

Norwegian mathematics teachers' dilemmas related to "Going Gradeless" assessment practice

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Introduction

The assessment practice in Norway stands out among other countries since grading is only introduced at the lower secondary school, in year 8 (14-15 years old pupils). The debate about whether pupils' performance should be assessed with grades has been a hot topic for a long time and reached its peak in the 1970s. Since then, the use of grades is repeatedly discussed when new educational reforms are introduced (Tveit, 2009) and not only regarding years 1-7. Assessment plays an important role also in the latest Norwegian curriculum, introduced in 2020. In case of upper secondary school mathematics (years 11-13), it is specified what "underevgsvurdering" (literally translated as "assessment along the way") entails, and what assessment of coursework should show (Directorate of Education, 2019). Despite changes regarding a greater focus on formative assessment during the mathematics lessons which supports pupils' learning and that teachers are to act as guides, the requirement for grades (from year 8 onwards) is still part of the assessment regulations. There are few external exams in secondary school mathematics and teachers' assessment practices have traditionally been weak (Hopfenbeck et al., 2013). Due to various reasons (like aligning practice with policy intentions and improving learning, new assessment experiences from the COVID-19 pandemic, reducing pupils' stress, etc.), several secondary schools not only in Norway are now going gradeless (GG), by reducing or eliminating grades, in all or selected subjects, including mathematics. Little is known about this new assessment practice and how it affects different stakeholders. Thus, in this study, we seek to answer the following research question: What characterizes the dilemmas of Norwegian upper secondary school teachers related to "going gradeless" assessment practice in mathematics? The insight into mathematics teachers' practices and challenges regarding GG, might inform other mathematics teachers, teacher educators, and researchers of classroom assessment.

Analytical framework

In our study, we explore the experiences of Norwegian mathematics teachers, coping with various challenges as they shifted their practice from grades to "gradeless". We endeavour to better understand these challenges by using the analytic framework of Suurtamm and Koch (2014), who investigated the dilemmas of Canadian mathematics teachers as they incorporated this new assessment practice into their classrooms. The term dilemma was used in the broadest sense, referring to a wide variety of problematic situations that are difficult to find simple solutions to. The framework consists of four types of dilemmas: conceptual, pedagogical, cultural, and political. *Conceptual dilemmas* in assessment arise when teachers consider the "why" of assessment - the different purposes of assessment, the role of formative assessment, the value of aligning instruction and assessment, or what it means to understand mathematics. *Pedagogical dilemmas* arise as teachers design and enact new assessment. Teachers consider "how to" of assessment - how to create assessment tasks and

tools, how to find time and provide feedback, how to increase students' involvement in assessment, etc. *Cultural dilemmas* are related to changes in classroom and school culture because of the new assessment practice. Teachers face dilemmas as their new assessment practices challenge pupils', parents', or colleagues' notions of assessment (“*who*” of assessment). *Political dilemmas* arise when teachers try to align their thinking and practice with state and school policies on classroom and large-scale assessment (“*what*” of assessment). (Suurtamm & Koch, 2014, p. 268-269).

Method

This study is part of a larger research project “Going Gradeless” (<https://www.ntnu.edu/ilu/going-gradeless>), in which more than 20 upper secondary schools were identified as they self-report implementing a gradeless approach to assessment. Adopting a mixed-method approach to multiple case study methodology, we conduct (among other methods) semi-structured group interviews with different stakeholders about their perceptions and practices related to GG. So far, data were collected in six schools, however, in this study, we focus only on the interviews with mathematics teachers from four schools. A hybrid approach, modelled after the inductive-deductive thematic analysis method (Fereday & Muir-Cochrane, 2006), is being used to code teachers' responses.

Preliminary results

Interview results indicate that despite a shared understanding of learning and assessment, mathematics teachers face significant challenges in establishing a common assessment practice. The lack of tools for valid, reliable, and fair assessment leads to autonomy, making new practices time-consuming. Traditional chapter tests have been replaced by oral and (smaller in scope) written formative forms of assessment; conversations between teacher and student got more space, as well as creativity and exploration. However, it appears that clear frameworks and systems are desired for grade-free assessment. Norway's examination system limits desired assessment practices because the alignment of creative pedagogy with exam-based assessment doesn't seem to be compatible. Ensuring effective teacher-student communication without grades is difficult, possibly due to inconsistent feedback usage. Teachers see a need for improved assessment skills to enhance teacher-student communication, as well as self-assessment and peer assessment.

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