Highlights from Julia's presentation – GEM Report event 26 September 2023

- As we know technology really is a game changer for persons with disabilities. I accept that there are challenges with technology as Manos went into lots of detail about, and we know that it doesn't reach everyone, but it's really important to emphasize how vital it can be and how much it can make a real impact at all educational levels, for persons of all abilities and for a diverse range of different needs.

- You might think, how can technology help very young children especially if we are trying to reduce screen time. It's true that we can use technology directly for children, but also we could use technology for their teachers and that's another aspect of how technology can be really helpful in the education sector. I can think of an example in Nepal. We are working to support making the national teacher training portal, part of ECED more inclusive. This is a teacher training website for teachers and one aspect is early years and they are looking at inclusive education. This is enhancing teachers' skills in how to deliver inclusive early years practice including information on how to make their own teaching and learning materials for example, so a more indirect way of how technology can make things accessible. This is an example of low tech and high-tech and working together in harmony.

- Another example of teachers using technology, but perhaps in a more interactive way, is where they can use technology to create their own teaching and learning materials using the technology itself, again making things more accessible. I can think of examples in Rwanda and Nepal and Bangladesh where teams have been introduced to using certain software, in this case a software called "widgit" which is paid for , but also there are examples that are open source. Teachers learn to use this picture symbol generating software to create picture books, communication boards ,games as well as visual timetables. They are then able to print them out and have ready to use materials for the classroom, tailored to individual needs. This can benefit children who might have developmental disabilities or intellectual disabilities who really benefit from visual information.

  For more information about the different types of AAC options that are available, and other ICT options for children with disabilities please see this repository and report, plus a shorter factsheet.

- I wanted to add something about technology for the learners themselves. This could be accessible technology for all children (such as tablets with accessibility features enabled) and sometimes it could be assistive technology. Assistive technology is more specific to learners with particular disabilities so they might need a screen reader for example , an adapted keyboard or digital story books with sign language embedded. Learners who are deaf might benefit from sign language being embedded on video as part of the accessible digital storybooks and that's something that's being used quite commonly now and might be talked about later on. (e.g. from All children reading and Unicef's accessible digital textbooks project. We have been working with Ekitabu to trial some of these textbooks in Rwanda, and we have

really seen positive results not just for learners who are deaf but for all learners in the class as it can inspire them.)

- I wanted to mention the AAC apps, (augmentative and alternative communication) apps because that really enables people who might not otherwise be able to participate in class or work, for example if they nonverbal, to communicate through text to speech or picture to speech technologies. If the user presses or activates the pictures / icons, a pre recorded voice is activated to give the user a voice . For example, the user may press the pictures or text for " Hello, it's good to see you" , or " I need help". This is where technology can really be a lifeline for persons with disabilities.

- On the topic of how education systems can ensure that assistive and accessible technologies are individualized to students' specific learning needs, there needs to be one education system first and foremost. We shouldn't see this as an extra or siloed aspect, or something that's nice to have. Inclusion and accessibility need to be thought about, right from the get-go. We need strong collaboration between the ministry of health, ministry of education, making sure they are all coordinated , and there is a true delineation of roles. The Ministry of education might be thinking that the Ministry of health can pay for children who need assistive technologies for school, but likewise health may assume that it falls under education; sometimes it falls through the gaps and there is no institution that's funding it.

- Funding and investment is probably the most crucial thing to mention at this stage and communication between different teams involved, because if it's not budgeted as part of the educational sector plan then all too often, the policy may be there but it isn't put into practice.

- Technology alone isn't going to do this too, so funding for individual laptops or tablets won't be enough. We know from our experiences in all of these good practices that you need additional support staff, ongoing training, mentoring support to the teachers, parents, students, so unless you have all of that, there no point in procuring wonderful fancy laptops if they sit on a shelf unused because the training, support , maintenance and understanding just isn't in place. I have sadly seen this through my own eyes when visiting classrooms in the past, under the 1 laptop per child policy.

- So technology is simply a means, a tool to enable great teaching and great support for students to go hand in hand, and we need to make sure that funding for the whole package is available.