through aerosol. *Irish Journal of Medical Science*, *189*, 1143–1144. http://doi.org/10.1007/s11845-020-02218-2

World Health Organization. (2020a). *Novel coronavirus—China update*. https://www.who.int/csr/don/12-january-2020-novel-coronavirus-china/en/

World Health Organization. (2020b). *Situation report—199*. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200806-covid-19-sitrep-199.pdf?sfvrsn=6b9d262d_2