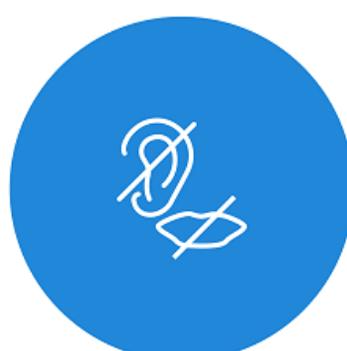# Pandemic and the Impact of Distance Learning Methods on Students with Visual and Auditory Disabilities: The Zarqa Governorate

West Asia-North Africa Institute, December 2020

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1 Preface

In Jordan, emerging barriers to education and obstacles to learning facing students with disabilities, represented by access to fair and quality education, became evident in the transition to distance learning with the onset of the pandemic, and despite the existence of international agreements that oblige state parties "to ensure an inclusive education system at all levels and lifelong learning" – as in the case of the United Nations Convention on the Rights of Persons with Disabilities.[1] In addition, our initial exploration of the topic indicated that studies as well as policies related to barriers to education and obstacles to learning for students with disabilities in Jordan were scant, particularly in reference to the context of distance learning and the pandemic.

The policy paper that follows is the product of a participatory action research project led by the West Asia-North Africa Institute (WANA), with support from IM Swedish Development Partner. The paper, which falls under the rubric of social justice and the empowerment of marginalised individuals and communities, seeks to highlight the education barriers and learning obstacles faced by students with disabilities and present recommendations to policymakers and thus advocate for better integration in development policy. Research was undertaken in the Zarqa Governorate on the basis of the fact that the governorate is the third largest in terms of population and that it records the highest levels of minor and major auditory and visual impairments across the Kingdom (at 4.81% and 2.47% of the total population respectively).[2]

The analytical results of the paper were arrived at through information gathered by way of in-depth and semi in-depth interviews conducted with a number of representatives from relevant authorities. The representatives were selected on the basis of current and past links to distancing learning. The research team also interviewed five mothers with students with auditory and visual impairments as children in order to better understand the children's experiences with distance learning during the pandemic.

2 Executive summary

Distance learning or e-learning involves an educational institution transmitting lessons and course content to its students via digital technology. In the Jordanian context, distance learning methods were activated in March of 2020 when the government put into place a number of precautionary measures in order to stem a public health crisis and which included the shuttering of schools. Television channels and electronic platforms were used by the government to ensure public sector educational continuity, the most well-known of which is Darsak, an educational platform that broadcasts and re-broadcasts televised lessons on The Jordan Sports Channel.[3]

This paper identifies the following as barriers to education, obstacles to learning, and other challenges facing students with disabilities in the context of distance learning and the COVID-19:

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[1] United Nations Convention on the Rights of people with disabilities, article 24

[2] Department of Statistics, general Population and Housing survey 2015.

[3] Esra'a Ali Alshyab.2020. Distance education and its effects on visual and hearing disabilities students during the Covid-19 pandemic in Zarq'a governorate. West Asia-North Africa Institute (WANA).

1. Technical challenges,
2. Poor or inadequate distance learning infrastructure(s) for students with auditory and visual impairments,
3. Motivation challenges leading to, for example, class absences or incomplete homework,
4. The general and prevailing culture surrounding distance learning,
5. Psychological problems.

And, proposes the following measures to improve distance learning for students with visual and auditory impairments in the Zarqa Governorate:

1- A general policy to improve distance learning methods for students with visual and auditory Impairments.
2- A general policy to create an investment environment capable of attracting private sector investments in the e-learning sector.
3- A general policy to support the telecommunications sector for the provision of free access to e-learning platforms.
4- A general policy to integrate the education of students with disabilities in the COVID-19 crisis and disaster management plan.

3 Key Terms

- **Distance Learning:** A method of teaching and learning where teachers and students are not physically present in the same and instead use traditional or modern means of communication such as the Internet, e-email, mail etc.[4]
- **Blended Learning:** A method of teaching and learning in which teachers and students communicate via electronic and online media as well as traditional face-to-face methods.[5]
- **Persons with Disabilities:** "All persons with disabilities including those who have long-term physical, mental, intellectual or sensory impairments which, in interaction with various attitudinal and environmental barriers, hinders their full and effective participation in society on an equal basis with others."[6]
- **Hearing Impairment:** Refers to all kinds and degrees of hearing loss including the partial to total inability to hear. [7]
- **Visual Impairment:** Refers to all kinds and degrees of vision loss including the partial to total inability to see.[8]

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[4] Al-Farrah, Ismail. 2007. Distance learning and open education: roots, concepts and justification. Palestine: Palestinian journal of open and distance learning.
[5] The handbook of blended learning 2006: global perspectives, local designs, chapter 1.
[6] United Nations Convention on the Rights of Persons with disabilities, article 1
[7] WHO. (2020). Deafness and hearing losses article, March1, 2020.
[8] The international classification of diseases 11 (2018) vision impairment.

4   Background

The Rights of Persons with Disabilities is one of the most important human rights issues facing the globe today. Although the Universal Declaration of Human Rights was issued in 1948, its impact on persons with disabilities came much later. To be sure however – and as a result of concerns regarding the increasing numbers of people with impairments and the concomitant increase in the need for diagnosis, treatment, rehabilitation, and prevention through the provision of medical care by doctors and specialists and the establishment of specialised centres – the suffering experienced as a result of the Second World War did contribute to the enactment of human rights legislation. But, it was only in 1981 that the United Nations declared an International Year of Disabled Persons, under which the term disability including all kinds of impairments, and called for the inclusion of persons with disabilities in society under the banner, *Full participation and equality for persons with disabilities.* The slogan then resulted in a set of rights that were adopted by most countries, including in the Arab world, and these rights are summarised by the following headers:[9]

1- The Right to Life as A Right of All Human Beings,
2- The Right to Early Diagnosis and Medical Consultation,
3- The Right to Education and Vocational Training,
4- The Right to Work and Economic Self-Sufficiency,
5- The Right to Mobility, Travel, and Entertainment,
6- The Right to Marry and Found a Family, and
7- The Right to Political Participation.

Due to the deteriorating conditions of persons with disabilities, most of whom live in impoverished societies where infrastructure is both weak and overlooked, the fact that persons with disabilities are considered as marginalised communities, the growing need to facilitate integration on the basis of sustainable development strategies and policies, and in order to end discrimination against persons with disabilities and protect the rights of said persons, the United Nations General Assembly adopted a set of binding human rights principles that oblige state parties to take appropriate measures and legislations in that regard in December of 2006. Collectively, the principles were called *The Convention on the Rights of Persons with Disabilities.* A number of countries including Jordan ratified the convention, which came into force in May of 2008.

The Convention called on state parties to adopt the term "persons with disabilities" with reference to individuals with disabilities in light of the argument, as inferred from Article 3 of the Convention, that disability is a long-term physical, mental, intellectual, or sensory impairment whose medical and social effects exhibit complementarity. As such, disability, which bears on the question of rights and society, the argument goes, would not have been singled out by the convention were it not for its socio-cultural effects on the rights of a person with disability and status in society. The term stands in contrast to the anthropological view which declines to establish standardised differential distinctions between and among individuals, societies, groups,

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[9] Hamid, Sahar H. Ali and Muhammad, Mujahid Abdel Moneim. (2017). The effectiveness of a multimedia program in the teaching and learning of students with hearing disabilities: A case study at the Umm Kulthum Foundation for the Deaf. Journal of the college of basic education for educational and human sciences, University of Babylon, Iraq.

and cultures. The view taken by the convention thus affirms the close connections between a medically diagnosed health condition and the social contexts and barriers that prevent persons with disabilities from enjoying and exercising their rights and performing their duties towards their communities and thus actively participating in society. Accordingly, legislation and laws that contribute to integration and the enjoyment of rights must be activated to ensure equal opportunities and equality among individuals.[10]

Jordan was among the first states that supported the international convention. The Kingdom signed the Convention in 2007 and ratified it in 2008 while declaring its full commitment to implementing all provisions in order to achieve the goals and objectives of the convention, which are based on the protection of the rights of persons with disabilities and the full enjoyment of rights and fundamental freedoms. Thus, and in accordance with commitments made to the text of the Convention, the fulfilment of human rights standards is an obligation with respect to the rights of persons with disabilities. At the forefront of these standards is the fulfilment of the right to a comprehensive education while enabling access to all services, facilities, and reasonable accommodations for a safe education commensurate with capability, need, and circumstance, which would help in the achievement of economic, social, and political development for persons with disabilities.

Progress and development in education and technology has contributed to the increasing interest in the provision of programmes commensurate with the capabilities of students with disabilities particularly with regards to those with a hearing disability, for example through the use of computers for education since students with complete hearing loss tend to depend on the use of vision rather than other forms of sensory communication. The first use of a computer in the education for persons with a hearing disability occurred in 1970 when the Stanford Project on Computer-Assisted Instruction for Hearing-Impaired Students was launched.

The use of computers by teachers and speech therapy specialists is considered to have improved the communication process between students with disabilities and the teacher; a method which also helps to communicate real and educational phenomena particularly phenomena that are difficult to see due to spatial dimension issues or the lack of occurrence of said phenomena in the environment. Computer-based classroom group presentations are also considered as contributing towards an interactive learning environment that enhance the motivation and curiosity of students with disabilities and assist in the development of cognitive, emotional, scientific thinking, and problem-solving skills.[11]

As such, and given that societies today face new challenges represented by the nurturing and development of human capital, whether in terms of individuals with disabilities or individuals without disabilities, care for persons with disabilities and the process of empowerment for capability-commensurate roles is as important as any other aspect of social development that seeks to provide reassurance and stability for the present and future of its children.

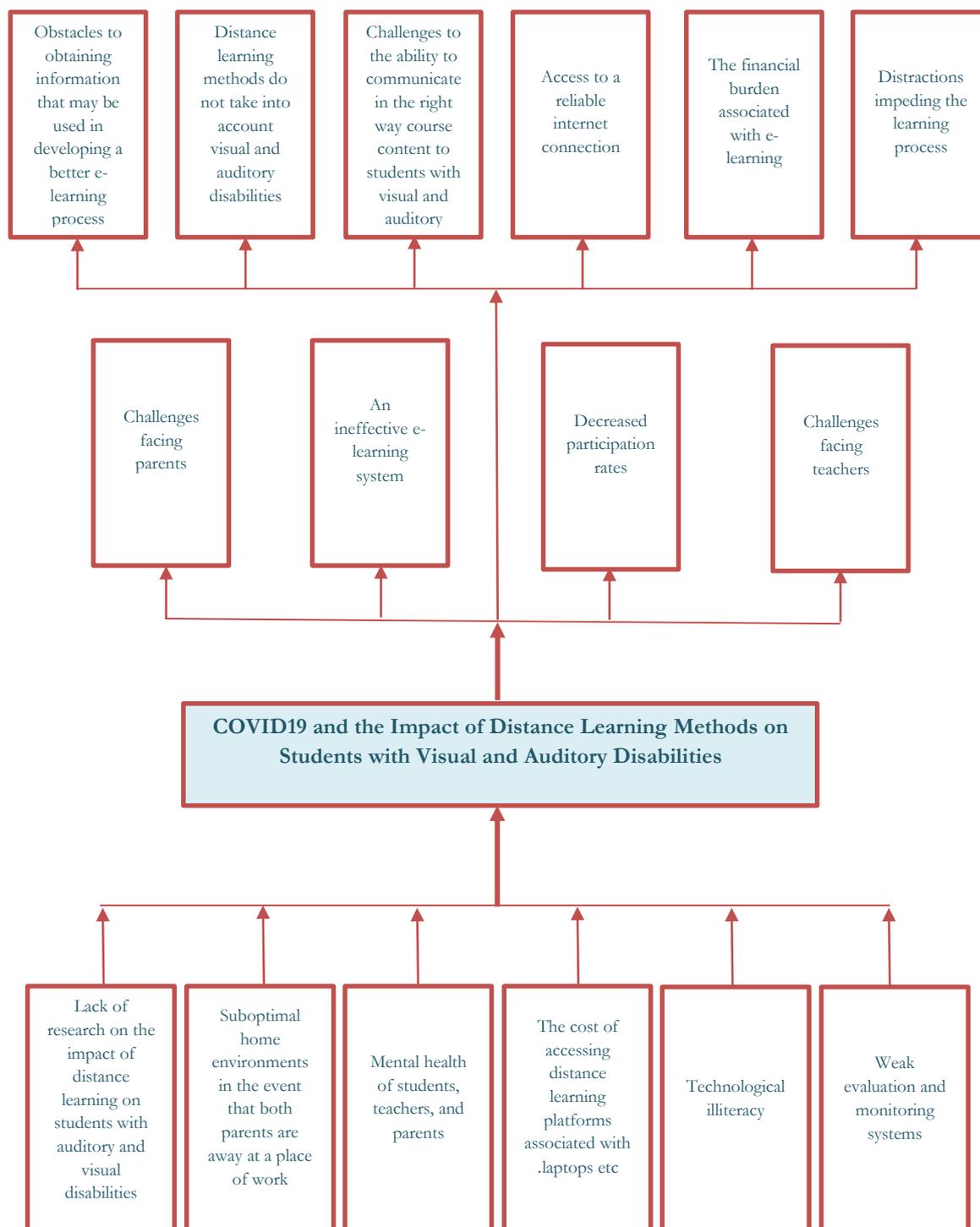[10] Soliman, Gharib. (2008). The international convention for persons with disabilities: towards a deeper understanding of private rights, No. 2244.

[11] Hadaki, Hamza. (2013). The Rights of People with Special Needs: A Comparative Study between Islamic Law and Algerian law. Published master's thesis, Algeria.

5 Challenges

In the context of Jordan and the pandemic, the challenges associated with distance learning effectively represent barriers to education for students with visual and auditory disabilities. Research and analysis have led us to conclude that there is a significant problem affecting distance learning that has resulted in weaknesses affecting the education system as a whole.

5.1 Problem Tree

| Obstacles to obtaining information that may be used in developing a better e-learning process | Distance learning methods do not take into account visual and auditory disabilities | Challenges to the ability to communicate in the right way course content to students with visual and auditory | Access to a reliable internet connection | The financial burden associated with e-learning | Distractions impeding the learning process |

| Challenges facing parents | An ineffective e-learning system | Decreased participation rates | Challenges facing teachers |

COVID19 and the Impact of Distance Learning Methods on Students with Visual and Auditory Disabilities

| Lack of research on the impact of distance learning on students with auditory and visual disabilities | Suboptimal home environments in the event that both parents are away at a place of work | Mental health of students, teachers, and parents | The cost of accessing distance learning platforms associated with laptops etc. | Technological illiteracy | Weak evaluation and monitoring systems |

6 Review and Discussion of Findings

6.1 A snapshot of learning at a distance and the Zarqa Governorate students with visual and auditory disabilities

Distance learning technologies used by primary school and secondary school students with visual and auditory disabilities during the pandemic have varied. Students have however notably used WhatsApp to both communicate with teachers and submit homework, Darsak, a distance learning educational platform, as well as the teacher's guide programme and Microsoft Teams, which are both used on a daily basis and for an average of 4 hours a day. Whether at times of synchronous or asynchronous learning, parents have had to provide support with regards to the interactive process between teacher and student and to ensure that information is delivered in a correct and appropriate manner to students with an auditory disability (in the form of sign language) and to students with a visual disability (in the form of presenting writing assistance and audio recordings for the requested assignments). Parents of students with auditory disabilities generally relayed that parental assistance to children was forthcoming whereas the parents of students with visual disabilities expressed strong frustrations and relayed their inability to properly relay information considering that topics often needed greater and in-depth explanations.

Parents with children in primary school were on the whole able to fulfil education needs. In contrast, given the extra follow-up required of both students in secondary school as well as of their teachers, parents with children in secondary school found it difficult to fulfil those needs, with adverse effects on student cognition and understanding with respect to Mathematics and English. As for the mental health impact on students and parents, one mother exclaimed with reference to her high school-aged and visually-impaired female child, "She can't understand [although] she's old. [The students] have grown accustomed to their teachers and I can't explain [the material] … [Can you imagine] how frustrating it is for me to open up a book and not understand a thing?!"

6.2 Obstacles and challenges faced by the students

Although distance learning offers students with visual and auditory disabilities radical solutions to a number of problems that they face, such as geographic distance and access to transportation, and thus increase the number of available educational opportunities, students still face obstacles and challenges, as indicated by our interviewees:

Technical

The rapid and sudden transition to distance learning was a factor contributing to the weak technical support that students received in terms of quality access to distance learning programmes. Ownership or access to electronic means of distance learning such as laptops was also issue particularly in families with more than one school-attending child, where the cost of purchasing an electronic device such as a laptop is prohibitive and constitutes an added financial burden. Moreover, speedy and stable internet access was also reported to have been a challenge.

Infrastructure-related

Interviewees indicated that remote educational programmes were lacking in content suitable for students with auditory and visual disabilities. For example, students with a visual disability were not provided with audible material and lacked access to software applications such as Adobe Acrobat, which would have assisted in reading the material while students with an auditory disability were not provided with material in sign-language. Moreover, primary school teachers of students in levels 1, 2, and 3 received no training programmes in delivering disability-friendly educational content at a distance. The absence of budgets for said programmes is also notable.

Motivation and Incentive

Self-motivation and incentive are essential for educational success, and with distance learning students assume greater responsibility. However, the challenges and obstacles faced by students with visual and auditory disabilities in relation to the use of different distance learning methods and technologies negatively affect both self-motivation and incentive. All parents stated that children refrained from studying in the absence of follow up and encouragement, which pushed parents to offer constant encouragement and continuous follow up.

Attitudes towards distance learning

The sudden transition to distance learning led some parents to develop a critical attitude towards e-learning. Parents focused on the ineffectiveness of said measures and relayed that the academic year was spent in vain and without their children benefiting from it. Parents also compared between distance learning and face-to-face education and expressed a strong desire to have children return to school. It has thus become clear that it is necessary to highlight that distance learning acts in support of the educational process and to emphasise the central role that technology plays in education both during and after the pandemic.

Psychological

As a result of the challenges and obstacles outlined above and stemming from the mismatch between the expectations and realities surrounding distance learning, students appear to have developed a range of psychological and behavioural disorders including anxiety, loss of self-control, and crying spells. One mother of a student with a visual disability relayed, "My daughter is in tenth grade. She is in a very bad condition and her psychological state is terrible. Every time she tries to take an exam, she starts crying."

6.3 Levels of satisfaction concerning distance learning

Interviewees expressing their satisfaction or dissatisfaction with distance learning split into two groups: One group expressed dissatisfaction and considered distance learning an unsuccessful and unsatisfying approach to education whereas the other group expressed satisfaction and considered the approach as successful and interactive.

7 Options and Alternatives

7.1 Four Sets of Options and Alternatives

In developing alternatives – and in order to push for a more effective educational process through the development of digital-specific and tailored educational content, greater and more frequent student-teacher communication, and more effective teacher support –we relied on analysing the current situation and developing alternatives that ensure that students with visual and auditory disabilities receive the appropriate information, at the right time, and in the appropriate form. The alternatives have been constructed along the following four investment axes: trainers, trainees, training material, and infrastructure. The goal is to contribute to improving distance learning with the aim of increasing the participation rate of students with visual and auditory disabilities whether during the pandemic or any other crisis that may prevent said students from obtaining an appropriate education tailored to their specific needs. The alternatives include:

Measures to improve the effectiveness of distance learning

- Simplified training programmes for parents that enhance the role played in the educational process.
- Specialised training programmes for teachers that enhance the role played in the educational process, improve student access to course content and materials, and support better communication between teach and student.
- Psychological support sessions provided in the form of partnership programmes between psychologists, students, parents, and teachers to address the issues caused by the pandemic and the transition to distance learning and to better the mental health of all students and concerned parties.
- Distance learning evaluation and monitoring programmes that monitor, measure, and address challenges, build on existing strengths, and reduce potential downsides.
- Programmes that facilitate access to disability-specific educational content and material: audible course content and content supported by sign language.
- Programmes that facilitate the adjustment of learning hours to the evening: Delaying learning hours so that working parents can help children with auditory and visual disabilities.

Measures to develop an attractive e-learning investment climate

1- New and improved investment policies to facilitate the establishment of schools specialised in the field of distance learning and open to students of all socio-economic backgrounds.
2- Improved infrastructure: access to electricity, access to a speedy and stable internet connection, access to laptops and computers.
3- Real partnerships between business and education facilitated by a permanent education support fund.

Measures to support telecommunications providers in the provision of free access to distance learning platforms

1- A fund to support free internet access for students during lessons.
2- Technical programmes that facilitate access to distance learning programme.
3- Laptops for students who cannot afford to purchase them through grants offered by telecommunications companies.

Measures to include the education of people with disabilities in crisis and disaster management plans

1- Disability-specific educational content: written content made available in sign language and in audible formats.
2- A hotline to facilitate complaints communication to relevant government authorities.
3- Specific and accessibly-designed educational platforms that facilitate access to course content and material for students with disabilities.

7.2 Options & Alternatives Analysis

Based on our analysis of the situation, the literature reviewed, and the in-depth and semi in-depth interviews conducted with relevant parties, the research was designed in order to bring to the fore the impact of different factors when choosing one set of options and alternatives over another. Optimal options thus were chosen as follows:

1- Programmes to improve the effectiveness of distance learning.
2- Measures to support telecommunications providers in the provision of free access to distance learning platforms.

If relevant authorities pour maximal effort into: 1) improving the effectiveness of the distance learning experience as a whole and with respect to students with visual and auditory disabilities, 2) developing measures in support of telecommunications providers to support the provision of free access to distance learning platforms, and 3) including the education of people with disabilities in crisis and disaster management plans, then the distance learning experience will greatly improve for students with visual and auditory disabilities in the context of the ongoing pandemic. The improvement of said experience would contribute to increasing the participation rate of persons with visual and auditory disabilities and reflect positively on the economic, social and psychological wellbeing of persons with visual and auditory disabilities. And, thus contribute towards the achievement of Sustainable Development Goal 4 (SDG 4) through meeting the targets of ensuring quality, equitable, and inclusive education for all, promoting lifelong education opportunities for all, eliminating disparities in access to education due to gender or wealth, and achieving universal access to high-quality education.[12]

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12 UNDP around the world, sustainable development goals, goal no. 4.

8 Appendix

In addition to the aforementioned research, the research team also conducted a set of interviews with official bodies and specialists in the field of disability-specific education, namely (and in alphabetical order):

- Mrs. Alaa El-Helou, an individual with an auditory disability.
- The Higher Council for the Rights of Persons with Disabilities.
- Mrs. Khouzama Al Rashid, The Jordanian Education Coalition.
- Mrs. Fattouh Younes, The Jordanian Education Coalition.
- Mrs. Rawan Barakat, Founder and director of Raneen.

The paper represents all the findings, analysis, and conclusions of the team, which are based on interviews with the aforementioned individuals, interviews with parents of students with visual and auditory disabilities, and the desk research.

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I N S T I T U T E