Assessment of mathematics in Preschool-class

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Assessment in mathematics work as a gatekeeper to future education and contributes to the reproduction of disadvantage for certain groups of students. Equity is an increasing challenge for the Swedish school system (Skolverket, 2019). The government and school agencies have identified early support of students at risk as core in raising equity. Through this there is a recognition of early detection and well-designed teaching for students that fall behind (Swedish Government, 2017). One of the latest reforms in order to raise equity is mandatory assessment in mathematics in preschool-class from 2020. If a student in need of support is detected, support is supposed to be given and special educational competence has to take active part. Furthermore, teachers understanding of and knowledge about the student and support matters for the support given (Scherer, Beswick, DeBlois, Healey & Opitz, 2016).

This article reports from a project about national assessment in mathematics in preschool-class. A previous report from the project showed that there are some concerns to investigate further regarding how the student as a test-taker, the knowledge in mathematics and assessment are fabricated. Policy documents and the assessment material fabricated these in ways that creates tensions and could lead to potential pedagogical dilemmas in the carrying through of the assessment for preschool-class teachers (Bagger, Vennberg & Björklund, 2019). Therefore, the purpose of this article is to further contribute with knowledge regarding prerequisites for students in need of support and the assessment of knowledge in mathematics in preschool-class for these students. The research question that guided this purpose is: How are the students in need of support and their knowledge fabricated by teachers? This is followed by a compare regarding the fabrication that the teachers make, and the fabrication that the documents make. Finally, a discussion of the assessment of knowledge and teaching of students in need of support in mathematics is made.

The selection of preschool-classes consists of a preschool-class with a multifaceted composition regarding language, culture and socioeconomical settings. During the voluntary implementation period 2019, the preschool-class teachers were interviewed in focus groups of 4 teachers while they got acquainted with the assessment material and planned the carrying through. Hence, they talked about implications for students in need of support during and after the assessment. We derive from Popkewitz (2012) theories of fabrication of kinds of people in our analysis. The tool for analyzing is a framework already used on the steering documents and the assessment material itself (Bagger, Vennberg & Boistrup, 2019). Fabrications are explored through categorizing the motives, values and assumptions (see Popkewitz, 2012) expressed in relation to students in need of support and their knowledge. Preliminary results are displayed in table 1.

<table>
<thead>
<tr>
<th>Fabrication of knowledge</th>
<th>Fabrication of student</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governed</td>
<td>Restricted in displaying knowledge</td>
<td>School mathematics is fostered and narrowed</td>
</tr>
<tr>
<td>Situated</td>
<td>Fitting in or not</td>
<td>Students’ way interacting plays out. Social aspects</td>
</tr>
<tr>
<td>Visible</td>
<td>Responsible for displaying knowledge</td>
<td>Test format/ content vs student’s prerequisites</td>
</tr>
<tr>
<td>Applied ability</td>
<td>(Un)able</td>
<td>Access to agency and capability</td>
</tr>
<tr>
<td>Fair</td>
<td>Participating in an equal way</td>
<td>Opportunity to participate</td>
</tr>
<tr>
<td>Usable</td>
<td>User</td>
<td>Activity that affords action</td>
</tr>
<tr>
<td>Too advanced</td>
<td>Counted out</td>
<td>Avoidance</td>
</tr>
</tbody>
</table>

Table 1: Examples on how the connections between students and knowledge appeared.
Commonalities with the earlier performed policy analysis shows that there is a risk that knowledge indeed is limited to the items tested, and that tensions appear between learning and controlling knowledge. Also, responsibility is placed upon the individual to display knowledge which contributes to a shift from being a learner to becoming a performer.

References


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