

expertise in medical research designs that generally do not accommodate subjective experiences? Adjustments on the epistemological level may ensure that peoples' experiential expertise is durably integrated in medical research designs. We present a concept-framework for inclusion of people with intellectual and developmental disabilities' expertise in medical research based on SDM. This framework is informed by an epistemic conceptual analysis, and our first experiences with involving people with intellectual and developmental disabilities in medical research within the HA-ID consortium (Healthy Ageing and Intellectual Disabilities) at the Erasmus Medical Center, University Medical Centre Rotterdam.

**Contribution:** We will share our ideas and experiences with inclusion of people with intellectual and developmental disabilities in research and invite participants to share their experiences and expertise. This will improve our framework and helps the intellectual and developmental disabilities research community to develop shared ideas and practices on how to involve people with intellectual and developmental disabilities in various forms of medical research.

### Easy English and Easy Read, 2 years on

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**Description:** Two years ago at the World Congress in Scotland, an inaugural roundtable met to discuss issues around the current research and development of accessible written information. Many questions were raised.

Some further research has been published since 2019. There are many more questions that need to be explored.

The COVID-19 pandemic has raised many issues for people with intellectual disability in their access to written information in a way they need it, at the time they needed it. Technical PLAIN Standards and Easy to Read Standards are being discussed and developed or ratified in other sectors that identify the need for clear and accessible written information. We need to engage in these processes, and consider how they may be of practical benefit for the research being undertaken in our sector. This may have an impact on documents being created with and for people with intellectual disability and low literacy.

**Contribution:** 1) To build on the international collaboration; 2) To share current policies and practise for accessible information in different countries; barriers and facilitators; 3) To share issues raised during the pandemic, and possible solutions; 4) To share knowledge on research that is currently underway, is being considered, and to propose other research questions.

## Track 1: Inclusive Education and Employment

### PRESENTATIONS IN A SYMPOSIUM

#### *Being close at a distance: Learning maths*

#### **Family math: Involving parents in mathematics education of children with Down syndrome**

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**Background:** An experimental pedagogical research regarding children with Down syndrome approaching mathematics in their home environment was designed, taking advantage of the lockdown conditions in Spain in response to the Covid-19 pandemic. We explored: a) an informal approach involving home spaces and objects, and b) the engagement of parents and siblings.

**Method:** A series of 14 mathematical challenges was designed on a weekly basis, regarding whole numbers (counting, cardinality, little oral problems), plane geometry (straight lines, polygons, circle) and solids (cylinders, orthohedrons). The target consisted of 16 children aged 3 to 13 whose families received the request by WhatsApp and were asked to record a short video that synthesized the child's work. The video material was analyzed in video-compilations.

**Results:** All the families took assiduous part in the weekly activities showing deep engagement maintaining the weekly connection, organizing the activity and producing videos, in which a joyful approach resonates.

**Conclusions:** This project is part of an ongoing research on the educational role of mathematics in youngsters with intellectual and developmental disabilities, that explores the need to linking informal experiences on number and form with school mathematics. Moreover, the approach by means of challenges rather than execution of tasks proved crucial in engaging both children and parents.

#### **Students with Down syndrome using technology to learn secondary mathematics**

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**Background:** The research investigated the way secondary students with Down syndrome used technology, such as spreadsheets and calculators to learn concepts in the secondary mathematics curriculum.

**Method:** Five secondary school aged students who were being taught the standard secondary mathematics curriculum, with adjustments, in regular classrooms participated over the two years of the study. Classroom observation rounds involved video recording of lessons, interviews with teachers and collection of lesson artefacts. Four observations rounds were undertaken for each participant. Data specifically related to the use of mathematics technology were analysed through a disability studies in mathematics framework.

**Results:** All students were expected to make use of technology to support their learning, and teachers explicitly taught them how to do