



Teaching Mathematics to Students with Dyscalculia and Mathematics Anxiety

CONCLUSIONS OF INTERVIEWS

Partner: SIA Izglītības atbalsta birojs (Latvia)

All the interviews were carried out at SIA Izglītības atbalsta birojs (SIA IAB, Latvia) were conducted in February and early March 2021.

1. TEACHERS' INTERVIEWS

Three teachers were interviewed: one from pre-Primary, one from Gymnasium and one from Secondary school. Questions and summaries of answers are below.

Do students with dyscalculia disorder have the possibility to learn according to the individual learning program adopted to them?

- No, students with dyscalculia study in a regular classroom with other students. However, for some students with math learning difficulties, the examination time may be extended, additional classes may be required, etc.
- Individual program only by the decision of the medical pedagogical council. If a child is diagnosed with a learning disability in general, they are enrolled in a special program.

Do you have the possibility to individually assign training materials, work methods and other tools to pupils with math learning difficulties?

- Although there are a large number of students in the classroom, we try to provide an individual and differentiated approach, depending on the student's abilities; attract attention with games / puzzles; we reformulate the task in simpler words, etc.
- I try to create a peaceful environment and help to achieve the goal with prompting questions.

How do the students who have math learning difficulty behave during maths lessons?

- These students are often agitated, avoid the gaze or other contact of the teacher, often engaged in side matters, sometimes behave bravely and disturb others; in the upper grades, they miss math classes or do not attend tests, etc.



Teaching Mathematics to Students with Dyscalculia and Mathematics Anxiety

Do pupils with math learning difficulties have possibilities to get help from specialists (social pedagogues, psychologists, consultants etc.)?

- Opportunities are limited because not all schools have social pedagogues, psychologists, counsellors, etc. In addition, these specialists provide assistance only in the case of behavioural or general learning disabilities, and not in the case of learning difficulties in mathematics.

2. FAMILIES' INTERVIEWS

Two parents from two families were interviewed, two of whom have children in Basic school and one in Gymnasium.

As you know, math is a stumbling block for many students. What do you think is the reason for this and what could help children better understand math and overcome anxiety?

- Teachers explain too quickly. There is a lack of time to understand and solve tasks.
- Nothing is explained individually in the classroom, but a more complex topic should be explained individually. The child more often does not understand the connections and often does not understand what the teacher wants from him.

Do you work with the school to solve your child's difficulties in learning math?

- Yes, we work together. We communicate on the site klase.lv, use phone conversation/ emailing or meet in person, etc.
- However, it must be acknowledged that the interest of disadvantaged families in children's education is usually low, although children from these families are most likely have learning difficulties because they are not addressed in a timely manner.

What can be done to improve the math skills needed in everyday life, such as shopping, time, transport, food - drinks, etc.

- The school or city should have extracurricular activities, which develop the child's creative thinking through various dramatic performances, creative games, various imaginary problem-solving scenarios and plans.



Teaching Mathematics to Students with Dyscalculia and Mathematics Anxiety

- Playing various creative games with family or friends, such as "Alias", "Latvia", "Monopoly" and also origami puzzles, etc.
- Also strategic computer games (!!!).
- Discussions with children family daily expenses (water, electricity and gas tariff, etc.).
- When traveling with children, mention the height of natural objects, historical or geographical facts using figures, etc.

If a student has math anxiety, how does it affect achievements in math?

- Stereotypes in society that math is something terrible and cause anxiety when hearing the word math. Of course, this affects math learning, creating blockages in learning math.

3. STUDENTS' INTERVIEWS

We surveyed two Secondary school students.

Are there students in your class who have difficulty with math? If yes, please describe what kind of difficulties are there?

- Yes, mathematics seems like a difficult subject to us. Some find it difficult to solve problems, others find it difficult to understand the new content, choose the right formula or task solving algorithm, others lag behind the pace of the class.
- But there are also those who do not learn on their own, but write homework from others.

How do the students who have math learning difficulty behave during maths lessons?

- Some ask the teacher, others students who understand, but some show no interest at all and do not follow the lesson.

What could help you / your classmates better understand math and to overcome anxiety?

- Divide the class according to abilities in mathematics lessons. Then there will be less student in the class and the teacher will be able to explain it better to each student.



Teaching Mathematics to Students with Dyscalculia and Mathematics Anxiety

- At present learning is more correlate with repeating of a rule, algorithm solving examples, not with deeper understanding of mathematics. The process of learning could be more involving, interesting, motivating.
- Enhance the link between teaching of mathematics and real/ everyday life. The teachers should explain examples of real life where is used particular teaching content. It makes easier to perceive and understand the mathematics concepts differently, the question arises whether is it necessary.
- Links between mathematics and other subjects. Students pay attention to the need to demonstrate the connection of mathematics with other subjects and applications in them.