# The role of elicitation in formative assessment

Kristoffer Arvidsson

Department of Science and Mathematics Education, Umeå University  
Umeå Mathematics Education Research Centre (UMERC)

A central component of formative assessment practices is the act of elicitation, where teachers create situations (e.g. through questions or tasks) that enable the gathering of information on students’ current understanding and misconceptions. This short presentation will report on a case study, exploring the elicitation techniques used by one mathematics teacher when she responds to students seeking help during task-solving. Data is collected through audio recordings of lessons over the span of one year. Preliminary findings suggest that the teacher's feedback more often aligns with students’ learning needs when the elicitation process yields sufficient information, i.e. enough information to enable the teacher to tailor the feedback to those specific needs. This indicates the importance of the elicitation process in formative assessment practices.

## Introduction and aim

Research has shown that formative assessment has great potential for accomplishing positive effects on student learning (Andersson & Palm, 2017; Black & Wiliam, 1998; Hattie & Timperley, 2007). A main function of formative assessment is to adapt teaching and learning to the students’ learning needs. Such practices would require the elicitation of information about these needs.

This study is part of a larger project that seeks to contribute to the development of a theory of action for formative assessment by identifying mechanisms by which formative assessment affects student learning. The present study aims to explore a mathematics teacher’s elicitation techniques used during task-solving classroom activities and study the relations between the process of elicitation and the tailoring of feedback to student learning needs.

## Method

This qualitative case study focuses on in-depth insights into the practice of one experienced middle school teacher. The data consists of 15 audio recordings of the teacher’s mathematics lessons over the span of one year. During this time the teacher was a part of a professional developmental program which focuses on improving formative assessment practises in the classroom. During the recorded lessons, the teacher helped students individually in task-solving. The data will be analysed in a thematic approach by identifying types of eliciting, types of feedback and the relations between them.

## Tentative findings

Preliminary findings suggest that the teacher’s feedback addresses students’ learning needs more efficiently when the elicitation yields sufficient information about these needs. In cases where the elicitation doesn’t provide sufficient information, but the teacher moves on to feedback anyway the feedback tends to miss the actual learning need and focus instead on solving the task, which can be a separate issue.

Other cases show that if the teacher persists in elicitation and the student gets the chance to express their learning needs then the feedback can be tailored and used effectively to help the student. The following is a transcript of a teacher-student interaction that shows how the teacher elicited information about the learning need and by the end of the conversation could tailor her feedback to help the student.

Student: I don’t get it…

Teacher: What are you supposed to find out? What is the assignment? Can you tell me?

Student: I must figure out the circumference and area of this thing…

Teacher: OK, what help have you received [from the textbook] to be able to solve it?

Student: Ehh.. all sides are 1 cm.

Teacher: Yes, OK, what about it do you find difficult?

Student: I don't know... I don't understand. Should I count all of them, like that?

Teacher: Yes?...What do you think... How do you calculate the circumference?

Student: But I'm going to... You add everything together.

Teacher: Yes, you already knew that! Great!

In the short communication, I will describe the present study that focuses on the importance of elicitation in the formative assessment practice. In doing so, I will describe the different types of elicitation that the teacher uses and how they relate to the adjustment of feedback she makes.

## References

Andersson, C., & Palm, T. (2017). The impact of formative assessment on student achievement: A study of the effects of changes to classroom practice after a comprehensive professional development programme. *Learning and Instruction*, *49*, 92–102. https://doi.org/10/f3t4k7

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, *5*(1), 7–74. https://doi.org/10/fpnss4

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81–112. https://doi.org/10/bf4d36