

Inclusive Education Study

February 2024

UZBEKISTAN
EDUCATION
for
EXCELLENCE
PROGRAM



Uzbekistan Education for Excellence Program

Inclusive Education Study Findings Report
Cooperative Agreement No. 72011519CA00004

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February 20, 2024

This publication was produced for review by the United States Agency for International Development. It was prepared by RTI International. The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ACRONYMS AND ABBREVIATIONS

dB	decibel
EFL	English as a foreign language
ERP	enterprise resource management system
ICT	information and communication technology
IRB	Internal Review Board
LogMAR	Logarithm of the Minimum Angle of Resolution
MOPSE	Ministry of Preschool and School Education
OPD	organization of persons with disabilities
RDC	Republican Diagnostics Center
RTI	RTI International
STB	student textbook
TG	teacher guide
TLM	teaching and learning material
TPD	teacher professional development
ULA	Uzbek Language Arts
UN	United Nations Educational, Scientific, and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
UNPRPD	United Nations Partnership on the Rights of Persons with Disabilities
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

The Inclusive Education Study explored the status of, drivers of, and barriers to inclusive education in Uzbekistan, particularly as they pertain to students with disabilities. The study respondents included 2,560 students in grades 1, 4, 5, 9, and 11 from 10 purposefully selected schools in Namangan and 10 schools in Sirdaryo, as well as 93 teachers, 19 school principals, and 25 caregivers, and 96 community members.

The study used Bronfenbrenner's Ecological Systems Theory along with an adapted Ajzen's Theory of Planned Behavior as guiding frameworks. The study employed a mixed methods design including screening of students for visual and hearing impairments, qualitative interviews, quantitative surveys, and classroom observations focusing on students screened for potential hearing and vision impairments.

The key findings of the study are summarized as follows:

- The perspectives on inclusive education for children with disabilities, as revealed by various respondent groups, present a complex picture. On one hand, there was a general belief that children with disabilities are treated positively and without segregation in Uzbek society. However, attitudes toward inclusive education were mixed, with about half of the respondents from all groups favoring segregated education as a better option for children with special education needs. This dichotomy was further complicated by the negative biases of some teachers, particularly toward students with cognitive difficulties. Moreover, 40% of parents reported experiencing a sense of segregation and a decrease in close relations within their community following the discovery of their children's conditions. This illustrates the societal challenges and stigmas still faced by families of children with disabilities, highlighting the need for greater understanding and support in both educational and community settings.
- For every school sampled, on average, there were two students with diagnosed disabilities who attended. Interviews with district and regional education administrators showed that most of the primary level students with disability were served through inclusive education or correction class programs, while secondary level students with disability were not tracked by the existing education system. These students, whom the system does not track, were mainstreamed into the general public education system.
- The district and regional medical committees play an important role in identifying disabilities in children. They also approve the type of education the student receives. Some parents avoided the diagnosis or tried to influence the review by the committee, because of their fear of stigma or their lack of trust. Some parents wanted their children to attend school without being segregated into an inclusive or correction class organized only for students with disability, or to have their children homeschooled even when their child's condition would allow for inclusive class.
- Most parents, although satisfied by the attitudes of the homeschooling teachers, believed that their children were not receiving the same quality education as children at schools. Half of the parents believed that their children did not like being homeschooled and wished their children could attend school, but considered schools

lacking in necessary conditions. School principals also believed that school cannot support these children and that they should be homeschooled.

- The study revealed a significant yet often unnoticed challenge in schools: on average, 20 students per school were found to have previously undiagnosed vision and/or hearing impairments. Specifically, 7% of the screened students were identified with mild to moderate vision impairment, while 1.1% of the screened students exhibited potential hearing impairments. This finding underscores the necessity for accommodations or special considerations, given the possibility of having students with more diverse needs than often was assumed in the classroom environment. Despite the finding that teachers already employed various inclusive teaching methods, the study highlights a need for further enhancement of these approaches.
- Lack of training, lack of specialized teaching and learning materials, and large class sizes were highlighted as the main impeding factors for inclusive education in Uzbekistan by all groups (teachers, school principals, education officials), while teachers and school principals also highlighted factors like parental attitude, severity of disability, lack of practical guidelines, and support from government. Although attitudes of teachers were not mentioned as an impeding factor, school principals believed some teachers were not willing to integrate students with disabilities into their classrooms due to the increased workload and perceived negative effects on other students in the class.

Overall, this report provides a detailed examination of the current state of inclusive education in participating schools, reflecting a diverse range of perspectives from various stakeholders. The findings of the study can support future programming and further research including research on personalized financial support mechanisms to families and on teacher self-efficacy and perceptions.

SECTION 1: BACKGROUND AND STUDY DESIGN

1.1 PROGRAM OVERVIEW

The Government of Uzbekistan Ministry of Preschool and School Education (MOPSE) is committed to an ambitious program of systematic and comprehensive reforms. The country aims to create an education system that can produce graduates with critical thinking, problem solving, and practical skills that will enable them to succeed.

To support the MOPSE in achieving its reform agenda, the United States Agency for International Development (USAID) initiated the Uzbekistan Education for Excellence Program (the Program) on December 9, 2019. The Program is implemented by a consortium of implementing partners, including RTI International (RTI) as the consortium lead and Florida State University and Mississippi State University as partners. The RTI consortium provides the expertise and experience needed to help the MOPSE achieve and sustain three overarching results:

1. Improved Uzbek Language Arts (ULA) and Mathematics outcomes in grades 1–4.
2. Enhanced information and communication technology (ICT) instruction for grades 1–11; and
3. Improved English as a foreign language (EFL) instruction in grades 1–11.

Over the life of the Program, in close collaboration with the MOPSE, the Program:

- Developed relevant and appropriate student learning standards for ULA, Mathematics, ICT, and EFL.
- Customized or developed and piloted revised student textbooks (STBs) and teacher guides (TGs).
- Developed a Digital Platform to provide electronic versions of all curriculum products to teachers and education administrators.
- Designed and implemented an in-service teacher professional development (TPD) approach.
- Conducted Program monitoring, evaluation, and learning activities, including impact evaluation research.

The Program developed new approaches to curriculum products development and support for TPD, including the Digital Platform for standards and instructional materials. These materials and approaches were used as the centerpieces to help enhance teachers' capacity to understand, apply, reflect on, and improve classroom practices and ultimately student learning outcomes.

For this study, the Program worked closely with the Republican Diagnostics Center (RDC) under the MoPSE, which oversees inclusive education in the MOPSE system, including the education of students with disabilities.

1.2 PURPOSE OF THE STUDY

The purpose of this study was to better understand the status, drivers, and barriers to inclusive education in Uzbekistan, particularly as they pertain to students with disabilities.

The study's specific focus originally was on these students' access to, and use of, the curriculum and teaching and learning materials (TLMs) the Program has developed, both inside as well as outside of public government schools (including in their homes). Because of the delay of the start of the Inclusive Education Study and the change in MOPSE direction for primary TLMs, the design of the study was adjusted to meet the new context. Under the adjusted design, we investigated the status of inclusive education in general without focus on TLMs.

1.3 STUDY BACKGROUND AND CONTEXT

The study was initiated because of findings derived from data collected from schools by the Program in early 2022. Data were collected by the Program in February and March 2022 in the pilot districts of the Namangan and Sirdaryo Regions. For the 127,450 students in 213 schools from which the Program collected data, the school administration provided information based on the actual certification of a disability. School administrators identified 351 children certified as having a disability (128 girls and 223 boys), of whom 126 children (46 girls and 80 boys) were home schooled. These data suggested a larger than previously estimated attendance rate of students with reported disabilities in regular public schools as well as a significant number of children with disabilities being home schooled. The data also raised questions about teachers' and diverse learners' needs and about the use of the new standards, TLMs, and teaching methodologies the Program introduced, as well as related inclusive education approaches.

According to Uzbekistan's Ministry of Health, in a report from December 28, 2020, in Uzbekistan, there were 70,804¹ school-aged children under 16 years old who had a disability. While 38,785 students attended general public schools, 9,170 students attended specialized public schools. In addition, 13,197 students with a known disability were educated at home with the assistance of the public education system (e.g., through regular teacher visits). Furthermore, disability prevalence in the country was estimated at 2%, which contrasts sharply with global estimates of 15% (United Nations Partnership on the Rights of Persons with Disabilities [UNPRPD], 2022), suggesting significant underestimation and under-reporting of disability in Uzbekistan.

While critical gaps still exist, great strides have been made in the country on inclusive education in recent years. Following years of little or no attention to the topic and a perspective generally informed only by medical concerns, which promulgated a segregated approach to educating children with disabilities, the context is changing. In 2009 the Government of Uzbekistan signed, and in 2021 ratified the Convention of the Rights of Persons with Disabilities, and several laws since, signaling that the country is embarking on a pathway to inclusive, rather than segregated education.

In Uzbekistan, inclusive education is currently described as a barrier-free, adapted educational environment for students with special needs as defined in Uzbekistan's Cabinet of Ministers Decree #638 (October 12, 2021). The decree, titled "Approval of regulatory and legal documents regarding education of children with special needs," outlines the goal of promoting inclusive education through use of special tools and methods, involving teachers

¹The Government of Uzbekistan Ministry of Health reported in 2020 that in Sirdaryo Region, 1,861 students with disabilities attended general public schools, and 493 students were home-schooled. In Sirdaryo, 195 students attended specialized schools, and 191 were not in formal education programs. In Namangan Region, 2,382 students with disabilities attended general public schools, 1,100 students were home schooled, 1,005 students attended specialized schools, and 814 were not in formal education program. The Ministry of Health's report is available at this link: https://ssv.ssv.uz/uz/open_ministry/view/16-eshgacha-blgan-nogiron-bolalarni-itish

trained in special needs education, to provide quality general secondary education that serves the effective adaptation and full integration into society of students with disabilities. Cabinet of Ministers Decree #638 is pursuant to the Presidential Decree #4860 (October 13, 2020), “On measures to further improve the system of education of children with special educational needs” approving the concept for the development of inclusive education in the public education system in 2020–2025, as well as the roadmap for its implementation. In general, “inclusion” efforts of the Ministry have so far focused on special, segregated schools (boarding schools) for children with disabilities and providing some support for home schooling. Efforts also included enrolling children with mild disabilities (i.e., limited vision or hearing; mild forms of autism, cerebral palsy, or Down syndrome) in regular schools as part of a pilot project with 42 schools that started in the 2021–2022 school year. Yet, even in these inclusive public pilot schools, students were at times segregated into special classrooms within the school. Schools with more than 3 students with the same type of disability per grade were required to provide “correction classes” to comply with the policy from Cabinet of Ministers #638 from October 12, 2021, which restricts the number of students with the same disability in one mainstream classroom to fewer than 4. This approach of integrating students with mild disabilities into ordinary schools started in 2021 with grade 1 students as a pilot. The Government of Uzbekistan is expanding this approach to one higher grade each year. By the school year 2023–2024 this approach expanded up to grade 3.

There is a lack of research to date to evaluate the effectiveness of these models as well as a lack of research with comprehensive primary data collection on inclusive education in Uzbekistan in general. The most comprehensive study in recent years was conducted in 2019 by the United Nations (UN) in Uzbekistan, specifically, by the United Nations Children’s Fund (UNICEF); United Nations Development Programme (UNDP); United Nations Population Fund (UNFPA); World Health Organization (WHO); and United Nations Educational, Scientific, and Cultural Organization (UNESCO), and was a more general analysis of the situation of persons with disabilities. This needs assessment study included over 4,831 households with and without persons with a disability across the country (UNDP, UNFPA, WHO, UNESCO, & UNICEF, 2019). This study was followed by several policy briefs, situation analyses, and recommendation papers on more general inclusion of people with disabilities, including reports by UNICEF (UNICEF, 2018), the UNPRPD (UNPRPD, 2021 and 2022), and the World Bank (World Bank, 2021), and publications and discussion pieces by local researchers and advocates (e.g., Chicherina & Bondareva, 2022 Yusupov & Abdukhalilov, 2022). There have also been several small-scale qualitative or diagnostic studies, including qualitative dissertation research with 23 teachers, parents of children with disabilities, and representatives of organizations of persons with disabilities (OPDs) (Nam, 2021) on understanding of inclusive education and its enactment. In 2022, a diagnostic study was commissioned by USAID (White, J., D’Agostino, T.J., Ikramova, S., O’Neill, S., & Conaghan, B., 2022), which featured key informant interviews and focus groups with 22 teachers and 37 parents and explored “the status and quality of education for children with disabilities in three locations” (p. 4) of the country. Also in 2022, the Japan International Cooperation Agency commissioned a baseline study for a new program on inclusive education in preschool (International Development Center of Japan, Inc., 2022).

These contributions and publications to date highlight critical barriers to inclusion, including, among others, the following.

- Gaps:
 - in the legal framework (Chicherina & Bondareva, 2022; UNDP et al., 2019;

- UNICEF, 2018; UNPRPD, 2021);
- in the implementation and monitoring of existing laws and policies (UNDP et al., 2019; UNICEF, 2018; UNPRPD, 2022);
- in inclusion of OPDs in the development of laws, policies, and interventions (UNPRPD, 2022);
- in coordination, communication, and advocacy (White, J. et al, 2022); and
- in resourcing of inclusive education (White, J. et al, 2022; UNPRPD, 2021).
- Lack of accessibility of public infrastructure (UNDP et al., 2019; Yusupov & Abdukhalilov, 2022)
- Weakness in early identification, relevant data collection, and management (Chicherina & Bondareva, 2022; Government of Uzbekistan, 2023; UNPRPD, 2021)
- Limited knowledge and capacity of education stakeholders (University of Notre Dame, 2022; Yusupov & Abdukhalilov, 2022)
- Lack of appropriate curricula and teaching and learning resources (Government of Uzbekistan, 2023; UNDP et al., 2019)
- Larger societal issues around the stigma associated with disability and a prevalence and perpetuation of a medical understanding of disability and inclusion in laws, policies, and discourse on inclusive education (e.g., Chicherina & Bondareva, 2022; Nam, 2021; UNDP et al., 2019; White, J. et al, 2022).

Yet few efforts to date included primary data collection from a wider range of stakeholders, or more quantitative data on factors influencing the implementation and quality of inclusive education, such as disability prevalence, socio-cultural and socio-economic factors, or other barriers to inclusion.

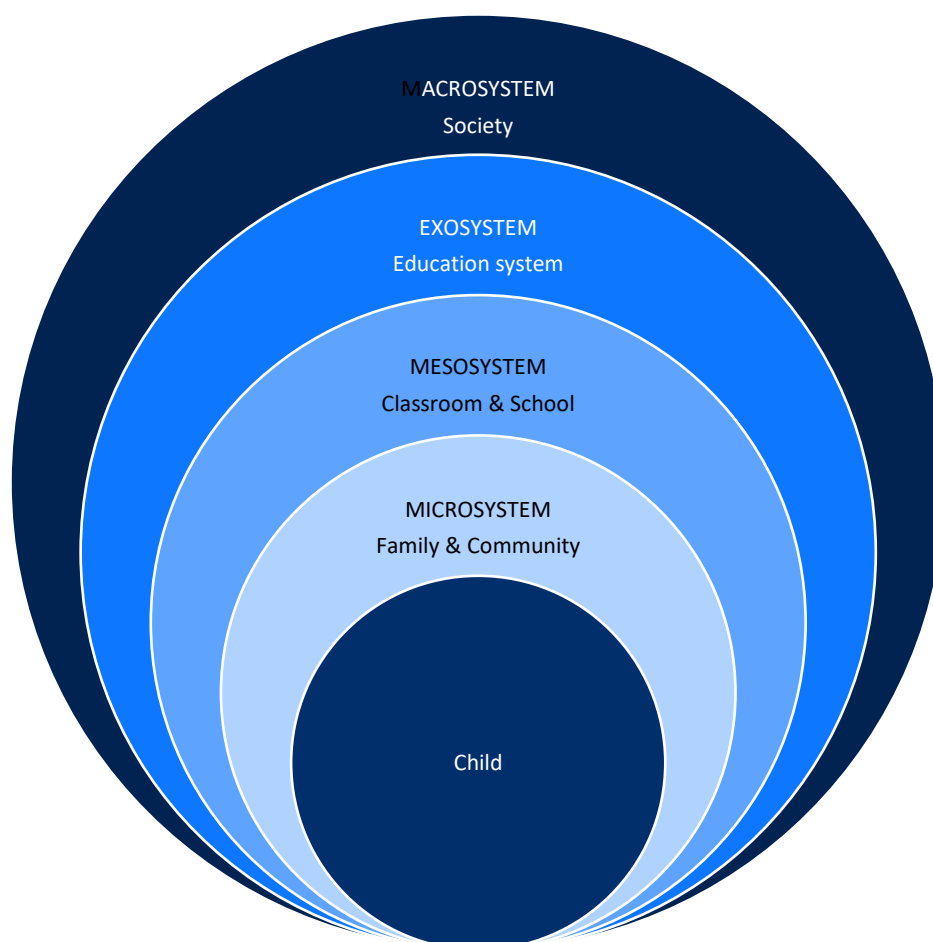
This study provides a unique contribution to this past work by including primary data collection on specific aspects of disability prevalence, attitudes, self-efficacy, school climate, and barriers to inclusive education for students, teachers, school principals, parents, and community members, in addition to Ministry personnel. As such this study will provide important information for future interventions, including the new USAID-funded All Children Succeeding Activity and efforts of the Government of Uzbekistan to further equitable access to transformative quality education, as also agreed on in the recent Partnership Compact for Education Reform (for 2023–2026) with development partners (Government of Uzbekistan, 2023; Global Partnership for Education, 2023).

1.4 STUDY DESIGN AND RESEARCH QUESTIONS

For this study, disabilities were defined as “long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder [individuals’] full and effective participation in society on an equal basis with others” (UN, 2006, p. 4), and inclusive education was understood as the integration of students with disabilities into regular classrooms for 80% or more of the school day.

The study used Bronfenbrenner’s Ecological Systems Theory (Bronfenbrenner, 1979) (**Figure 1**) as a theoretical framework to understand especially students’ experience within, and interactions with, various systems, including at the levels of both their family and their classroom, but also within the larger education system and in general among society.

Figure 1. Ecological Systems Theory Adapted as a Theoretical Framework for the Present Study



Bronfenbrenner's (1979) condensed research work describes the essential mechanisms that steer child development, creating the Ecological Systems Theory as a framework for understanding human growth. It views all elements as interconnected, emphasizing that our comprehension of developmental processes is shaped by context, culture, and historical background (Darling, 2007). Furthermore, the study adapted Ajzen's Theory of Planned Behavior (Ajzen, 1991) to examine specific drivers of inclusive education at the school and classroom levels, exploring teachers', school directors', parents', and community members' attitudes and teachers' self-efficacy regarding inclusive education as well as prevalent subjective norms and the school climate. In the case of teachers, the framework also helps examine how these factors may influence teachers' behavioral intentions toward inclusion.

The overarching research questions for this study were:

What is the status of inclusive education in Uzbekistan in regular public schools?

What are drivers and barriers to inclusive education in regular public schools for different stakeholders, including students, school and Ministry personnel, caregivers, and community members?

The study featured a convergent mixed methods design to appropriately address these research questions, which allowed the study team to collect qualitative and quantitative data, separately and together, and then jointly consider the data in the analysis.

1.5 METHODOLOGY

1.5.1 Participant Selection

Participants for interviews and surveys, who were key data sources for several of the research questions, are outlined in **Table 1**. In addition to participants at different levels of MOPSE management, the Program's interventions focused on the two regions of Namangan and Sirdaryo, which were the focal geographies for this study.

Within each region, study participants were chosen as follows. The study engaged 10 schools in each region that were randomly selected from public schools that were part of the Program pilot in each region and had at least 3 students with disability who were being homeschooled by the school (an estimated total of 65 schools out of 213 Program pilot schools met this criteria). School selection was stratified by location—that is, in each region, 5 urban and 5 rural schools were selected to participate in the study. Participating communities were the immediate catchment areas for each selected school.

Once the MOPSE approved the participation of the selected schools, the Program team worked with the school administrations to select one class from grades 1, 4, 5, 9, and 11. The Program selected some classes from first shift and some from the second shift in line with the school timetable, to enable day-long data collection at the schools without having to hold teachers and students longer than their ordinary school day. Once the classes were selected, the class lead teacher² for that class also became part of the study. However, the teachers' participation in the study was voluntary, thus, if the class lead teachers were not willing to participate, the teacher who had the most teaching hours in the class was selected (in secondary grades these classes were mostly Mathematics, English, Native Language, etc.).

For participating classes, all students in the class became part of the study and were included in classroom observations, student screening, and student interviews. Only students in each participating classroom whose parents and caregivers provided permission were screened for a vision or hearing impairment, followed by a short interview.

To identify community participants, the study planned to include up to five parents or caregivers of students with a known disability, who already attended the selected school or were homeschooled by the school, in interviews. The study also interviewed up to five community members, selected by convenience through snowball sampling procedures starting with suggestions by the school director, the above-mentioned parents and caregivers, and the Mahalla³ officials.

In advance of data collection, RTI completed applicable Internal Review Board (IRB) procedures to ensure the protection and informed consent of all participants in this research.

1.5.2 Instrumentation

As outlined in **Table 1**, data were collected from a variety of sources, including through a desk review, surveys, interviews, screening, and classroom observations.

² In the Uzbekistan education system, a class lead teacher is responsible for non-teaching support to their assigned class. Although they support their classes as needed throughout the week, one hour is dedicated weekly, typically on Fridays, during which these teachers discuss various matters with their class. The class lead teachers can also teach their classes any subjects that they are specialized in. In primary grades, class lead teachers are usually mathematics and language arts teachers.

³ Mahalla is a smallest administrative unit of governance in Uzbekistan, which is one level below the district governance.

For each of these, the Program conducted a literature review for existing instruments for adaptation to the Uzbek context or beyond. The team then drafted or adapted existing instruments to a first version, translated the instruments into Uzbek, and tested each with up to five individuals representing the anticipated participant groups in February 2023.

Table 1. Study Research Questions from a Lens of Ecological Systems Theory and Anticipated Data Sources

System	Research questions	Data source
MACROSYSTEM— Society	<ol style="list-style-type: none"> 1. What current laws and policies exist related to disability-inclusion? 2. What data exist, and what do data say about disability prevalence in Uzbekistan? 3. What family supports are available to support children with disabilities? 	<ul style="list-style-type: none"> ▪ Desk review
EXOSYSTEM— Education System	<ol style="list-style-type: none"> 1. What current laws and policies exist related to disability-inclusive education? 2. What data exist, and what do data say about children with disabilities in government primary schools in Uzbekistan? 3. What education supports are available for families with children with disabilities? 	<ul style="list-style-type: none"> ▪ Desk review ▪ Interviews with key informants at the MOPSE
MESOSYSTEM— Classroom & School	<ol style="list-style-type: none"> 1. What current experiences exist with inclusive education at the school level? 2. What is the prevalence of different forms of disability at the school level? 3. What are school directors' and teachers' attitudes toward inclusive education? 4. What is teachers' level of self-efficacy for inclusive instruction? 5. What are school- and classroom-level barriers and drivers to inclusive education? 6. What assistance (materials, services, etc.) is available to schools to support learners with disabilities? 	<ul style="list-style-type: none"> ▪ Desk review ▪ Surveys with school leaders and teachers ▪ Interviews with school directors and teachers ▪ Classroom observations ▪ Screening of classroom students
MICROSYSTEM— Family & Community	<ol style="list-style-type: none"> 1. What current experiences exist on educating children with disabilities at home? 2. What are community- and family-level barriers and drivers to inclusive education in public schools? 3. What are community members' attitudes toward children with disabilities and inclusive education? 4. What assistance (materials, services, etc.) is available to families to support children with disabilities? 	<ul style="list-style-type: none"> ▪ Desk review ▪ Interviews with community members ▪ Interviews with families of children with disabilities
CHILD	<ol style="list-style-type: none"> 1. What are children with disabilities' experiences with inclusive education? 2. What are children without disabilities' experiences with disability-inclusion? 	<ul style="list-style-type: none"> ▪ Interviews with children with disabilities ▪ Interviews with children without disabilities

Table 2 outlines the final data collection instruments used for the study, with the number of respondents targeted and actual. For quantitative data collection, apart from screening for hearing and vision, the Program used the Tangerine data collection platform to electronically collect data on tablet devices.

For the hearing and vision screening of the students, the Program used HearScreen and Vula Vision, which are clinically validated smartphone-based applications distributed by hearX Group. At the beginning of the screening, each student was asked whether they had difficulty in their hearing or vision. The study screened all consenting students in the grade including those who wore glasses and self-reported having mild or moderate vision impairment with their glasses on.

The HearScreen application was configured to measure hearing loss in decibels (dB) across frequencies ranging from 1000Hz to 4000Hz. The audio played to the students in a quiet room via the Sennheiser HD280 Pro Headsets attached to the smartphone. The screening device was configured to conduct a retest if a student did not hear at least one sound, to make sure that results were not influenced by outside factors like background noise. The final result was categorized as either “Pass” if the child could hear all the sounds with a retest if needed, or “Referred” if the child did not hear at least one of the sounds even with a retest. The screening solution was designed to only identify whether there was a potential hearing difficulty, not the actual level of impairment.

The Vula Vision application was used for vision screening. The application displays the letter “E” in various orientations and size. The specialist administering the screening holds the device at 2 meters distance to the child. The application categorized visual impairments using Logarithm of the Minimum Angle of Resolution (LogMAR) scores. The results of the visual screening were categorized as follows:

- Normal (LogMAR 0 – 0.3)
- Mild visual impairment (LogMAR > 0. – 0.48)
- Moderate visual impairment (LogMAR > 0.48 – 1.0)
- Severe visual impairment (LogMAR > 1.0)
- Blindness (LogMAR > 1.3)

Table 2. List of Data Collection Tools

#	Data collection tool name	Target audience	Targeted number of respondents	Actual number of respondents	Data collection method (qual/quant ⁴)	Data collection platform
1	Teacher interview form (with attitudes and efficacy surveys)	Teachers	100	93	Quantitative	Tangerine
2	School principal interview form (with attitudes surveys)	School principals	20	19	Quantitative	Tangerine

4 Given the broad scope of possible responses, all quantitative data collection protocols (apart from the student interviews) included note taking forms, where data collectors took note of any additional response or comments the interviewees provided that were not captured by the response options that were developed during tool testing.

Table 2. List of Data Collection Tools

#	Data collection tool name	Target audience	Targeted number of respondents	Actual number of respondents	Data collection method (qual/quant ⁴)	Data collection platform
3	Parents interview form (with attitudes surveys)	Parents	Up to 100	25	Quantitative	Tangerine
4	Community members interview form (with attitudes surveys)	Community members	Up to 100	96	Quantitative	Tangerine
5	Classroom observation form	Classrooms	100	71	Quantitative	Tangerine
6	Student interview form	Students	2500	2533	Quantitative	Tangerine
7	Education administrators survey form	Education administrators in the MOPSE system	6	6	Quantitative	Tangerine
8	Education administrators interview form	Education administrators in the MOPSE system	6	6	Qualitative	Paper based
9	Hearing screening	Students	2500	2560	Quantitative	HearScreen
10	Vision screening	Students	2500	2560	Quantitative	Vula Vision

As part of teacher, school principal, parent, and community member interviews, the Program also administered a survey on attitudes toward inclusive education. With teachers, the interviews included an additional survey on their self-efficacy on implementing inclusive teaching practices. Both surveys were previously used and tested by RTI in the Reading for Ethiopia's Achievement Developed Technical Assistance project, funded by USAID. The Program translated the surveys in consultation with the RDC and tested them as part of initial piloting of the tools in February 2023. The attitudes survey had a slightly different number of items depending on the group targeted for interview. The attitudes survey for teachers had 14 items; for school principals, 12 items; and for parents and community members, 10 items. The efficacy survey had 11 items.

Following refinement and finalization, the Program trained data collectors in the application of each instrument.

1.5.3 Follow-Up on Previously Undiagnosed Cases of Hearing and Vision Difficulties Found During Study Screening

The Program committed to inform and support parents of students screened for a potential hearing and vision impairment. The Program team contacted the public district and regional medical centers to explore their capacity to conduct medical diagnoses for hearing and vision impairment. Almost all medical facilities were found to have the necessary equipment for vision diagnosis. The Program informed and referred the parents of students with potential vision impairment directly without sharing the results of screening with any other third party.

For follow-up on a potential hearing impairment, however, the study noted a significant gap in the availability of medical screening services at the district level. Yet, there were appropriately equipped medical centers in the regional capitals. To bridge this gap, the study worked with the Republican Scientific-Practical Center of Sports Medicine to arrange for medical follow-up and organized individual transportation to the regional capitals for families to visit the medical center.

1.5.4 Data Collector Training and Data Collection

The Program contracted experienced data collectors, psychologist-methodologists, including representatives from MOPSE and RDC, as data collectors for the study. Data collector training took place on September 13 to 15, 2023. The Program team thoroughly trained data collectors on each data collection instrument and its administration protocol, including for the interviews, classroom observations, and screenings. During the training, the data collectors visited a school twice to practice the data collection process in the relevant setting with students, teachers, parents, and community members.

In total, the Program trained 14 data collectors and 2 specialists from the RDC, forming 2 teams of data collectors each having 8 individuals. Program staff accompanied each data collection team during the data collection process to ensure appropriate procedures were followed, especially regarding child well-being and data privacy protection. The data collection took place September 18 to 29, 2023. Each team visited 1 school per day.

The Program contacted school management of each school 2 weeks in advance of data collection to provide information about the collection and request their support. School administrators secured a consent form, provided by the Program, from the parents of children in the grades sampled for the study. The consent form contained information about the activity, the screening process, and pictures of the sample process. The students whose parents did not consent to their participation were not included in the study. In addition, before the start of interview and screening, data collectors verbally asked students for their consent as well, even though their parents consented. Students who did not want to participate were not screened or interviewed.

1.5.5 Data Analysis

The Program used factor analysis and internal consistency analysis to analyze the results of the attitudes and efficacy surveys and use that analysis to construct attitudes and efficacy scales. The factor analysis on the attitudes toward inclusive education survey reduced the final number of items from 14 to 10 items (to 8 questions for school directors, and 6 questions for parents and community members). These 10 items together explained 91% of variance and showed acceptable internal consistency (Cronbach's alpha of 0.70). To create the attitude scales for each question the study team recoded the responses for the survey (*Strongly agree, Agree, Neutral, Disagree, Strongly disagree*) to values ranging from 1–5, reverse coding the items that were reverse-worded. Thus, each teacher participating in the interview received an attitudes score ranging from a minimum of 10 to a maximum of 50 (consequently, for school principals 8–40, for parents and community members 6–30). The Program analyzed the scales for each group separately and compared the scale averages for different groups normalizing the scores and using the Analysis of Variance test. For the teacher self-efficacy toward inclusive education scale, the Program kept 9 of 11 items in total, which together explained 85% of variance and had good internal consistency (Cronbach's alpha of 0.84).

The Program conducted regression analysis of both attitudes and efficacy scales outcomes with other factors like gender; years of teaching experience; having had training in inclusive

education; having a student with a known disability in the class; having a relative who has a disability; and receiving support from school administration, district, regional offices.

The remaining survey items in each of the targeted group interviews were analyzed using frequency and cross-tabulation tables. Independence tests and tests for significance of mean difference were used during the analyses as appropriate. Responses on open questions followed inductive qualitative data analysis procedures and were also tabulated, summarized, and combined with the quantitative summaries in the forms of frequency or cross-tabulation tables. This allowed the Program to enrich, and at times explain, quantitative findings. The Program triangulated the findings of classroom observations, student interviews, and screening results of students.

1.6 LIMITATIONS

Although the Program tried to cover the range of stakeholder groups with a high number of targeted participants, employing robust analysis methodologies, the Program acknowledges a few limitations of the study findings.

The Program sampled from the schools that had at least 3 homeschooled students who were supported by the school, to get a higher number of interviews with parents of students with disabilities. There were only 65 schools that met this requirement among the 213 Program pilot schools, while on average, schools in Uzbekistan are reported to have only around 2 students with a known disability either homeschooled or attending school.⁵ Thus, study schools differed somewhat from the general public-school population by already supporting a higher number of students with a known disability.

Although the Program targeted up to 5 parents of students with a disability for each school, only 1–2 parents per school participated, on average. The reasons are outlined below, in the order of significance:

- Schools generally did not have many students with disabilities coming to school or being supported by the school via homeschooling.
- Not all parents were willing to participate in the study, and many did not want data collectors to visit their house, nor did they want to go to the school themselves. The Program could not explore the reasons that parents were not willing to participate in the study as the school made first contact. To a certain extent this adds bias to the study findings.
- As the data collection for the study coincided with the cotton harvest, some of the parents targeted for the study were not available to participate in the study.

Disability is a sensitive topic for some parents and for some individuals working in the education system. As a consequence, there may have been a certain degree of social-desirability bias.

The classroom observations of the study were focused on students with hitherto undiagnosed disability and their experiences and behaviors in the classroom. As a result, teachers did not know about these students' potential difficulty, likely affecting their classroom practices. The Program did not have control groups and did not track other students without any disability in the classroom. Thus, the Program cannot conclusively

⁵ The February 2022 school profile data collection activity in 213 schools showed that there were on average 2 students with disability either homeschooled or attending school.

explore any relationships between potential disability status of a student and the observed behavior by teachers and students in the classroom.

The Program explored a snapshot of the status of inclusive education in Uzbekistan, and in the participating schools specifically, as of September 2023. While interpreting the results one must consider that major structural change took place in early 2023 at central levels. The MOPSE restructuring changes at regional, district, and school levels occurred at a rapid pace. Thus, the structure and the system described in place might have already been changed or restructured by the time this report is being read. The Program advises reading this report together with any new laws or regulatory documents concerning the education system in general and inclusive education specifically.

SECTION 2: MAIN RESULTS

2.1 PREVALENCE OF DISABILITIES AT SCHOOLS

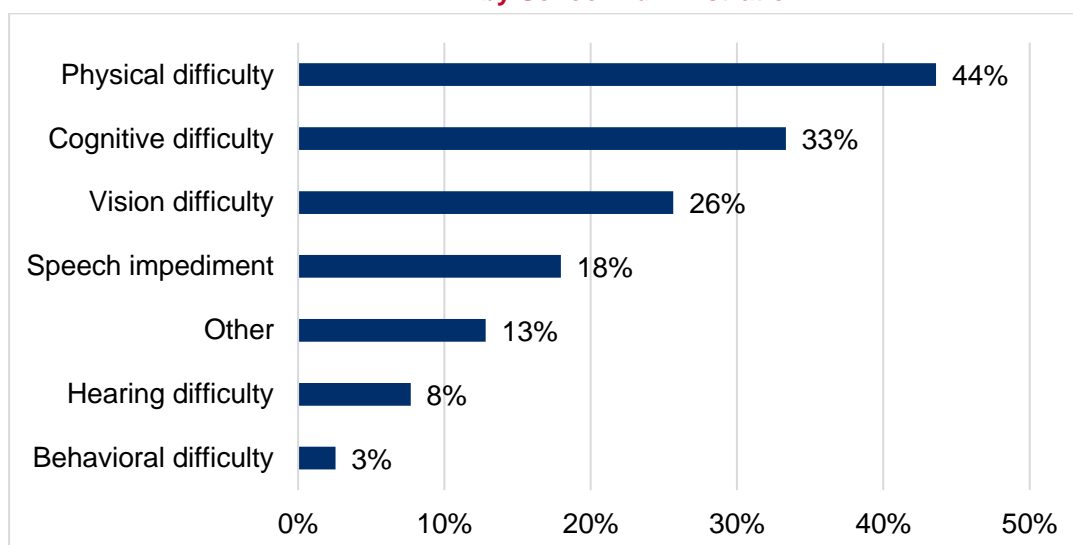
2.1.1 Prevalence of Diagnosed and Undiagnosed Disabilities at Schools

To understand the prevalence of disabilities in participating schools, the survey team asked teachers and school principals how many students with disabilities attended school, how many were supported via homeschooling, and what types of disabilities these students had.

Findings indicate that there were 40 students (on average 2 per school) with a known disability attending school. These students were attending primary and secondary levels. Students with disabilities attending school in secondary grades are not tracked systematically in the education system, as there are no supporting programs for this group of students in the schools as of 2024. The education system tracks only students homeschooled at all grades and those attending inclusive education classes or correction classes in primary grades.

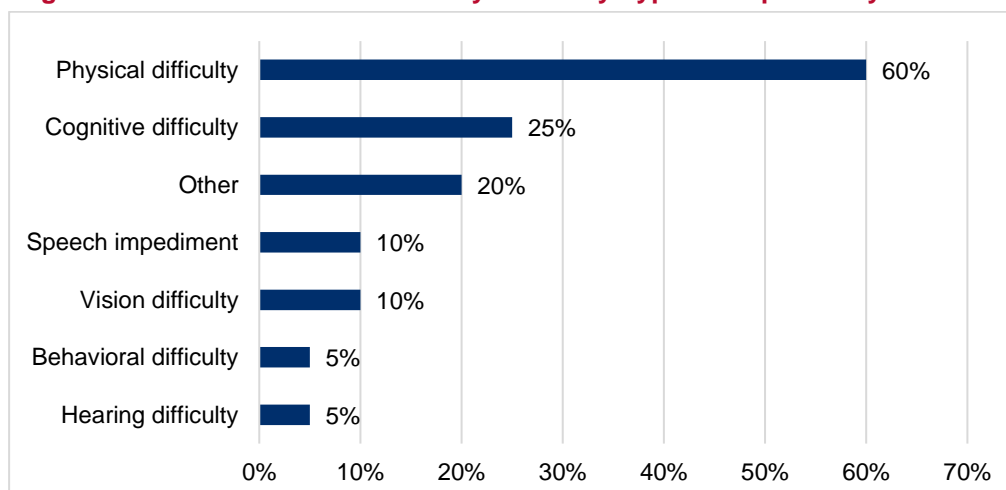
Figure 2 below shows the distribution of school administrators' responses on disability prevalence among students in their school. Physical disability was the most reported type of disability (44%), followed by cognitive difficulty (33%) and vision difficulty (26%). Behavioral difficulty was the least reported type of disability. The students with a known disability, as reported by their school administration, attended all grades, not only primary.

Figure 2. Students with a Known Disability Attending School by Disability Types as Reported by School Administration



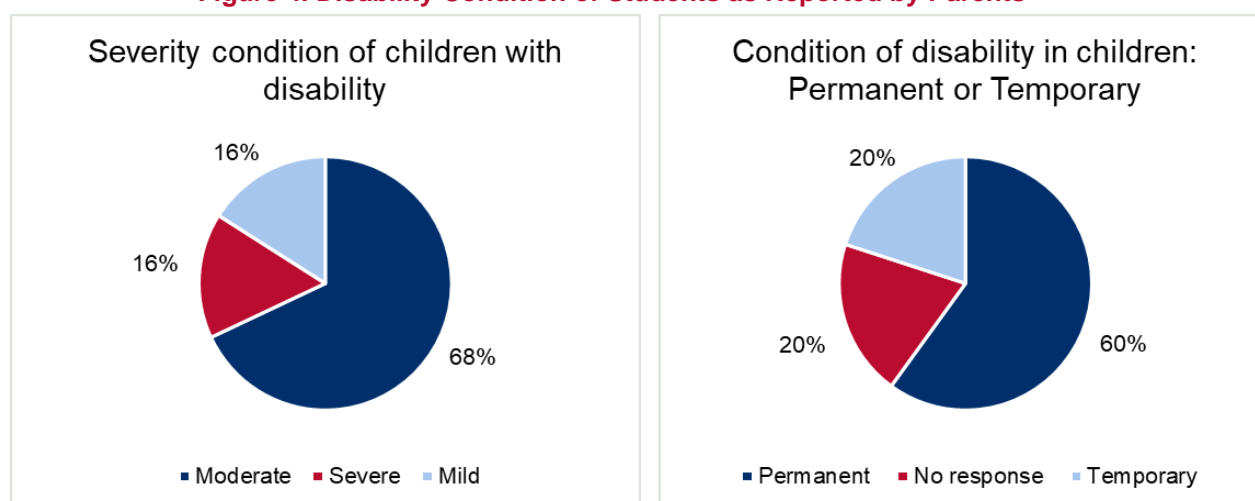
The Program used the sampling criteria of at least 3 homeschooled students per school, to find enough parents to interview. There were 65 homeschooled students in the 20 study schools. **Figure 3** provides the breakdown of homeschooled students by disability type as reported by teachers. Physical difficulty was the most common type of disability teachers reported (60%). In addition, 25% of teachers reported that they were teaching a child with cognitive difficulty, and 20% of teachers reported homeschooling students with other types of disabilities that were related to long-term illnesses or epilepsy. A higher percentage of homeschooled students compared to students who attended school had physical or other difficulties.

Figure 3. Homeschooled Students by Disability Type as Reported by Teachers



The study team asked parents about homeschooling. Among the 25 parents with children who were homeschooled and who participated in the study, most (68%) reported that the condition of their children was moderate, while 16% described the condition of their children as severe. When asked whether the disability of their child was permanent or temporary, most parents (60%) said the disability was permanent (**Figure 4**).

Figure 4. Disability Condition of Students as Reported by Parents



As part of the student screening for potential hearing and vision impairments, the study found that 7% (178 students) of the students who participated in the study had a potential mild or moderate vision impairment, and 1.1% (28 students) of the students had a possible hearing impairment, as shown in **Table 3** and **Table 4**. Overall, the study uncovered almost 200 students with previously unknown vision and hearing difficulties. The study did not screen students who were already wearing hearing devices or students who had a known severe vision impairment.

Table 3. Results of Vision Screening

Vision impairment category (in either/both eye)	Number of students	Percentage of students
Severe visual impairment	0	0%

Table 3. Results of Vision Screening

Vision impairment category (in either/both eye)	Number of students	Percentage of students
Moderate impairment	41	1.6%
Mild impairment	137	5.4%
Normal	2280	89%
Screening not complete or done*	102	4%
Total students participated in the study	2560	100%

*Screening was stopped or not conducted if child did not want to participate or if the child had a known vision disability

Table 4. Results of Hearing Screening

Hearing screening result (in either/both ear)	Number of students	Percentage of students
Referred	28	1.1%
Pass	2430	95.9%
Screening not complete or done*	102	4%
Total students participated in the study	2560	100%

*Screening was stopped or not conducted if child did not want to participate or if the child had a known hearing disability

The screening results showed that there were, on average, nearly 20 students per school that had a potential vision or hearing impairment. Students' grade was correlated with a potential previously undiagnosed vision impairment, and results showed that a relatively larger proportion of students in the study were screened for a potential vision impairment in higher grades (grade 9 and 11) than in lower grades.

As per the follow-up process outlined in Section 1.5.3 Follow-Up on Previously Undiagnosed Cases of Hearing and Vision Difficulties Found During Study Screening, the study team contacted the parents of students identified with potential hearing impairments, informing them about the preliminary screening results and the necessity of a proper medical evaluation. The Program offered support for follow-up medical check-ups. Unfortunately, only a limited number of parents agreed to participate: 1 from Sirdaryo and 6 from Namangan. The study faced challenges in reaching all 19 targeted parents in Namangan, successfully contacting only 10 and was unable to obtain correct phone numbers for the remaining 9 families.

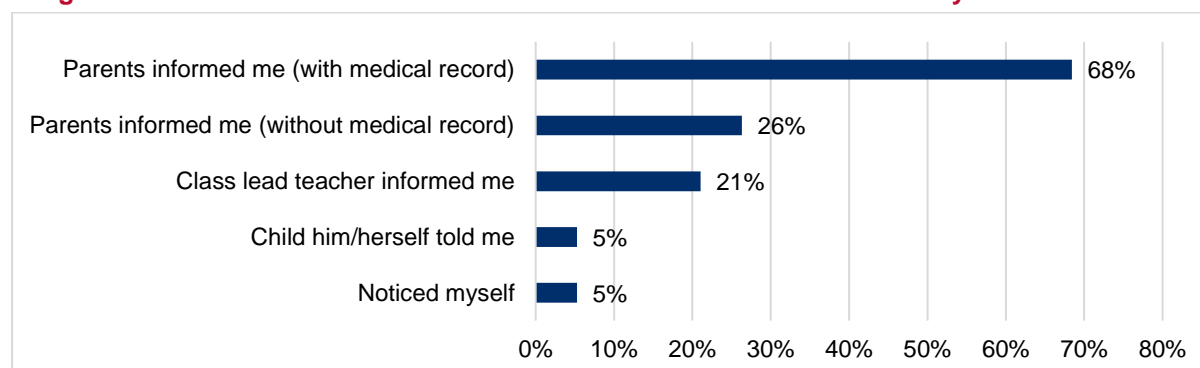
The results of the follow-up medical diagnosis showed that all children who came for follow-up medical check-up did indeed have difficulties in their hearing. The condition of most of the students could be improved with simple medical treatment. All parents were provided with references to approach district or regional government medical centers. Two students were found to have severe hearing difficulty, and hearing aids were recommended to them. Families expressed that they were not able to afford adequate hearing aid devices, and the Program provided the hearing aids.

2.1.2 Identification of Disability: Insights from Parents, Principals, Teachers, and Education Administrators

The diagnosis and identification of disabilities at the school level usually starts when students enroll in school. As per the current system, the school medical personnel and the psychologist examine all new school entrants. As reported by participating parents, most of the children's known disabilities were identified at an early age, before kindergarten. This

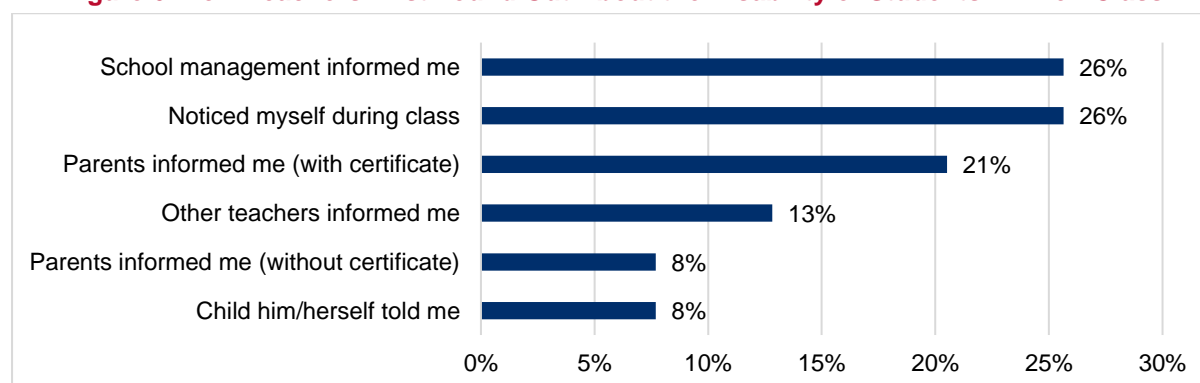
aligns with school administration’s reporting that the most common way the school finds out about the disability of a student is when the student is first enrolled (**Figure 5**). When enrolling a child, parents would inform the school administration and provide a medical record of the disability, which is necessary for getting homeschooling organized or allowing the child to attend an inclusive class at the school. Although less common, lead teachers also sometimes inform the school administration.

Figure 5. How School Administration First Found Out About the Disability of Their Students



One of the most common ways teachers learned about the disability of a child in their classroom was from the school management or through their own observation in the classroom (**Figure 6**). Most lead teachers learned when school administrators assigned them their classes at the beginning of the school year. Non-lead teachers also frequently reported that they noticed a disability themselves rather than being informed of it by the school administration or another teacher, including the lead teacher. These findings suggest a lack of a systematic process through which all teachers get informed about students with disabilities in their classroom, and hence any support or accommodation they may require.

Figure 6. How Teachers First Found Out About the Disability of Students in Their Class



In the Presidential Decree #4860 (October 13, 2020) 39% or 3,900 of the country’s public general schools should be implementing inclusive education by 2023. In the 2023–2024 school year, 400 public schools provide inclusive education classes (MOPSE, 2023)⁶. This study asked district administrators about the process for identifying a student who might participate in the school’s inclusive education program. Findings suggest that the district and regional medical committees played an important role in diagnosing disabilities and providing necessary approval for homeschooling or inclusive education. Study participants reported that initially, parents often talked with the school administration and school level psychologists about the condition of their children. During these conversations parents also

6 The annual report of MOPSE 2023. Available at: <https://www.uzedu.uz/uz/news/1417>

expressed their preference for a particular education model for their children, whether specialized schools, homeschooling, or inclusive education (currently only for primary grades).

Following the discussion, parents applied for a medical committee review for the specific model of education they wanted for their child. The medical committees were usually composed of a neurologist, a speech therapist, a psychiatrist, a vision doctor, a psychologist, a surgeon, an audiologist, a pedagogue, a stomatologist, a pediatrician, and a secretary. The composition of the medical committee varied slightly from district level to regional level. Thus, if a student was suspected to have certain conditions for which the district committee did not have a specialist, they might be referred directly to the regional committee's review. At the time of the study, for inclusive education, families were required to go through the regional committee review regardless of the condition and type of disability. Based on the approval of the regional medical committee, schools could then allocate necessary resources to support the student's special education needs. However, district administrators noted that in practice, there were students in schools who had not been through this systematic process, and there were students with special needs attending general public schools before the inclusive education policy was established in 2021.

The inclusive education policy was originally designed to better integrate students from segregated special schools into general public schools. Education officials stated that the policy was mostly functioning, however, as a mechanism to identify students with disabilities who were already in the school. Education administrators stated that there were primary grade students with disabilities attending public schools who could qualify for inclusive education. However, their parents often refused medical committee reviews, avoiding the designation of 'child with disability', which would make their children eligible for inclusive classes. While teachers received additional compensation, parents may not have seen any benefit to their child in receiving this designation and accompanying services.

2.2 EXPERIENCE OF STUDENTS WITH SPECIAL EDUCATION NEEDS

2.2.1 Inclusive Teaching Practices in the Classroom

The study explored inclusive teaching behaviors, using student interviews and classroom observations in classrooms with students who potentially had undiagnosed hearing or vision impairment. Classroom observations focused on the practices teachers used and interactions with students who had been identified as having a potential hearing or vision impairment, following the study's screening activity.

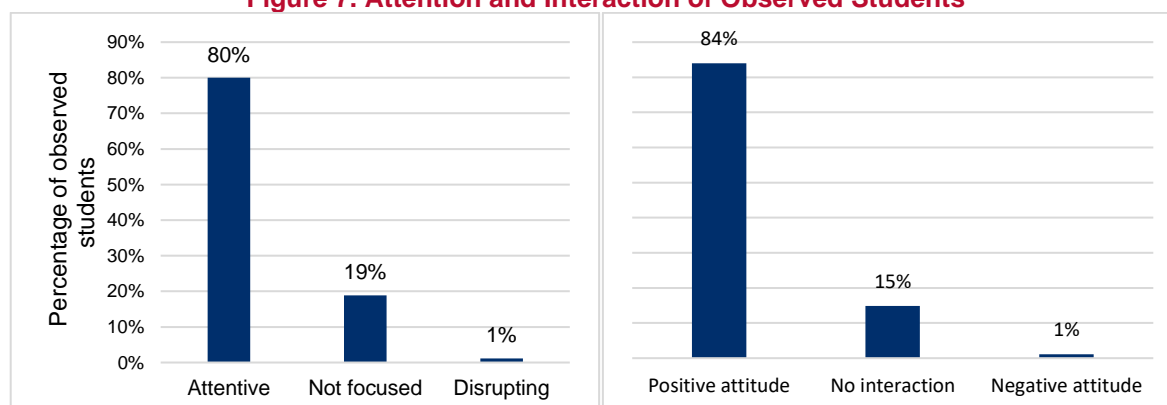
Interview findings show that some students with mild to moderate vision impairment had difficulties seeing the board or reading letters. Specifically, 27% struggled to see the board, and 13% had trouble reading letters, compared to only 4% of students without vision issues. Seventy-three percent of those screened for vision problems did not report difficulties, possibly due to their being unaware of their vision differences, or their not being comfortable sharing this information with others, or because their teachers were ensuring board visibility for all students.

About 14% of students who had potential hearing impairment (with the screening result of *Referred*) reported having difficulties hearing their classmates' responses to the questions of the teacher, while only 4% of the students with the screening result *Pass* did so. Of those diagnosed with hearing problems, 84% did not report any hearing difficulties. Most (90%) of the students with potential hearing or vision difficulty stated that there were no special materials or devices in their classroom to support students with hearing or vision difficulties.

The study explored whether students with potential hearing and visual challenges positioned themselves or were placed by a teacher closer to the board or teacher. Half of the students with a potential hearing or vision impairment observed were seated in the classroom's front, and some were seated at the back.

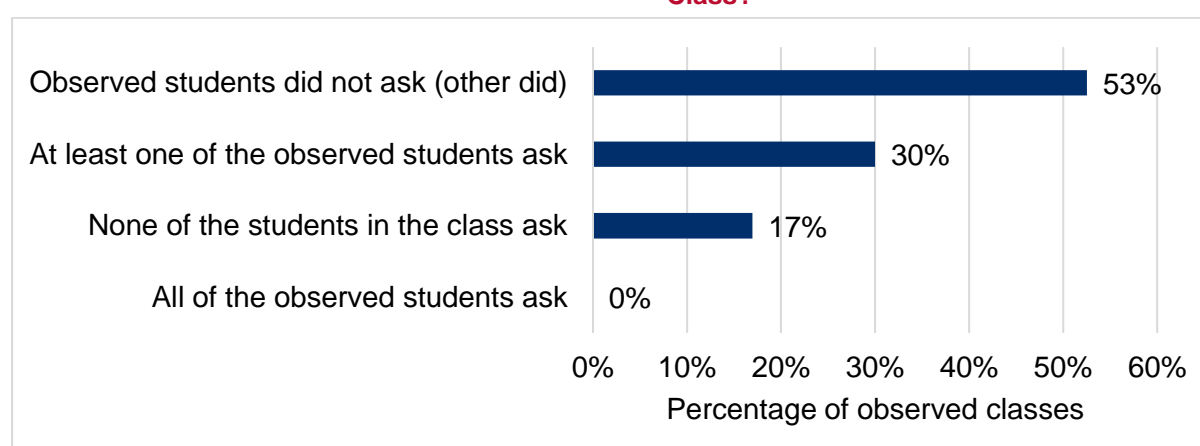
Results further show that a majority (80%) of the observed students were engaged and attentive in the lesson. Similarly, over 80% of the observed students showed positive interactions with other students during classes. However, 19% and 15% of observed students, respectively, were not focused on the lesson or not interacting in the lesson (**Figure 7**).

Figure 7. Attention and Interaction of Observed Students



The study also explored whether the observed students participated in question and answer sessions during lessons. In over half (53%) of the classes, observed students with potential hearing or vision impairment did not ask questions of their teacher (**Figure 8**). In 30% of the classes, the observed students participated in the question and answer sessions. Additionally, most teachers were not observed modifying or repeating the questions or providing extra time for the observed students during question and answer sessions. None of the students in the classroom asked questions in 17% of the observed classrooms.

Figure 8. How Many of the Observed Students Asked Questions of a Teacher During the Class?



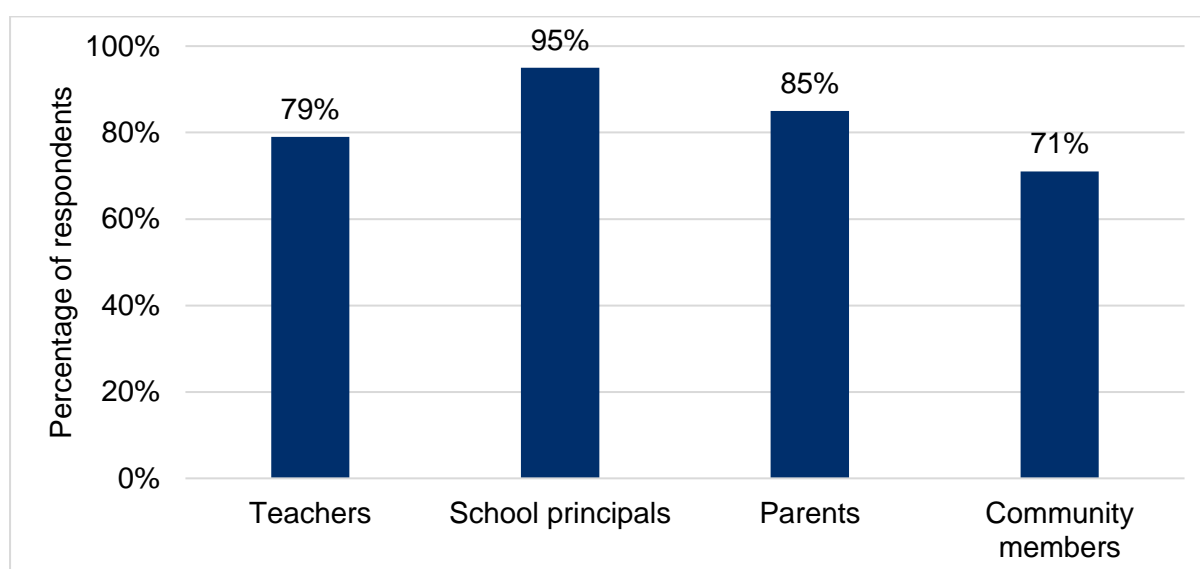
In line with the self-reported experience of students who had hearing impairments, around 85% of teachers were observed to be speaking clearly and loudly and could be heard from the back of the class. However, in only 20% of the observed cases did teachers repeat the

questions or answers of other students to the whole class. Students with hearing impairment reported not hearing their peers' answers to teachers' questions, as was mentioned before.

2.2.2 Perceptions and Treatment of Students with Disability in Schools and Communities

Teachers, school principals, parents, and community members provided their opinions on how students with disabilities were treated or viewed in school or community. Most of the respondents stated that students with disabilities were treated positively, without discrimination and segregation, as shown in **Figure 9**.

Figure 9. Different Groups Responding That Students with Disability Treated Only Positively by Their Peers



However, 40% of parents reported a change in the attitudes of community members toward their family in general after the community members learned about their child's disability. They noticed community members trying to segregate their family or avoiding any close relationships with them.

Over 80% of respondents from each group believed that there was no difference between how girls and boys were treated by different groups (community, teachers, and peers at school). In a few cases where respondents did not believe that students were treated equally, a common response was that girls were generally treated better than boys, as people try to be more careful in their attitude toward girls culturally. Education administrators on the other hand believed that when it comes to marital prospects, girls with a disability tended to be more adversely affected, compared to boys with a disability.

2.2.3 Experiences of Homeschooled Students

Through interviews with parents, the study inquired into the experiences of students who were homeschooled. Although interviews with the homeschooled students were not part of the study, on few occasions, parents asked interviewers to have their children sit beside them while they (parents) were being interviewed.

Seventy percent of parents shared their concerns that their children did not receive the same quality education as would be provided at schools. Half (50%) of parents disagreed or strongly disagreed with the notion that separate or segregated education is the best method

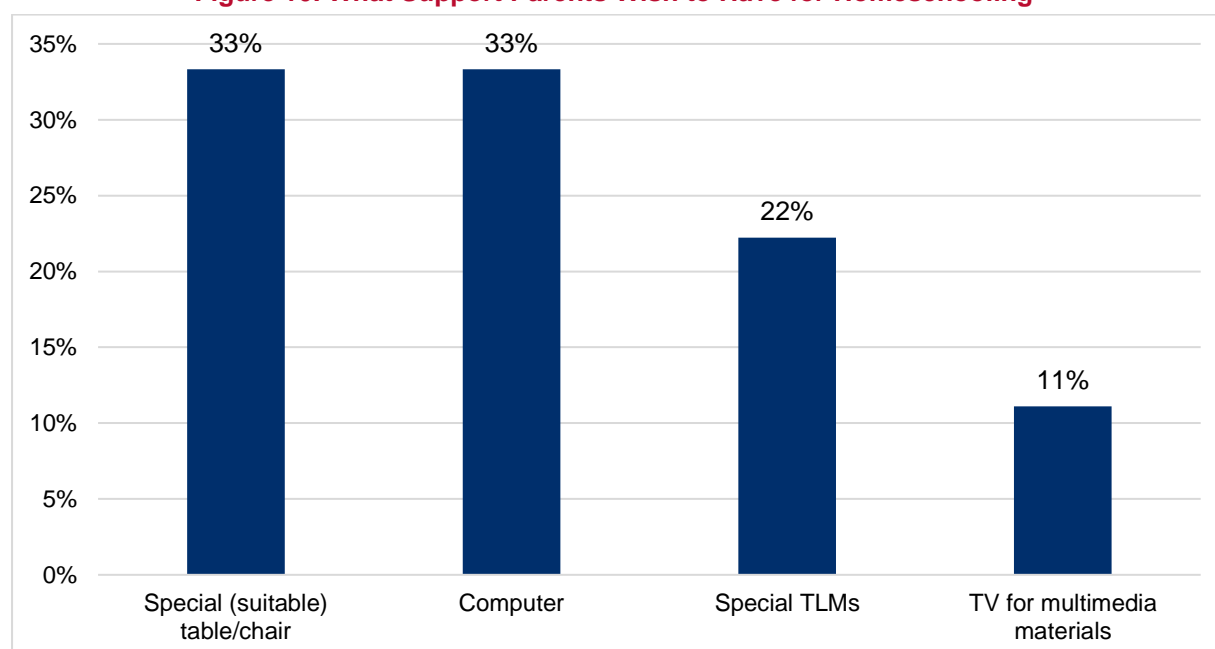
for students with disabilities. Most parents were satisfied with the teachers assigned to support their child's homeschooling. Ninety percent of them reported that the teachers who were assigned were kind and treated their children well. However, half of the parents stated that their children did not like studying at home and would prefer going to school.

Asked why their children were not attending school, 67% parents mentioned that the school did not have the necessary set-up for their child.

Only around 23% parents stated that the school met all the needs of their children when their child visited school, while the rest reported that schools did not meet or only partially met the needs of their children when they attended. Eighty-five percent of parents reported that their homeschooled students liked visiting the school and had friends at school.

About 57% of parents reported that their home met the special education requirements of their children with disabilities for homeschooling. However, around a third of the parents stated that they would benefit from more suitable furniture and a computer for their children. Parents also highlighted the need for special TLMs and TVs (22% and 11% of parents, respectively) (**Figure 10**Error! Reference source not found.).

Figure 10. What Support Parents Wish to Have for Homeschooling



School principals and the community members believed that the severity of the disability was the main reason students were in homeschooling mode, and, in a few instances, the attitudes of parents. Almost all school principals stated that students who were then being homeschooled should not attend school regularly.

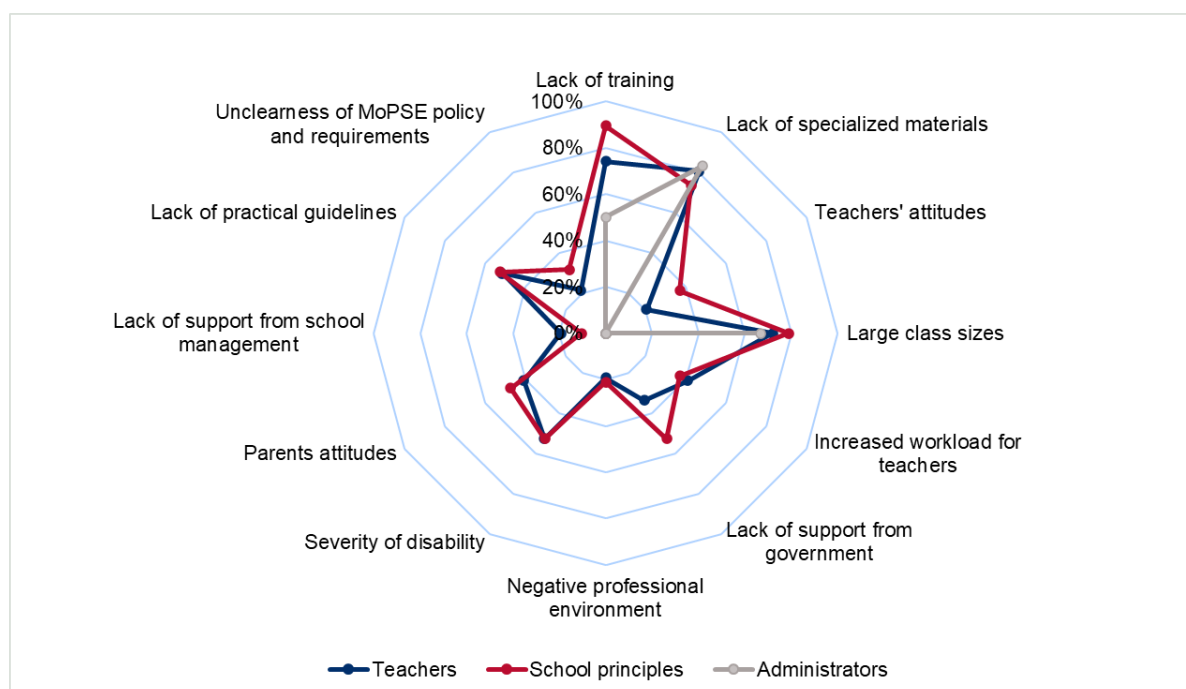
2.3 BARRIERS TO THE IMPLEMENTATION OF INCLUSIVE EDUCATION

2.3.1 Challenges in Implementing Inclusive Education in Uzbekistan.

The study explored teachers', school principals', and education administrators' opinions on what they thought were the challenges in implementing inclusive education in Uzbekistan. There was consistency regarding many factors among these three groups of respondents, as shown in (**Figure 11**); however, there were also some notable differences.

Education administrators believed that the lack of training for teachers, a lack of specialized materials, and large class sizes were the only factors impeding the implementation of inclusive education. However, teachers and school principals noted other factors, including increased workload to teachers, lack of support from the government, severity of disability, parental attitudes, and lack of practical guidelines. Fewer teachers and school principals than education administrators reported teachers' attitudes, poor working environment at schools, lack of support from school management, and unclear policies from MOPSE as challenges.

Figure 11. Challenges in Providing Inclusive Education in Uzbekistan, by Percentage of Teachers, School Principals, and Officials Who Agree or Strongly Agree



Additionally, education administrators raised the following challenges affecting establishment of inclusive education in Uzbekistan:

- **Overburdening of school psychologists:** School psychologists are tasked with a wide range of responsibilities that go beyond psychological matters and inclusive education to include professional orientation, homeschooling, and even women's matters for their Mahalla in some cases. This overburdening can impact the quality and effectiveness of their support to students with special education needs at the school.
- **Many data requests to psychologist-methodologists:** On top of the regular bi-annual reports, the psychologist-methodologists receive frequent requests for different types of information from the higher levels of management concerning students with special education needs. These requests are received at least once a month. Based on the type of information requested, sometimes these requests take a lot of time to complete. Information about the students with disabilities are entered into the Ministry's enterprise resource management system (ERP) and updated frequently. The ERP stores all demographic information about these students, even as detailed as number of hours and subjects they are studying. However,

psychologist-methodologists are frequently required to submit a different summarization of information available in the system.

Teacher training was stated as a challenge by all the 3 groups of respondents. Only 9% of teachers (8 out of 93) had specific training on inclusive education. These 8 teachers were all primary grade teachers who were teaching an inclusive class. They reported that the training content was mostly on general adaptation of teaching approaches for the special needs of students with different types of disabilities in the classroom. The teachers found the training to be useful and reported that they frequently used what they learned from these trainings in their classrooms. Teachers who received special training in teaching students with disabilities had higher confidence about teaching children with a disability than teachers who had not been trained; training had a statistically significant effect on teacher self-efficacy in inclusive education (see Section 2.4.1 Attitudes and Self-Efficacy of).

Many teachers stated that a lack of support from the government and a lack of practical guidance on inclusion were challenges. Sixty-five percent of teachers felt they got supported by their school administration in teaching students with disabilities, while around 30% of teachers reported getting support from district or regional education administrators, and other groups like parents or school sponsors.

School administrators reported that they provided teachers mainly with methodological guidance or advice (82%), guidance on adapting the classroom environment (33%), and specialized TLMs (22%). Teachers reported receiving the same three types of support, at 87%, 20%, and 43% coming from district or regional administrations (87% reported receiving methodological guidance or advice; 20%, guidance on adapting the classroom environment (33%); and 43%, specialized TLMs).

Support from other groups like parents and independent school sponsors mainly focused on adapting the classroom environment, purchasing special equipment, and organizing transportation to visit school on special occasions.

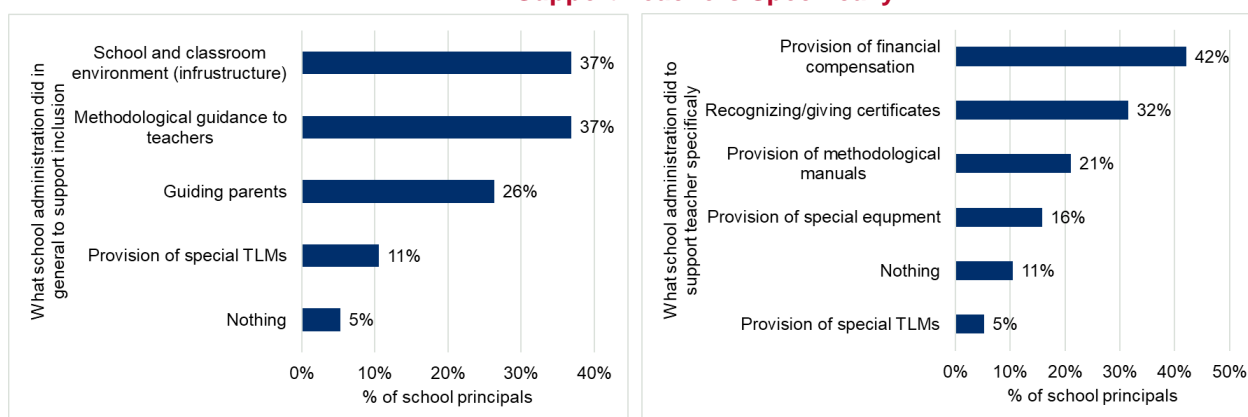
As shown in **Figure 11**, one of the less highlighted challenges to inclusive education among study participant groups was teachers' attitudes. However, 60% of school principals reported that some of their teachers were not willing to include a child with disabilities in their classroom. The main reasons given for this were because:

- it requires extra effort and time from teachers;
- teachers may think that this will affect other students negatively; and
- teachers did not have the necessary provisions in their classroom to support students with a disability.

The most common reason, according to school principals, why teachers were willing to include a child with a disability in their classroom was the additional compensation (noting that the salary bonus for having a student with a disability in the classroom was available only at the primary grade levels), followed by religious and ethical beliefs.

Figure 12 presents the summary of responses of school principals to support inclusion in the school in general and what they did specifically to support teachers. Methodological support, as was mentioned by most teachers, along with adapting the school infrastructure, were principals' most common responses. Many administrators mentioned financial compensation as another support provided to teachers. This support was limited to primary teachers, as there was no additional compensation, according to legislation, for secondary grade teachers supporting students with a disability at school.

Figure 12. What School Administration Did to Support Inclusion at School in General and to Support Teachers Specifically



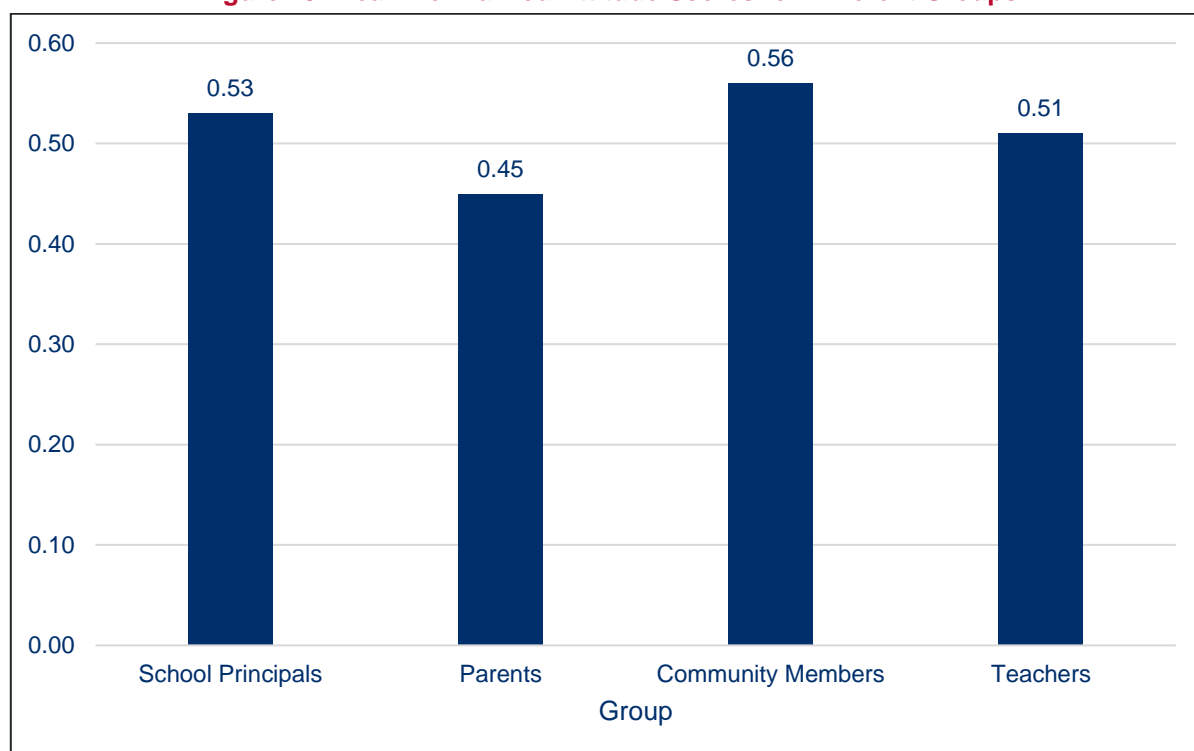
Additionally, the study also inquired into the support that parents were receiving and their perceptions of how well supported they were. Almost half (48%) of parents interviewed did not feel that they received sufficient support from their government and/or their Mahalla. Parents varied in their level of satisfaction with the support. The type of their child's disability and severity level did not explain this variance in satisfaction. A parent with two children with special needs remarked that the government financial aid provided did not align with the individual care expenses associated with each child's needs. While the aid sufficed for one child, the other child's condition necessitated greater support. However, the parent received identical financial assistance for both children, despite their differing levels of need. Overall, 76% of parents reported that they faced financial hardship because of their child's special needs.

2.4 BELIEFS, ATTITUDES, AND SELF-EFFICACY OF STAKEHOLDERS

Attitude questions were asked of each group of participants during the interview, and a score for each participant was calculated and normalized⁷ for comparison across groups. The Program asked for the definition of inclusive education at the beginning of the interview to better understand participants' understanding. Data collectors then explained the definition of inclusive education that was adopted for this study and asked participants to consider that definition when providing their answers. **Figure 13** shows the average normalized attitude scores for each targeted group. The Analysis of Variance shows that there is no statistically significant difference between the scores of different study participant groups. For all the groups the average attitude scores were at a medium value of 0.45–0.56. A maximum score of 1 would mean respondents had a very favorable attitude toward including students with disabilities in general public-school classrooms, whereas a score closer to 0 reflects a more negative attitude.

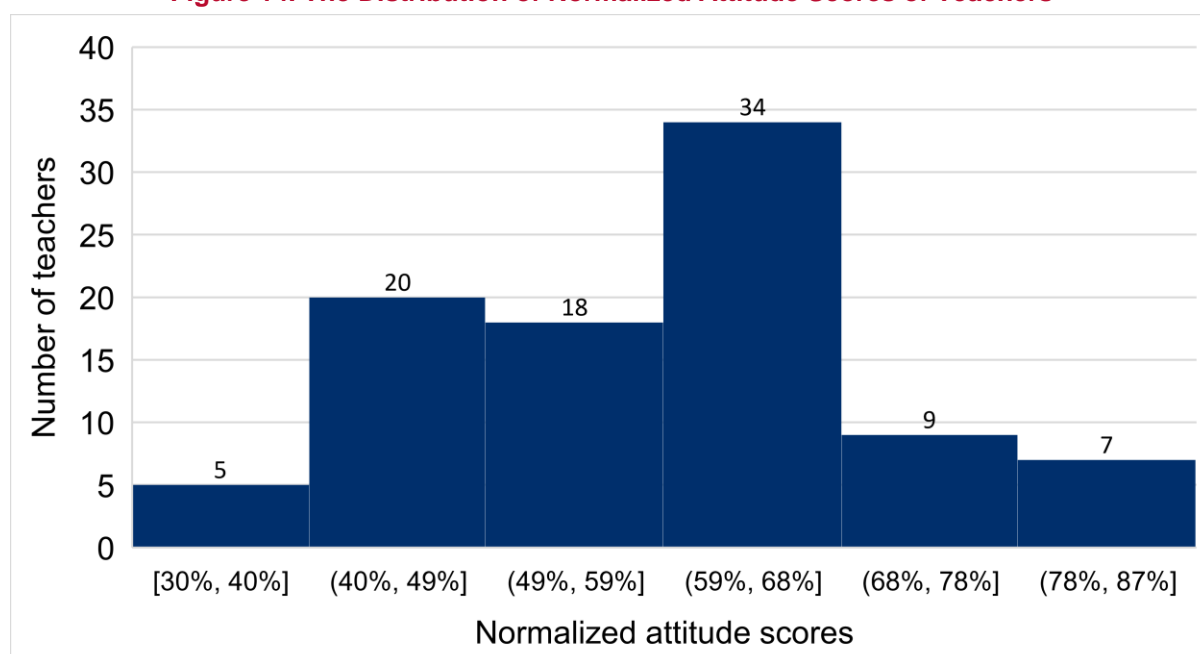
⁷ Normalization was applied based on the maximum and minimum possible values, whereby the attitude scores are changed relative to the range between maximum and minimum possible score. After normalization score values will have a range between 0 and 1 for all groups.

Figure 13. Mean Normalized Attitude Scores for Different Groups



The attitude scores of teachers ranged from 0.30 to 0.87 (or 30% to 87%). Most teachers (83% or 77 teachers interviewed) had attitude score below 68%. **Figure 14** shows the distribution of the attitude scores for teachers.

Figure 14. The Distribution of Normalized Attitude Scores of Teachers



Since all the respondent groups responded similarly to the attitude questions, the section below focuses on understanding the nuances within the attitude score of teachers.

2.4.1 Attitudes and Self-Efficacy of Teachers

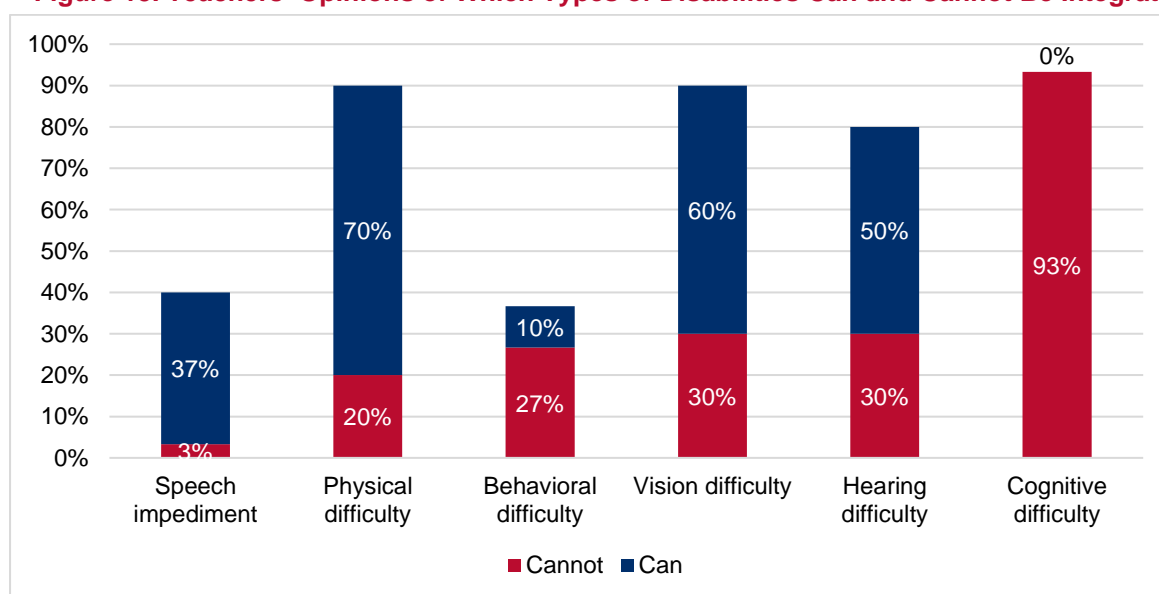
The study examined the relationship between the attitude scores of teachers and other parameters like their gender; their years of teaching experience; the number of students in their classroom; whether there was a student with a disability in their class at the time; whether the teacher had a family member with a disability; their participation in training on inclusive education; and whether the teacher reported receiving support from the school administration, district, or region. None of the listed parameters was statistically significant in explaining the variations in teacher's attitude scores.

Similarly, the study examined teachers' self-efficacy in inclusive education. The self-efficacy scores of teachers also did not correlate with any of the listed parameter, with the exception of teacher's participation in training on inclusive education. Generally, teachers' self-efficacy scores were above average, with a mean normalized score of 0.60 (out of a maximum of 1).

The analysis of specific attitude questions provides additional insight. About 52% of teachers agreed that separated or segregated education is better to meet the special education needs of students with disabilities. And, in apparent contradiction, 82% of these teachers agreed or strongly agreed that inclusive education helps students with disabilities grow more in knowledge and skills. This question was dropped from the attitudes score after factor analysis, but analyzed individually it highlights some of the tension on inclusive education.

Overall, 42% of teachers stated that students with disabilities could study alongside students without disabilities, regardless of the type of disability, while 32% reported that mainstreaming would depend on disability type. All teachers who stated that it depends on disability type stated that students with a cognitive difficulty cannot study with other students. In contrast, most teachers stated that students with physical, vision, and hearing difficulties could study with others (**Figure 15**Figure 15). Not all teachers shared their opinions on behavioral difficulties and speech impediment. Although cognitive difficulties were prevalent (see Section 2.1.1 Prevalence of Diagnosed and Undiagnosed Disabilities at Schools) among students attending school, 93% of teachers who thought inclusion of a child in a mainstream classroom would depend on the type of the child's disability, thought that this type of disability could not be integrated.

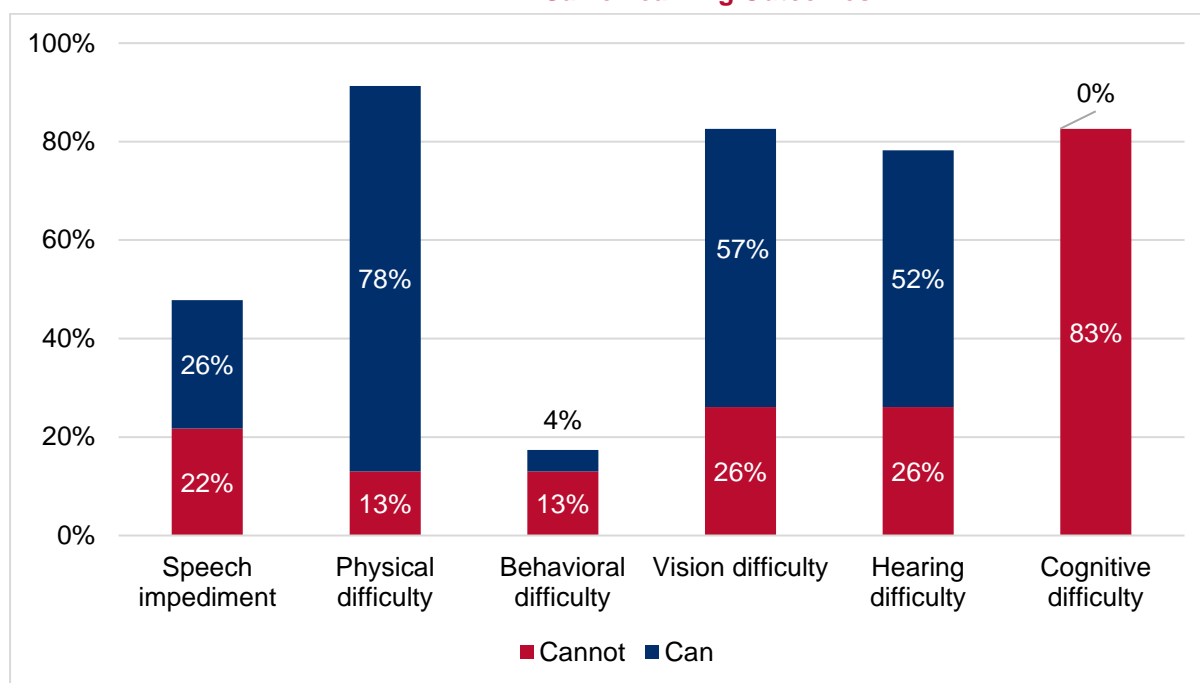
Figure 15. Teachers' Opinions of Which Types of Disabilities Can and Cannot Be Integrated



*Some teachers did not share their opinion on certain types of disabilities; thus, percentages do not add up to 100% for each type of disability.

Similarly, about 40% of teachers believed students with disabilities could achieve the same learning outcomes as students without, while 35% of teachers reported that this depended on the disability. Teacher perception of student achievement varied by disability (**Figure 16**).

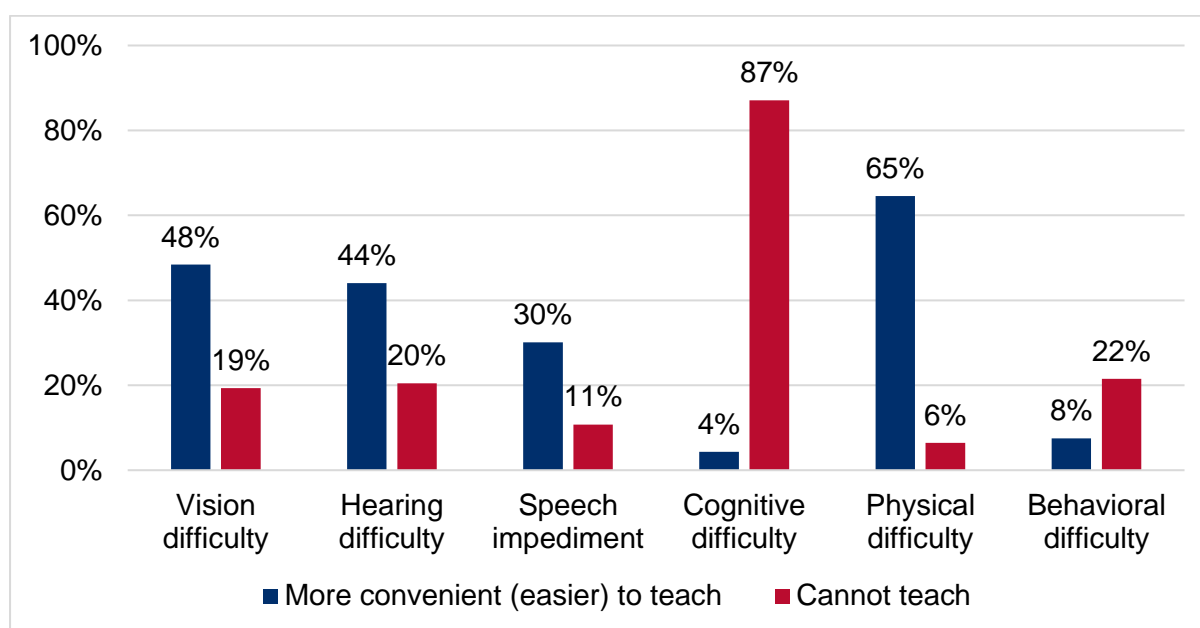
Figure 16. Teachers' Opinions of Which Types of Disabilities Can and Cannot Achieve the Same Learning Outcomes



*Some teachers did not share their opinion on certain types of disabilities; thus, percentages do not add up to 100% for each type of disability.

Regardless of teacher self-efficacy score, teachers stated that they could not teach some students with select disabilities, as shown in **Figure 17**. An overwhelming majority of teachers (87%) stated that they could not teach students with cognitive difficulty. A notable number of teachers (22%, 20%, and 19%, respectively) stated that they could not teach students with behavior difficulties, hearing difficulties, and vision difficulties. Sixty-five percent of teachers stated that students with physical difficulty were easiest to teach relative to other types of disabilities.

Figure 17. Types of Disabilities Teachers Consider Easier to Teach



Teachers showed varying positions toward different types of disabilities, with a generally strong bias against cognitive difficulty. Some teachers commented on the ease of working with students with physical disabilities in that such teaching did not require them to adjust their teaching approaches and content.

Although teachers had mixed attitudes toward education of students with special needs and biases toward certain types of disabilities, most teachers showed above average self-efficacy in their ability to provide education to students with disabilities. Most teachers (around 90%) agreed or strongly agreed that they could assess, monitor, and motivate students with special education needs, and adapt and create learning materials for them. Self-efficacy plays an important role in Ajzen's Theory of Planned Behavior as a factor influencing behavioral intention and behavior adoption. Uzbek teachers' high levels of self-efficacy in certain teaching practices for inclusive education, however, might also indicate overconfidence in their existing approaches and an underestimation of nuances and challenges, especially in the absence of any real inclusion of children with diverse disabilities in general education classrooms. Additionally, social-desirability bias in the self-efficacy survey responses should be considered.

2.4.2 Concerns of Parents on Participating in Follow-Up on Medical Diagnosis

The Program conducted brief interviews with the parents who attended the medical check-ups following the study's screenings. This was to better understand why other parents might be reluctant to participate in the medical follow-up support, even when that support was paid for by the Program. Parents expressed the importance of privacy and trust in the study team in deciding to engage. Parents who made use of the follow-up services voiced several concerns that could discourage other parents from engaging. These concerns are offered below.

Perception of Hearing Impairment: Some parents expressed skepticism about the possibility that their child had a hearing impairment, noting that their child appeared to hear and respond normally. They speculated that the screening results might have been

inaccurate. In response, the study emphasized that hearing impairments are not always easily identifiable in everyday interactions.

Fear of Stigmatization: Parents voiced concerns about the potential their child would be labeled as ‘disabled’, particularly about such a label’s impact on prospects such as military careers for boys and societal acceptance of girls in the marital context. They appreciated the study’s commitment to confidentiality in handling their children’s health information.

Concerns Over Legitimacy: The unusual nature of receiving offers for free medical check-ups and transportation led some parents to initially suspect a scam. To alleviate these fears, some parents verified the legitimacy of the initiative with school authorities.

Distrust in Medical System: A lack of confidence in the accuracy and reliability of the medical system was another concern. Parents worried about incorrect follow-up diagnoses and services and potential adverse health effects arising from such errors.

SECTION 3: CONCLUSIONS

This section presents conclusions and recommendations based on the Inclusive Education Study findings.

At the time of this study, there were many students with known disabilities already attending public schools or being homeschooled across all grades. Types of disability among students attending school included mostly physical disability (44% of schools), followed by cognitive difficulty (33%), and vision difficulty (26%). The most frequent types of disability among students who were homeschooled was physical disability (60%) and cognitive difficulty (25%).

There were large numbers of students with likely undiagnosed hearing and vision difficulty: respectively, 1.1% and 7% of students already attending school. This averaged to 20 students with previously undiagnosed hearing and/or vision difficulty per school. Although these students tended to report having challenges in the classroom relative to other students, most of them did not highlight any difficulties with seeing or hearing in the classroom. This might be because teachers already (likely not deliberately) were accommodating mild to moderate difficulties, children did not notice differences between their abilities and those of other students, or students did not feel comfortable to share information about their difficulties. Nevertheless, out of the 6 students screened for a potential hearing difficulty and who participated in medical follow-up, 4 had an immediately treatable solution to a temporary condition, while 2 required long-term solutions to support them to fully engage in their lessons.

Across participant groups respondents believed that Uzbek students with disabilities are treated positively and do not experience discrimination, and affirmed their belief that there also is no gender discrimination with respect to disability. However, approximately 40% of parents reported experiencing segregation from society due to their child's disability. Moreover, findings suggest moderate attitude scores with mixed beliefs and biases among participants. Around half of the teachers, school principals, and parents believed that segregating students with a disability would better meet the students' special needs. Parent and education official interviews further indicated a fear among parents about the label "child with disability" and believed it to have lifelong implications, hindering their child's career or marital prospects. This results in parents at times not getting their children diagnosed and thus their children not getting the support needed to fully participate and benefit from their education. Parents also wanted more decision making about the mode of education their children receive and felt that sometimes there were mismatches in the type of education provided.

Inquiries into the school- and classroom-level experience of students show that teachers were seen to be already applying some inclusive education practices like speaking loudly, speaking facing the class, and grabbing the attention of class before starting or switching to new activity without knowing whether a child with an undiagnosed vision or hearing difficulty was in their classroom. However, most teachers did not repeat the answers of students to the whole class. This was notable as several students with a potential hearing impairment reported that they had difficulties hearing their classmates' responses to the questions of teacher. Many students screened for a potential vision or hearing impairment also did not participate in question and answer activities during the lesson. There is an opportunity to build and improve on good practices teachers have already adopted and expand their skills toward more deliberate adoption of differentiated and inclusive teaching practices.

At the same time, while teachers expressed above average levels of self-efficacy in inclusive instruction, simultaneously they believed that they could not teach certain types of disabilities; and that certain types of disabilities could not be integrated into a traditional class. A significant majority of these teachers identified cognitive difficulty as the most difficult disability type to teach. Teachers believed that students with physical difficulty are easiest to teach and could thus be easily integrated into inclusive classes. The tension between above average levels of reported self-efficacy in inclusive instruction, accompanied by a reported selective 'preference' for certain disability types, coupled with low levels of actual inclusive instruction taking place, will be an important area of future support and intervention. It might help teachers to experience what good inclusive instruction looks like in practice, how it can be implemented for all types of disability in a general classroom, and to explore what forms of support by school administration and districts are most beneficial to encourage and empower them.

Students' homeschooling experience was reported as satisfactory by many parents, and they evaluated teachers' attitudes and school supports as positive. However, half of participating parents reported that their children did not like being homeschooled, and around 70% of parents believed that their children were not receiving quality education. The majority of students being homeschooled visited schools a few times a year and, according to their parents, most would like to attend school. Most parents also wanted their children to attend school, but reported that the school did not have the necessary conditions for their children. Only 23% of parents stated that when their children visited the school, the school could meet all their children's needs. On the other hand, school principals and community members mostly believed that the severity of the student's disability was the main factor limiting them from attending school.

Half of the parents participating in the study felt that they were not well supported by the government to meet the special needs of their children. This variation in their satisfaction in the government's support was not explained by severity of the disability and type of disability. Over 70% of parents, however, stated they were experiencing financial hardship due to the special needs of their children. This may indicate families' financial condition affected their perceptions of support, or the need for more nuanced support based on the specific treatment and care a child requires.

Many teachers, school principals, and education administrators believed that the lack of specialized training, special TLMs, and class sizes were the main challenges in establishing inclusive education in Uzbekistan. Although school principals did not highlight attitudes of teachers as an impeding factor, over half of participant principals stated that some of their teachers were not willing to include students with a disability in their classrooms. School principals suggested that this was due to teachers' belief that this inclusion increased their workload, that inclusion affected other students negatively, or that they did not have the necessary equipment or materials.

Education administrators noted the high workload of the psychologist-methodologists at school, district, and regional levels and an ineffective data management system as additional challenges in implementing effective inclusive education in Uzbekistan.

This study highlights several findings that could be beneficial for future research and programming. The study recommends future research and intervention to explore more personalized support mechanisms for families to meet special needs of children, in the context of education and health care. Another area of interest is the examination of students who do not articulate their challenges despite having vision or hearing difficulties. Moreover, future studies could delve into the nuances of different types of disabilities and conditions.

As teachers show biases toward certain types of disabilities, a deeper understanding of teachers' perceptions and attitudes regarding different conditions can lead to more targeted and effective educational strategies.

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ANNEXES

Annex A: Challenges in Providing Inclusive Education in Uzbekistan, Opinions of Teachers, School Principals, and Officials

Table A-1. Challenges in Providing Inclusive Education in Uzbekistan, Heatmap of Percentage of Teachers, School Principals, and Education Administrators Who Agree or Strongly Agree

Type of challenges	Teachers	School principals	Education administrators
Lack of training	74%	89%	50%
Lack of specialized materials	81%	74%	83%
Teachers' attitudes	20%	37%	0%
Large class sizes	72%	79%	67%
Increased workload for teachers	41%	37%	0%
Lack of support from government	33%	53%	0%
Negative professional environment	19%	21%	0%
Severity of disability	53%	53%	0%
Parents attitudes	41%	47%	0%
Lack of support from school management	19%	11%	0%
Lack of practical guidelines	52%	53%	0%
Unclearness of MOPSE policy and requirements	22%	32%	0%