Comments to the Reviews of my MADIF 10 paper, by Allan Tarp

In its 2015 report ’Improving Schools in Sweden: An OECD perspective’ the foreword begins as follows

> The highest performing education systems across OECD countries are those that combine excellence with equity. A thriving education system will allow every student to attain high level skills and knowledge that depend on their ability and drive, rather than on their social background. Sweden is committed to a school system that promotes the development and learning of all its students, and nurtures within them a desire for lifelong learning.
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> PISA 2012, however, showed a stark decline in the performance of 15-year-old students in all three core subjects (reading, mathematics and science) during the last decade, with more than one out of four students not even achieving the baseline Level 2 in mathematics at which students begin to demonstrate competencies to actively participate in life. The share of top performers in mathematics roughly halved over the past decade.
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> Sweden has used these disappointing findings to foster a national debate on how to raise the quality of school education and to build a broad consensus on changes in the education system.

On this background it seems only natural that Swedish mathematics education researchers focus their research on the question: How to improve Swedish PISA results?

Likewise it seems natural that papers addressing this question be given acceptance and perhaps priority at the Swedish conference on math education research MADIF 10 held in Karlstad in January 2016 instead of being rejected by reviewers seeing no relevance in PISA results, as has been the case with my paper ‘Calculators and IconCounting and CupWriting in PreSchool and in Special Needs Education’ addressing precisely the question above.

In its abstract the paper summaries its question ‘How to improve PISA results’, and its method ‘to use institutional skepticism to uncover hidden alternatives to choices institutionalized as nature’ as well as its three discovered alternatives in preschool mathematics: To replace traditional ten-counting with icon-counting in bundles less than ten implying recounting to change the unit, later called proportionality, and next-to addition, later called integration. To use a calculator to predict recounting results before being carried out manually. To use cup-writing and to allow overloads and negative numbers when recounting in the same unit in order to take the hardness out of addition, subtraction, multiplication and division.

To immediately test if the hidden alternatives will indeed improve PISA results is not possible so the question is reformulated to ‘Does mathematics education build on a goal-means confusion seeing mathematics as the goal and the outside world as a means?’ Through its discoveries the paper is able to conclude on page 9 that ‘Institutionalized education sees mathematics, not as a means to an outside goal but as a goal in itself to be reached by hindering learners in learning to count; by insisting that only ten-counting is allowed; by using the word natural for numbers with misplaced decimal point and the unit left out; by reversing the natural order of the basic operations division, multiplication, subtraction and addition; and by neglecting activities as creating or removing overloads and double-counting.’

The paper thus follows the research genre as described e.g. in the first line of the Introduction Alvesson and Sköldberg book *Tolkning och Reflektion*, Studentlitteratur 1994: “Traditionellt har

forskning uppfattats syssala med att skapa ojektiv, sann kunskap genom följende av vetenskaplig metod." Here the scientific method is institutional skepticism based upon the philosophical skepticism of the Greek Sophist and the two Enlightenment republics, American skepticism and French poststructuralism. And discovering that choices presented as having no alternatives has indeed hidden alternatives makes these objective truths.

Before going into details with the 3 reviews a short note on the difference between is-statements and has-statements. As seen by a mathematical definition as e.g. 'a binary set relation IS a function if it HAS a many-to-one property' a verdict has the condensed form 'A is B if A has C' used also in courtrooms as 'A is guilty since A has done C'. More precisely, to be a verdict, a sentence must have an is-statement, a judgement, and a has-statement, the reason supporting or substantiating it. Likewise, semantics differentiates between has-statements and is-statements since the latter can always be transformed from statements to predicates: 'The apple is sour' to 'the sour apple'.

Having only an is-statement, the verdict transforms from an objective verdict to a subjective opinion, that can be relevant when shopping in a marketplace but that is irrelevant in a courtroom, where it will be met with an objection, and in passing judgements on a research paper where it should also lead to not only disqualifying the judgement but also the person using subjective opinions as verdicts. Such a person is not a researcher.

In the attached file I will look into the text produced by the three reviewers. It will then be clear that almost all verdicts has the abbreviated form 'A is B since A has ?' thus being subjective opinions and not objective verdicts referring to the paper text for support for its judgements.

Also I include my own review of a MADIF 10 conference paper to illustrate that to be a verdict a judgement must refer to a specific part of the text under evaluation.

On this background I will ask the organizing committee to reevaluate their rejection of my paper. At the same time I send a copy to the Swedish Minister of Education asking him to monitor the level of quality of Swedish math education research and its commitment to solving the serious problems in Swedish education as described in the 2015 OECD report mentioned above.

My advice will be: Maybe researchers can decide themselves which papers to listen to, maybe they do not need to be patronized and especially not by persons unable to tell subjective opinions from objective verdicts. So, on the background of the serious problems in Swedish education, could you please cancel the present review method until the PISA results stop decreasing? And if you find it paramount to continue reviewing, could you please work out ethical guidelines so that persons handing in one-word or one-sentence reviews or reviews that does not refer to specific parts of the text will have their own paper excluded, and so that persons supporting PISA denial to avoid having their own paper excluded will refuse reviewing papers on improving PISA results?

Best regards,

Allan Tarp, December 16, 2015

Active at the MADIF conferences since 2000, both in the inclusive era and in the present exclusive era (http://mathecademy.net/papers/madif-papers/)

Response, December 17, 2015

Dear Allan

We regret you feel that you paper has not been treated fairly, but the organizing committee has followed the guidelines that we have set up and communicated through the call for papers. This decision process, the instruction to reviewers, as well as the scientific requirements for papers follows a general and widely accepted procedure. It may well be that for conferences with other aims or content, you paper could have been accepted. But the three reviewers (two conference contributors and one external reviewer, all of which are themselves experienced researchers) all rejected the paper. The reviews are also conducted in a double blind process. Even if some reviews are short, we have no reason to believe they are not based on a thorough and professional reading of the paper. When summarizing all three reviews, our conclusion is hence that the paper does not have the necessary quality and content to be fit for a Madif presentation.

We will however put forward your comment and suggestions to the SMDF board so they can be considered in to future planing for the madif conference series. For some years now, the madif proceedings have been on the Norwegian list of scientific publications. This is considered by many to be very good. But the decision to be on such a list _will_ also make it more important that all contributions are considered to have the right scientific qualities. This in turn affects which papers that get accepted for presentation. And in this process a qualified review process is paramount.

For several years, SMDF has also had plans for a more open type of conference, arranged the non-madif years. These are still just plans, but it is quite possible that the type of discussion points you raise in your paper, would fit such a format better.

Best regards

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for the Madif 10 organising committee