



Ministry of Education

Using Assistive Technology to Improve Reading Instruction for Learners with Special Needs in Ethiopia

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Reading for Ethiopia's Achievement Developed Technical Assistance (READ TA) Project

Presentation

- Background
- The Assistive Technology Capacity Building Initiative
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 - Vision screening
 - Hearing screening
 - Classroom experience
- Baseline findings from teachers
 - Challenges
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 - Self-efficacy
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Going to school in Ethiopia



READ TA Project Overview

- **READ TA** Reading for Ethiopia's Achievement Developed Technical Assistance
- **Start Date** 09 October 2012
- **End Date** 08 October 2017
- **Objective** Support MOE and RSEBs to improve the reading and writing performance of 15 million primary grade students in 7 Ethiopian Mother Tongue languages and English as a second as a Second Language

READ TA Project Overview

- To achieve its objective, READ TA supports the Ministry of Education in
 - revision of all student textbooks and teacher guides for grades 1-8 in 7 mother tongue languages and English
 - training of over 100,000 teachers are trained to use the new teacher guides
 - revision of pre-service teacher training curriculum
 - capacity building at national and regional level to support the systematic implementation of the new MT curriculum for reading and writing in the country.

Going to school in Ethiopia



Inclusive Education in Ethiopia

- In Ethiopia, an estimated 2.6% of children aged 0-14 years are living with a **known disability** (Geda, Berhane, Assefa, & Worku, 2016)
- Actual prevalence rates are estimated to be much higher
- For 2015, the Government of Ethiopia reported only 71,007 children (0.38%) with disabilities being enrolled in its primary schools - in spite of inclusive education policies.
- Based on the literature from the East Africa region, notable factors that are associated with this problem include,
 - poverty,
 - national policies,
 - traditional socio-cultural issues and the stigma attached to disabilities,
 - gaps in teacher professional development, and
 - lack of materials and resources.

Assistive Technology Capacity Building Initiative (ATCBI) - Assumptions

- READ TA designed the ATCBI in consideration of the few sources of available data and empirical evidence on disabilities in Ethiopia, and under the following assumptions:
 - There are significant proportions of undiagnosed children with disabilities enrolled in Ethiopian schools
 - There are no standardized processes or tools for screening and assessing school children for a possible disability
 - Disabilities with the highest prevalence rates include hearing impairment (HI) and visual impairment (VI)
 - Children who are hard of hearing or have low vision may not be aware of their impairment; and neither are their teachers
 - As with many other disabilities, HI and VI may significantly hamper a child's ability to learn how to read and write

Assistive Technology Capacity Building Initiative (ATCBI) – Aim and Scope

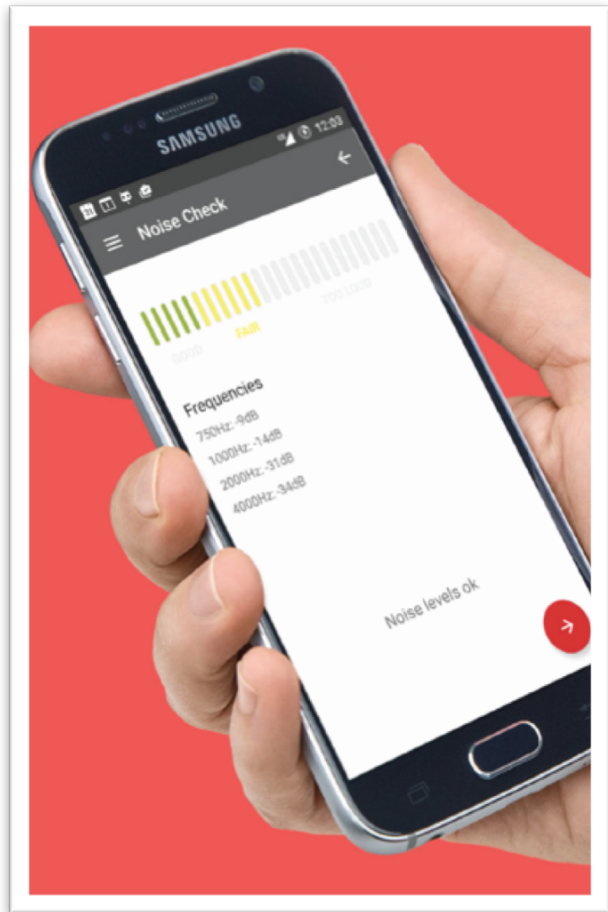
The ATCBI is exploring:

- if and how teachers may adopt technology for instruction;
- if provision of technology-mediated pedagogical support materials and training will promote adoption of inclusive instructional practices;
- if they help remove barriers of teacher attitude and efficacy in teaching children who are hard of hearing or who have low vision.

Scope:

- Implemented through regional working groups made up of Regional State Education Bureau staff, Disabled Person's Organizations, and experts from Colleges of Teacher Education
- Including 60 schools, 109 classrooms in 5 regions of Ethiopia
- Inputs include: Screening tools for vision and hearing, 3 days of teacher training, inclusive multimedia lesson plans on cell phones
- Implementation timeline: 3 months

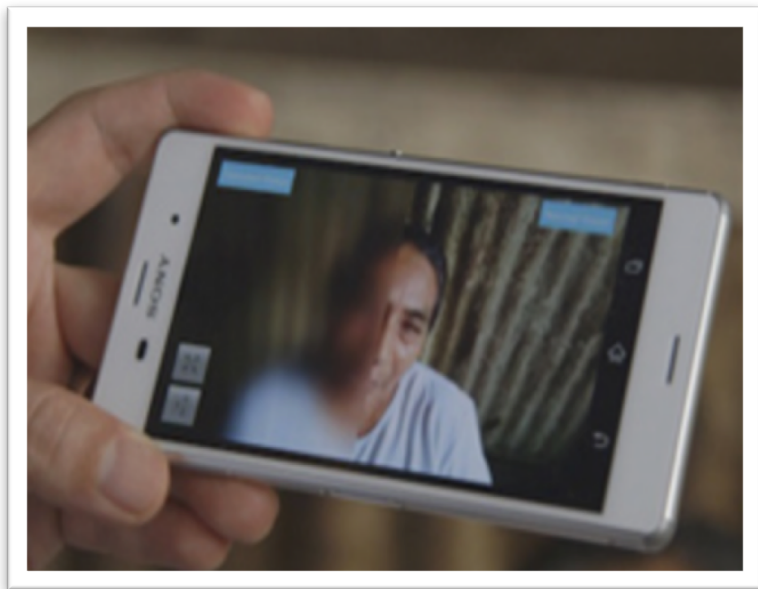
Hearing Screening – hearScreen, SA



Screening apps were selected for

- relevance for the purpose;
- simplicity in consideration of the intended target group;
- adaptability for the context; and
- clinical validity.

Vision Screening – PeekVision, UK



Inclusive Multimedia Lesson Plans


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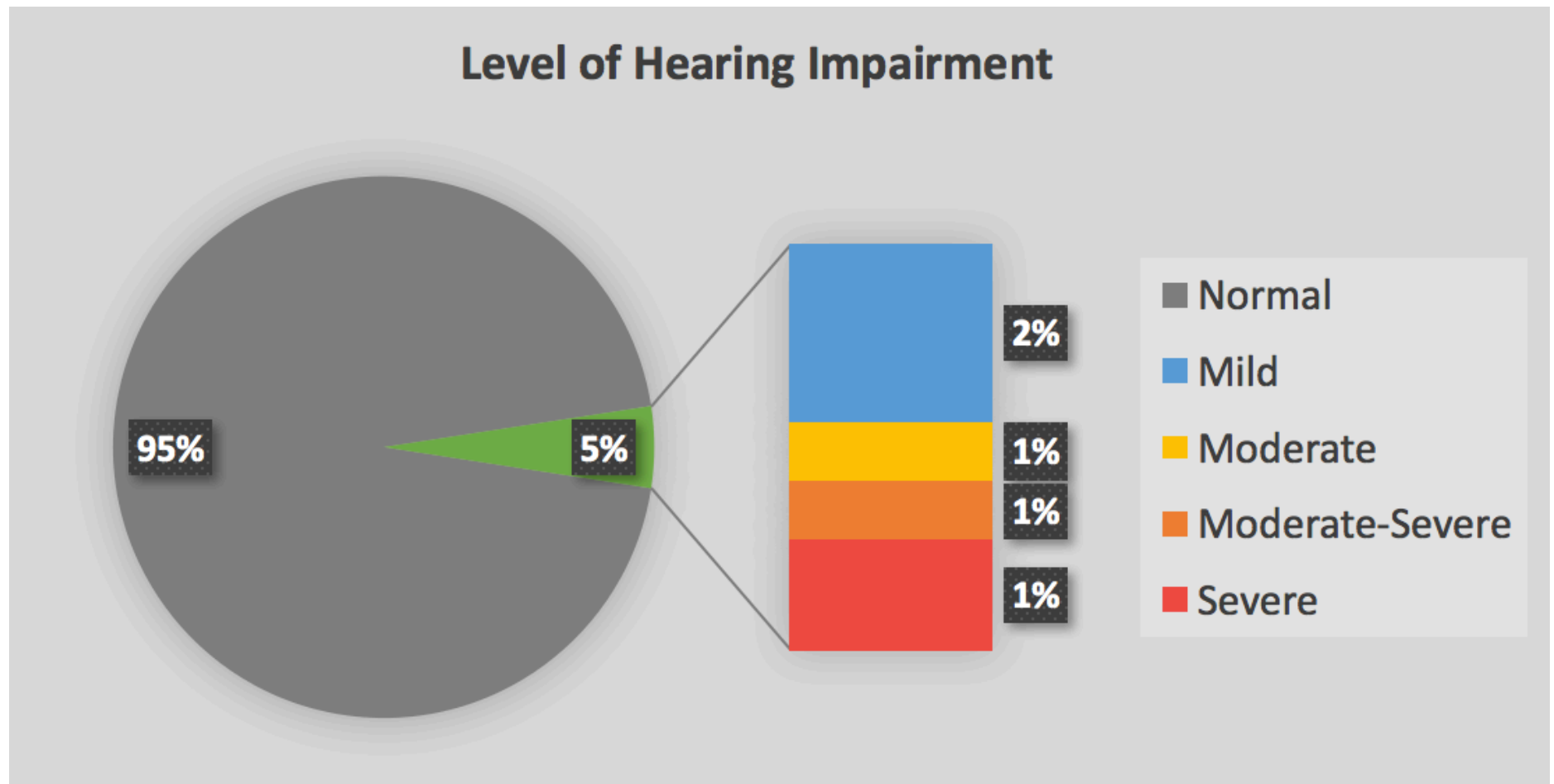
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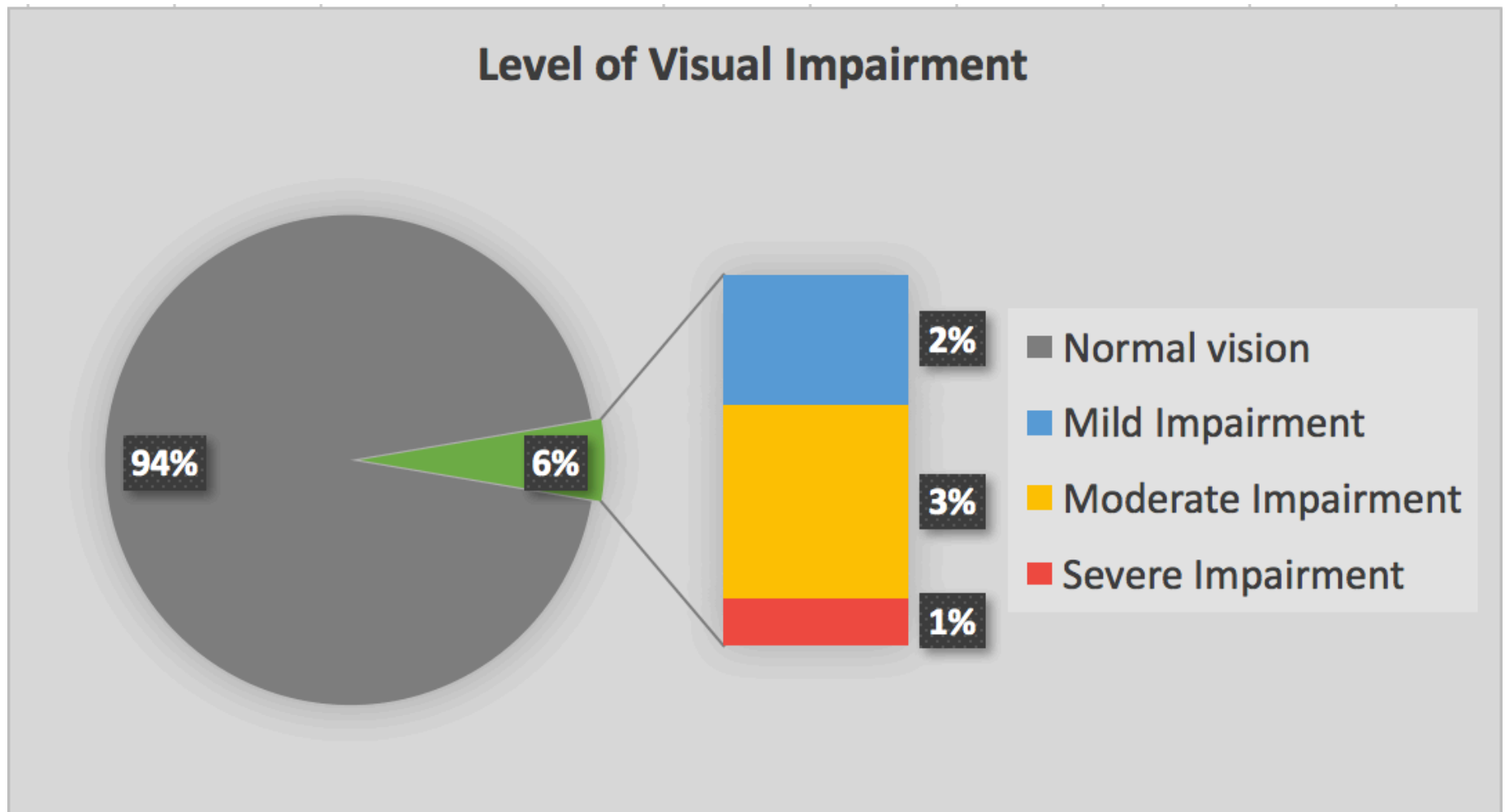
Baseline Findings – Students with HI

- Screening results for Hearing Impairment (n=3,725)



Baseline Findings – Students with VI

- Screening results for Visual Impairment (n=3,718)

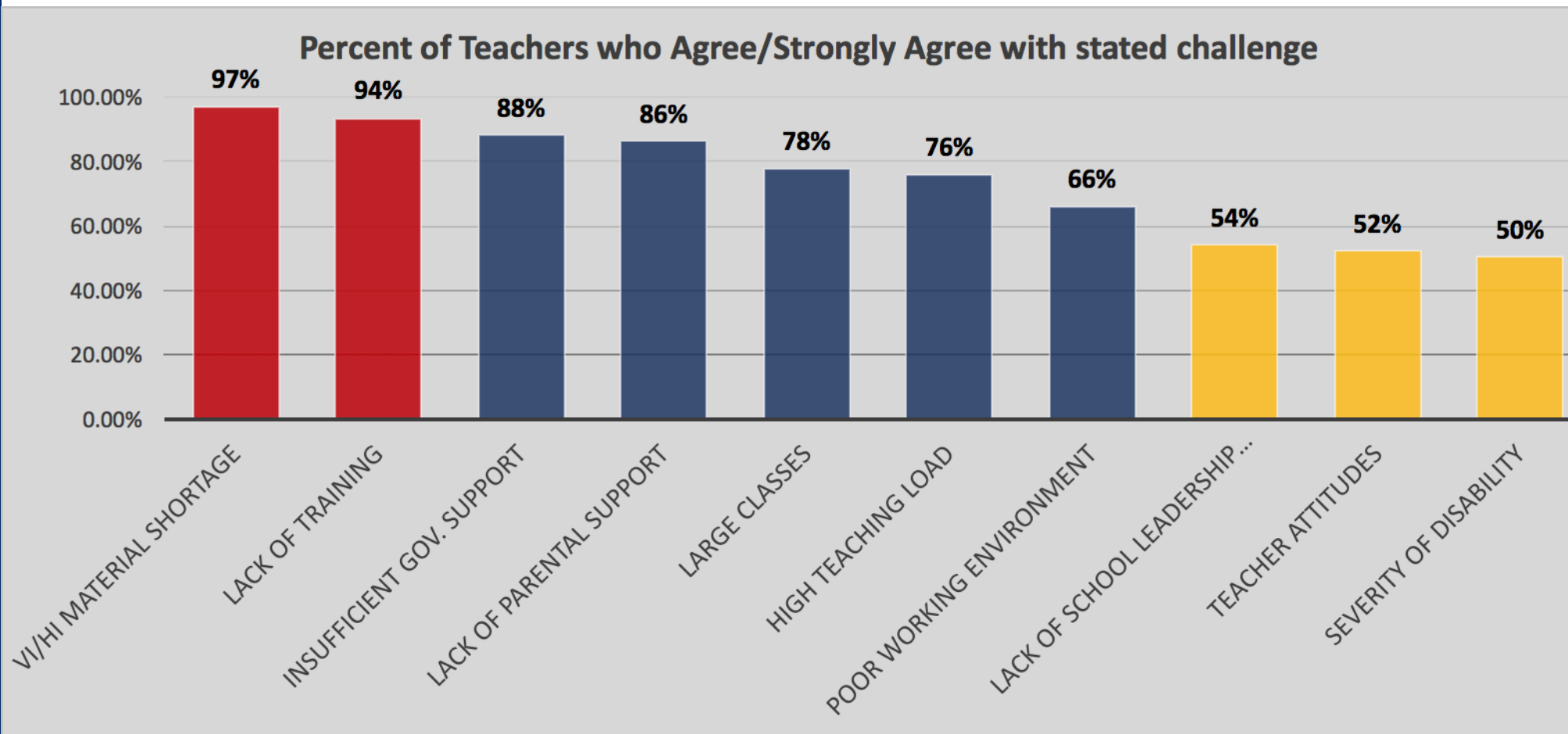


Baseline Findings – Students

- **53%** of children flagged for VI, and **51%** of children flagged for HI were **female**
- Children, even those identified with a severe VI or HI, seem to have limited awareness about their impairment. About 60% of children flagged with moderate-severe VI or HI, responded that they have difficulty hearing their teacher or classmates or seeing what is written on the blackboard.
- During classroom observations a large proportion of children flagged for VI or HI were observed to be generally **off task** (41% of observed children) and over 5% reported to have generally been **disruptive**.
- During classroom observations 11% of children flagged for VI or HI were observed to **interact negatively** with their classmates, and over 31% **sat alone** and did not interact with their classmates at all.

Baseline Findings – Teachers' challenges

Challenges teachers face in implementing inclusive education in their reading classrooms (n=109):



Baseline Findings – Teacher attitudes

- Teacher attitudes to inclusive education was measured through an empirically-informed scale developed for the purpose and context of the study. Items asked for responses on a 5-point Likert scale to statements like:
 - I believe that the needs of students with moderate visual or hearing impairment can best be served through special, separate classes.
 - I believe that isolation in a special class has a negative effect on the social and emotional development of a student with a moderate visual or hearing impairment.
- Overall, teacher attitude to inclusive education was found to be slightly positive; the mean score of their responses was 34.5 (min:10; max: 50; n=109), equivalent to the 61st percentile of the score.
- Having a child with a known HI in the classroom was found to be a predictor of a more positive attitude to inclusive education among participating teachers. Other variables, including gender, age, training background, or class size were not found to be statistically significant.

Baseline Findings – Teacher self-efficacy

- Teacher self-efficacy in inclusive education was measured through an empirically-informed scale developed for the purpose and context of the study. Items asked for responses on a 5-point Likert scale to statements like:
 - I believe that I have sufficient expertise, knowledge, and skills to teach students with moderate visual or hearing impairment in my regular classroom.
 - In my classroom, if a student with moderate visual or hearing impairment does not understand something that I explained, I will find another way to increase his/her understanding.
- Overall, teacher self-efficacy in teaching children with mild-severe (but not fully blind or deaf) in their regular classroom is slightly positive, the mean score of their responses was 22.1 (min:6; max: 30; n=109), equivalent to the 67th percentile of the score.
- No single variable, including gender, age, training background, or class size was found to be a predictor of self-efficacy.

Next Steps

- For the next 3 months, teachers will be using the accommodated inclusive multimedia lesson plans provided on smartphones in their classrooms
- Regional working groups will conduct at least three classroom visits during that time to monitor implementation
- Endline data collection will be conducted in May 2017, followed by reporting and sharing of findings.

More Information

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For more about RTI's work in intl. education, see <http://shared.rti.org>.



READ TA Project/USAID and RTI