Multiple Mathematical Practises Figuring in a Lecture About Assessment

Andreas Ebbelind
Linnaeus University, Sweden

Introduction and background

To study student teachers at teacher education has become an important aspect of research in mathematics education. The general features of this research focus on the individual student teachers' knowledge or beliefs (Phillip, 2007). However, this research is challenged by researchers indicating that these perspectives are regarded highly individual (Skott, 2013).

Because of the importance of the interpersonal aspects this part of my Ph.D. study set out to problematise lectures. The purpose is to better understand how a lecturer's contribution to immediate social interactions during lectures relates to prior engagement in a range of other mathematical practices. These student teachers participate in lectures that offer potential meaning of what it means to learn and teach mathematics. Attending these lectures is one part in the process of becoming an upper primary school mathematics teacher.

The aim with my presentation is to illustrate how multiple mathematical practices figure within one lecture.

The methodological and analytical tool

The Patterns of Participation framework (Skott, 2013) is used for interpreting and understanding how the lecturer re-engages in multiple mathematical practices. It intends to describe the patterns in the lecturer's contribution to the lecture by phrasing the shifted movement in participatory terms. In order to accomplish this, the generated data needs be structured with a focus on past and present practices.

System Functional Linguistics (Halliday & Hazan, 1989) is used for this purpose. It states that every speech act is about something (ideational meta-function), is addressed to someone (interpersonal meta-function), and is presented in a specific way (textual meta-function). The first function, *ideational*, addresses peoples experience and relates to the subject taught in the lecture. The second function, *interpersonal,* relates to the participants and how they engage in the lecture. The last function, *textual meta-function,* relates to how language is used in the lecture. However these functions do not highlight the content taught. Therefore, Berg (2012) extended the ideational meta-function with its own three subject meta-functions that concern texts in the subject: *subject content* refers to

ideas within the subject; *subject voice* refers to persons expressing meaning within the subject and *subject textuality* refers to how the subject content is produced. In this presentation the *subject content* consists of ideas about assessment. The *subject voice* relates to people within the mathematics education community concerning assessment. The *subject textuality* refers to the common way of using language in the mathematics education community, how we structure our communication while lecturing.

Result and concluding remarks, an example

The result shows that the lecturer present personal narratives related to assessment. These episodes are not just narratives; they can be viewed as true endorsed narratives about real experienced teaching. They stem from the lecturer's own teaching experience related to for example: (1) using a textbook; (2) teachers' use of body language; (3) the general dissatisfaction with the former steering documentation; (4) pupils different learning strategies and (5) how to teach professionally.

The structuring, of the generated data raised many questions. For example: how the endorsed narratives are established during the lecture; the relations between the endorsed narratives and the practice of assessment; how the manifestation of professional authority evolves during the lecture and how the discourse of assessment is established. Although all these aspects and questions is of interest in the on-going study in this short communication the focus will not be to answer the question of what function, for example, the endorsed narratives have in relation to the lecture or the student teachers. However, it has raised some interesting questions about the complexity of the actual lecture that will be feather discussed at the conference through some empirical sample.

References

Berg, E. N. (2012). *Var är meningen? Elevtexter och undervisningspraktiker.* (P.hD), Linneuniversitetet, Växjö.

Halliday, M.A.K. & Hasan, R. (1989). Language, context, and text: aspects of language in a social-semiotic perspective. (2. ed.) Oxford: Oxford Univ. Press.

Phillip, A. R. (2007). Mathematics teachers beliefs and affect *In F. K. Lester (Ed.), Second handbook of Research on Mathematics Teaching and Learning* (pp. 257-318). Reston: National Council of Teachers of Mathematics.

Skott, J. (2013). Understanding the role of the teacher in emerging classroom practices: searching for patterns of participation. *ZDM, 45*(4), 547-559