LPS-REPORT 2009 from Team Sweden:

**Introduction:**

In the report from 2008 I reported on changes in the LPS team and work in Sweden. In this report I will take such issues of given and will focus on events during the last year.

**The Swedish LPS team**

The 2009 LPS team in Sweden is as follows:

- **Team leaders:**
  - Sverker Lindblad, University of Gothenburg
  - Ference Marton, University of Gothenburg (now emeritus)

- **Researchers:**
  - Jonas Emanuelsson, University of Gothenburg.
  - Johan Häggström, University of Gothenburg
  - Michael Hansen, University of Gothenburg
  - Martin Harling, University of Gothenburg
  - Eva Jablonka, Luleå University of Technology
  - Johan Liljestrand, Gävle University College
  - Olof Reichenberg Carlström, University of Gothenburg
  - Ulla Runesson, University of Gothenburg
  - Fritjof Sahlström, Helsinki University

The degree of activity varies between the members, but at present I think it is fair to present this list.

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Research resources:

In the previous report I wrote about the Swedish KULT project (Swedish school culture in comparative perspective) which is the Swedish counterpart in LPS. The KULT project was part of an application for a centre of excellence that was approved, but almost all of the researchers in KULT as an LPS project were not included in this Linnaeus centre LinCS. Since this centre changed direction and since the LinCS to my understanding was not organised in a way that conserved agreements concerning intellectual property rights and research ethics in the LPS consortium I decided to resign from LinCS with the research projects I direct. Thus, the LPS is outside the LinCS centre of excellence in Gothenburg.

However, we got additional research funds for a study on Lived Curricula and School Results in Late Modernity, where we are continuing working with research and comparisons of classroom interaction. This opens up opportunities for LPS work.

On the deliverance of the Swedish data sets:

There is one data set delivered – a full set including very detailed transcriptions of lessons and interviews. The detailed level implied that we used all resources on that set. This was a fair thing to do, given the complex interaction patterns we identified in the school and class studied.

We have now, with a reallocation of resources, started anew with transcriptions of lessons and interviews. Jonas Emanuelsson and I have made a few strategic decisions and Olof Reichenberg Carlström is outlining the work to be done now. We have not yet decided on the time schedule, but the important point here is that work is in progress.

Current activities:

We have three different foci for our work:

Firstly, member in the LPS team are continuing their work on the mathematics education task. Here, Jonas Emanuelsson and Johan Häggström are writing on a chapter in the next LPS book. It will hopefully be published in the autumn of 2009.

Secondly, as part of the Swedish team ambitions there was an interest in developing conversation analysis, most persistently driven by Fritjof Sahlström. He has now edited a special issue of Scandinavian Journal of Educational Research with that focus: Scandinavian Journal of Educational Research, Volume 53 Issue 2 2009: Conversation Analysis as a Way of Studying Learning

As such this special issue is outside the LPS work, but it is of considerable interest for LPS research in its way to deal with a specific approach to capture interaction and learning. Ference Marton contributed with a commentary “Beyond learning as changing participation” where he states about the contributions to the special issue. I quote him here to show the qualities of the contributions in the special issue edited by Sahlström:
This is a very impressive collection of papers, right at the cutting edge of research on learning—or at one of the cutting edges of research on learning, I would rather say. The five papers relate nicely to each other: A shared methodological and theoretical (or a-theoretical) stance is applied to five widely varying content domains. The research specialization is exemplary insofar as it builds on clearly identifiable earlier research, in a highly convincing way, but goes beyond it, carving out its own space in the landscape of scholarly inquiry into human affairs in general, and human learning in particular. The approach is distinct, rigorous, precise, and relentlessly empirical. Some of its specific features are: relating the view of learning as changing participation to conversation analytic methodological stance and using the participants’ categories for describing events and scenarios, and all five papers seem to be educationally oriented in the wide sense. This research situates itself inside the learning as changing participation paradigm, but transcends it through a micro-analysis of the mechanisms by which learning—as described in that paradigm—is taking place. (Marton, 2009, p 214)

I hope this is enough of an appetizer for checking this special issue on conversation analysis.

Thirdly, we are continuing our studies on classroom interaction from an institutionalist or curriculum theoretical point of view. This includes analyses based on classification and framing, classroom discourses based on notions of recitation and specific classroom interaction patterns as well as the school class as a social system. Harling, Hansen & Lindblad (2008) presented a comparison of Swedish LPS recordings with filmed classroom activities in 2008 from a curriculum theory point of view. They conclude:

To end – we have presented a comparative analysis of classroom interaction based on recorded fragments of lessons from 1968 and 2003. This has given us a picture of differences in classroom interaction and the politics of learning which we think can be understood as differences in governing. Furthermore, we understand such differences as indications on a changing regime of government. What we need to look for in the next step is to have a closer look at instruments giving feedback to the actors and how such instruments are used for orientation and action inside as well as outside education as a system.

Doctoral theses:

A main event in 2008 was the presentation of Johan Häggström’s PhD thesis in May 2008 with David Clarke as external examiner. Häggström compared the teaching of the same content (systems of simultaneous linear equations) in Shanghai, Hong Kong, and Sweden using Variation Theory as a tool. The study produced a highly interesting conjecture, namely that Chinese students’ excellent performance in Mathematics is a function of wider space of learning constituted. The ways in which the Mathematical content was dealt with in Shanghai classrooms offered better possibilities (as compared to Hong Kong and Sweden) for the students to develop the capability of dealing with more widely varying problems in the future. Similarly, the space of learning in Hong Kong classrooms seemed to be wider than in Swedish classrooms. Reference
and abstract as below:


Abstract: A starting point for this study was an aim to better understand the relation between teaching and learning of mathematics. This interest was based on the assumption that what is possible for students to learn about mathematics must be related to how the mathematical content is handled during mathematics instruction. The intentions with the study were to inform mathematics teachers and mathematics teacher education in this respect, and to contribute to the development of methods of analysis that are sensitive to and focus on the specific content of instruction. Johan Häggström has studied sixteen mathematics lessons from six classes in Sweden and China, which were video recorded within the Learners’ Perspective Study. The analysis was based on Variation theory and had its focus on differences in how the same mathematical content was taught. Three ‘objects of learning’ related to the mathematics taught – systems of linear equations in two unknowns, solutions to systems of linear equations in two unknowns and the method of substitution – were analysed. The analytical approach employed made it possible to detect subtle differences in how teachers handled the same mathematical content and thereby made different things possible to learn for the students. The description of these differences points out several aspects that in many cases can be so familiar to teachers that they face the risk of being taken for granted in teaching. Observations regarding the use of systematic and deliberate variation in the Chinese classrooms are also discussed.

Another doctoral study – by Monica Johansson at Luleå Technological University – was using the Swedish data set to study the use of textbooks in mathematics. Reference and abstract as follows:


Abstract: The thesis consists of four articles and a preamble that introduces the work and links the articles together. The overarching issue that guides this work concerns the textbooks and their use in mathematics teaching in Sweden. The intention of making four different studies was to be able to examine the textbooks and their use in the classroom from different perspectives. All parts of the thesis share the same focus, namely the relationship between the textbook and the curriculum. In this case, the curriculum is seen in a broad sense. It involves the intended, the implemented curriculum and the enacted curriculum. The work is guided by the traditions in the curriculum field in Sweden. This means that the choice of educational content and contextualization of teaching is emphasized. The mathematics textbook as an object is discussed from different points of view. Some important features and different conceptions of the textbook are highlighted, for example the authorization of a textbook and the role of the textbooks as links between the national guidelines and the teaching of mathematics in schools. The empirical
study of the use of textbooks in classrooms is made up of two parts, one is mainly quantitative and the other is qualitative. The quantitative part of the classroom study shows that the textbook influences not only what kind of tasks the students are working with during the lessons, but also the examples the teacher presents on the board, what kind of concepts of mathematics are introduced and how they are introduced. The organization of the lessons is also discussed. In considerable parts of the lessons, students are working on an individual basis solving tasks in the textbook. From the qualitative part of the study, one could see that the teacher can get into difficulties because of too much reliance on the textbook. However, one could also recognize that there is room for maneuver and that the teacher sometimes uses this space and deviates from the book. It could for example happen when the teacher becomes aware of some mathematical aspects, which the textbook does not cover. It could also be the case that the teacher uses other resources than the textbook. In all, the study shows the relative autonomy of the mathematics teacher in relation to the most common teaching tool in Swedish classrooms - the textbook.

Research on Interaction and Content:

One of the hopes associated with our participation in LPS was to bring together interactional (CA) and content learning (variation theory) aspects on classroom data. After several publications with such an orientation in the past, Sahlström brought together a symposium in connection with the EARLI Conference in Budapest last year. Now, Sahlström is developing the theme further in form of a special issue of the Scandinavian Journal of Educational Research and an edited book as well. We find here already an article by Emanuelsson and Sahlström in the same journal. Reference and abstract as below:


Abstract: The aim of this article is to further the understanding of how content is learned in classrooms, using conversation analysis (CA) and variation theory for the analysis. Classroom video materials from two mathematics classrooms in Sweden and the USA are analysed. A result of the study is the empirical explication of the tension between the need for teacher content control and the simultaneous contradictory need for student participation in educational interaction. The article also develops variation theory toward a more sensitive understanding of the sequential implications of interaction and suggests CA can benefit from more systematic understandings of content orientation in interaction. In doing so, the presumed gulf between acquisitionist and participation understandings of learning is challenged.

Research on International statistics and the governing of mathematics education:

The LPS study was to some extent based on a criticism of the TIMSS research on The Learning Gap and The Teaching Gap. In a number of texts the LPS research have presented problems with the Stiegler & Hiebart book on the
teaching gap. Parallel to this Lindblad has been working on the international comparisons problematics (e.g. Lindblad, 2001; Lindblad & Popkewitz, 2001) concerning the international statistics as governing tools. Popkewitz and Lindblad are now finalising a manuscript on statistical reasoning, where the TIMSS is part of the focus. Reference and abstract as follows:


Abstract: Numbers and magnitudes that are found in international comparisons of educational systems such as the TIMSS as well as reform programmes to rectify situations in need of change are enactments of a system of reason that are fabricating particular kinds of people. By fabrication we mean the ways such kinds of people are constructed by categories and distinctions (such as urban child or low-educated female). Thus, our concern with statistics is not with its techniques of analysis. Instead, it is to historically and theoretically examine the system of reason through which numbers are given intelligibility and “reasonableness”. We pursue this study through focussing on statistics of populations as inscribing categories and distinctions that form statements about who child or adolescent is or should be (passing the test, finalising upper secondary education) and consequences of belonging to a category (not entering upper secondary education) for a future in prospect. In statistics (as a way of defining characteristics in the people of a territory) populations are embodied in such cultural theses. They are fabrications of particular kinds of people given attention in policy as well as research; (a) to identify and order social conditions over the population in the making of social planning; (b) this process of ordering and classification of kinds of humans in policy and research is to promote progress; yet that impulse for progress produces differences and exclusions.

To me would be a very good thing to cooperate with other LPS teams about this issue on international comparisons and statistical reason in relation to mathematics education.

Research on Classroom interaction and Politics of Learning:

In the Politics in Education research group have started with Swedish materials to develop analytical tools based on the works of e.g. Ian Hacking, Basil Bernstein and so forth. A main idea is to study classroom interaction with a focus on the making of progress, differences, identities and social inclusion/exclusion (e.g. Mouffe, 2005). Of interest here is the correspondence between variation theory and systems theory in terms of complexity reduction in communication. A first pilot study is to be presented at the EERA meeting in September 2008. Here we are focussing on the persistence of recitation and the problem of educational change related to notions of looping and labelling (Hacking, 2004). Reference:


Of special interest here are notions on knowledge and epistemic cultures in
mathematics education. I am here trying to convince Rita Foss Lindblad to work with us from a social epistemological point of view.

Concluding comments:

I have here presented some changes in the Swedish LPS team as well as current activities. In the Swedish team we have to finalise the two last datasets. This has to be a prioritised task. We have also published quite a few texts based on the LPS data – not infrequently in cooperation other LPS teams. We have also elaborated notions on LPS in relation to the politics of learning and in relation to international statistics on mathematics education. Here we would welcome collaboration with other researchers in the LPS consortium.

In appendix a list of publications and texts from the Swedish LPS team is presented.

References:

Appendix: Recent publications from the Swedish Research Team:


