

Abstract

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Assessment for Learning – Natural Science in a Social Context

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The premise of this study is four Swedish municipalities, which in spite of similarities in terms of size, population structure, labour, etc. show significant differences in the described performances of their students. This resulted in a three-year research and development project where municipalities and universities collaborate. The overall aim of this project is to explore, change and develop educational activities with the intent to optimise the conditions for the teachers assessing student learning with subsequent improvements in student performance. The sub-study is focused on learning and assessment in science teaching in a social context. The project is based on the pedagogical theory of Basil Bernstein (Bernstein, 2000), where the conditions of students with non-academic backgrounds are taken into account. Important theoretical concepts are horizontal and vertical discourses, which on one hand represent knowledge as colloquial, and on the other, knowledge as qualifying, i.e. more specialised and meriting in the assessment context. The theory facilitates reasoning on how students can be given access to such knowledge, and also it challenges contemporary educational ideals that have been found to disfavour students with some sort of social background (Norlund, 2009). One basic assumption for the project is that problems generate a so-called 'bottom' or 'inside' perspective. Teachers are the main actors and researchers helps to map out the direction for the documents in the practice work. The knowledge developed is reciprocal, and while the conditions for student learning are made visible for the school activities the researchers insights into practice are developed (Post Holm & Moen, 2009).

The three-year project period is based on action research and action learning with participants from four municipality 7-10 schools that consist of students, teachers, school leaders and development managers (Eriksson, 2007). Also, four of the researchers are so-called challengers, i.e. their task is to problematise in order to make the teachers critically reflect on various aspects related to assessment and learning. At the beginning of the project, there were available documents in the form of teachers' discussions of professional development days, concretised curricula, quality reports and grade statistics. Data will be collected through interviews, observations and records of group discussions. The first analysed results from the project are based on Snow, Burns and Griffin (2005), who say that each subject has its 'survival words' or, what can be termed as, "qualification words". As a first challenge, in subject groups the teachers were to discuss and specify the most important survival words for the students to 'master' in each teacher group, i.e. the 'survival words' that were the most important in the qualifying context. Approximately 250 different "survival words" were analysed and resulted in the following categories:

- a) Behaviour and moral values
- b) General competencies
- c) Subject-specific competencies

This research and development project started in the autumn of 2009. Data collection is continuous. The expected outcomes are to increase the teachers' consciousness level in terms of justifying the selection and assessment of teaching contents in relation to the students understanding their world in qualifying scientific concepts. From the research findings, conclusions are expected to be drawn that concern differences in 'performance' between municipalities depending on the students' social background, as well as describe how action research can be a constructive part of action learning.

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