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Power-relations in participatory action research project in mathematics education

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The purpose of the study presented in this poster is to examine characteristics of power relations between researchers and teachers in an action research project. We position the study within a critical and social approach and pay attention to inequities that may concern power relations between researchers and teachers in an action research project (Skovsmose & Borba, 2004). We draw on Gellert (2008) who argues that if “professional development of mathematics teachers is considered a collective affair, then the concepts used to describe the teachers’ actions and cognitions should reflect this perspective” (p. 94). We also draw on Atweh (2004) when we problematise “the process of research itself and critiques it in terms of power relationships between the participants” (p. 194).

Keywords: Mathematics classroom, action research, power relations.

ANALYTICAL FRAMEWORK: PARTICIPATORY ACTION RESEARCH

In our analysis we adopt a description by Atweh (2004), where participatory action research is characterised as:

- a *social activity*. This research always recognizes the broader institutional context as part of the process, for example the municipalities or colleagues etc.
- a *participatory* action research. This research engages teachers and researchers to investigate their own knowledge and actions. A consequence is that people can only carry out action research ‘on’ themselves. It is not research done ‘on’ others. Emphasised here are the conditions for the

research in which teachers should be given the opportunities to fully participate in research.

- research which involves *collaboration* where teachers and researchers engage in research together. Everyone in the project strives towards developing her/his own professional competence with the support of each other. The collaboration may also include cooperation with people who are linked to, but not directly involved in, the research project.
- research which is *emancipatory*. Participatory action research may afford teachers to see and analyse the mechanisms that put limitations to their work as mathematics teachers.
- research which is *critical*. Included here is that the research itself seeks to challenge a mathematics teaching that do not provide equal opportunities for all students to learn mathematics.
- research which is *reflexive* in that it goes in two directions. The participants in the research investigate their practice, *and* they also aim to change it.

METHODS AND FINDINGS

This is a case study where we reanalysed data from an action research project with a specific interest in power relations between teachers and researchers. The data consist of participants’ logs. We also analysed audio recordings from three of the meetings in the project as well as notes from these meetings.

In the action research project, a model by Skovsmose and Borba (2004) was adopted with an addition by Björklund Boistrup and Norén (2013), see Figure 1.

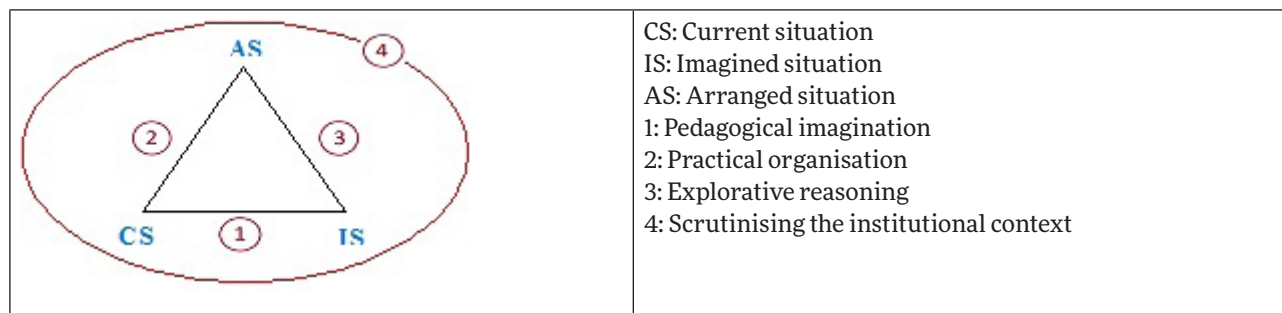


Figure 1: (Skovsmose & Borbra, 2004) plus (4) from (Björklund Boistrup & Norén 2013)

This model frames our account of the findings that is presented on the poster while we also use the mentioned characteristics by Atweh (2004) as analytical concepts. One finding we elaborate on is how teachers went from acting as observing participants towards participatory researchers during the project, while the responsible researcher went from research leader towards a facilitating participatory researcher. Simultaneously there were constraints identified in the institutional context which affected the affordances for participants to take on new roles.

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