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A photograph of a school hallway. On the left, there is a long row of orange lockers. Above the lockers, a round analog clock is mounted on the wall. Further down the hallway, there are several classroom doors, each with a blue sign that says "classroom". The ceiling is a white grid with recessed fluorescent lights. The floor is a light-colored, polished tile. The text is overlaid on the right side of the image, appearing to be on a white torn-paper-like background.

***What makes it so difficult
at upper secondary school?
Differences in school staff's views of what
influences poor goal achievement in
mathematics***

Educational context in Sweden

- a ten-year compulsory school (preschool-class – year 9)
- after that, the young students can apply for a three-year upper secondary education
- upper secondary education consists of two tracks: vocational program and higher education preparatory program
- to be able to apply for upper secondary school, a passing grade in mathematics, Swedish and English is required
- 86% of the students in year 9 are qualified for upper secondary school (2020)

A final diploma from upper secondary school is a key to success

- Without a full diploma young people risk ending up in unemployment, poverty, exclusion, bad health...

A final diploma from upper secondary school is a key to success

- 15 000 swedish students (19,6 %) fail to obtain a final diploma
- For vocational students the mathematics course (Ma1a) is the biggest obstacle



*Semistructured interviews among Mathematics teachers & Special teachers,
School nurses & School counselors, Principals*

Analyzed by thematic content analyse

a lot of different aspects emerged... Holmgren,2020; Holmgren,2021

Overarching purpose:

to contribute knowledge about what affects vocational students' goal achievement in mathematics

Purpose of this study:

to compare three different staff groups' views of mathematics difficulties at vocational programs in order to detect differences.

school fatigue

Students
have
general
school
fatigue

Mathematics
teachers & Special
teachers

Students are tired
due to excessive
workload due to
bad organization of
special educational
support

School nurses &
School counsellors

Students are tired of
mathematics
because they
struggled so hard in
Year 9

Principals

self confidence

Students
want to be
seen
They are
afraid to fail

Mathematics
teachers & Special
teachers

Students want to be
seen by the teacher
but not made
public in class
They are afraid of
being perceived as
stupid

School nurses &
School counsellors

Weak self-image
manifests in low
motivation, low
interest and
laziness

Principals

test situations

Students have difficulties concentrating during the test situation

Mathematics teachers & Special teachers

Students show great stress **before** and **after** a test
They feel uncomfortable having test in a big aula

School nurses & School counsellors

Principals

To conclude...

- Staff who do not connect directly to mathematics teaching have important information to give regarding mathematics difficulties
- The perspective of school nurses and school counsellors was in many ways a complement to the teachers' picture
- Different professions look at mathematics difficulties from different perspectives
- Support is likely to have different appearances depending on whose view that is governing
- Joint discussions with representatives from different professions may provide new perspectives that can develop the support for students in risk

Thank you for listening!

References

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