

# Selective truths – the use of PISA and of Educational research in parliamentary debates and in media

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First of all, we need to apologise for changing the title. As so often in research, when gathering and analysing data we need to modify our questions and perspectives to better describe the empirical reality we find. On the contrary, we would like to argue, public debate in media and in politics often “change” the description of the reality, or of a problem, to fit a predestined solution.

Our take on post truth and alternative facts differs from the other papers somewhat; we like to talk about selective truths, and, in particular the “PISA truth”. In our view PISA-scores are a perfect solution for people who are not yet willing to go post truth, but don’t really bother about the more complex reality of education as handed to them by educational research. PISA, like John Hattie’s *Visible learning*, offers an uncomplicated view on effects and results in education and has, we think, tamed the audience to believe that there is a simple relation between scholarly evidence and educational practice.

In a recent review by a “true” statistician Hattie’s work is called pseudo-science. Bergeron (2017) writes:

Unfortunately, in reading *Visible Learning* and subsequent work by Hattie and his team, anybody who is knowledgeable in statistical analysis is quickly disillusioned. Why? Because data cannot be collected in any which way nor analyzed or interpreted in any which way either. (not paginated on-line)

In this paper, we aren’t so much interested in how educational data and facts are produced. Rather we look at how they are used; how they are interpreted and used as arguments for or against something. The kind of “do this and get these results-thinking” is a wishful thinking, and an attractive thinking to politicians and others with strong opinions about education. Another aspect is the abundance of data and solutions offered by PISA and Hattie. If you don’t like one truth you can probably find another one that fits your pre-justices or solutions better. Data-richness invites to cherry picking and faster politics compared to research built on problematizing, arguing and theoretical reasoning. We claim that main stream educational research, curriculum theory, policy studies, classroom studies, educational philosophy etc. lost its attractiveness to politicians and to public debate, just because it is seemingly not as hopeful and efficient as PISA and evidence based studies.

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In our paper we will show how PISA and educational research respectively has been *used* in media and in parliamentary debates since the beginning of 2000. Our main arguments are 1) that educational research has become less interesting to public debate, 2) that when referring to PISA it is to promote national ideals rather than international –using the international to give weight to national ideals, and 3) when referring to educational research it is as a request for more policy driven and practice oriented research, or as a critic of more argumentative educational research.

### A solution that seeks a problem – selective data use in the politics of education

This study has its origin in experiences from how our own research on grading and assessment have been received and debated in Swedish media. Increasingly, we were getting curious about the role of educational research in public debate today and if – and how – it had changed since the early 21<sup>st</sup> century entry of PISA in Swedish and European policy, politics, and media. Departing from the notion of Niclas Luhmann that Mass media do not just depict social reality, but in a real sense produce it: ‘What we know about the world we live in we know through mass media’ (Luhmann 2009, p. 9), we wanted to conduct an analysis, inspired by ANT-methodology, in which the use of PISA and of research in the public debate on school could surface. Such an analysis makes it possible to trace the socio-material networks that are shaped by social actors’ referencing, including or excluding concepts and phenomena, by liking and linking. As Fenwick has asserted (2010), the networks that are produced are considered not “as metaphors, but as socio-material performances that enact reality”. Subsequently, the analysis must look closely at the relations between actors and how they evolve over time.

Our analyses are two folded. In a first instance we look at media reactions on PISA results and reactions on media’s reports about PISA results. We map media events and actors involved and how they react on each other, and forms alliances or contracting parts. In the second instance we study how PISA and educational research is used to legitimize or delegitimize certain positions, decisions and reforms in parliamentary debates. We also investigate whether it seems that members of parliament (MPs), and media representatives, learn from international comparisons.

Neo-institutional theory, in particular, has pointed out that change in governance, organization and management across the world seems to follow fairly similar models. In other words, the alternatives, in say educational policy and reform-making, are not endless. Rather, change is more often about a specific set of options that suddenly gets legitimacy. According to neo-institutionalism, legitimacy, rather than efficiency, is fundamental to an organization's survival. In the research that emerged in the late 1970s, the theory claimed that an organization's legitimacy in a society diminishes if it does not conform to the norms and beliefs that once institutionalize it (Meyer & Rowan 1991). Such a norm is that decisions must be made with support in science or in data. Another norm that has become increasingly central is to be internationally oriented. This seems particularly valid for educational policy decisions and reforms.

A key concept for understanding education policy reforms recent decades has therefore been the concept of policy borrowing (eg Steiner-Khamsi and Waldow, 2012) 'Policy borrowing' is about how “policy makers in one country seek to employ ideas taken from the experience of another country” (Phillips, 2004: 54). However, the term has recently gained a more general

meaning related to how countries 'policies are influenced by other countries' policies. A central aspect of policy borrowing is how selective references to other countries policy can be used to legitimize their own country policy changes (Schriewer & Holmes, 1988). This is usually called externalization. Other common forms of externalization in education policy are to science, organization, history (Schriewer 1990). Who or whom policy refer to may, as Schriewer and Martinez point out, change over time (2004), but it is often about seeking legitimacy for (political) changes by referring to other countries or international organizations. To legitimize means to justify (see, for example, Andersen 2009), for example, why you should have grades in earlier ages. Referring, or externalizing to, for example, what it looks like in other countries, to research or to PISA, can be effective ways to justify a new grading reform.

The question then arises if we can see that the use of PISA and of educational research seems more about externalization to legitimize national party politics and ideals or if references to PISA and educational research appear to represent an effort to learn; to find new and perhaps more effective solutions than those previously tried or proclaimed<sup>2</sup>. One, of course does not have to exclude the other, but how externalisations are used becomes part of the discourse, "the way of speaking". It signals what count as valid knowledge about education. Thus, it is, from a public point of view, a matter of constructing facts.

This paper does not cover but the initial phase of the research that we anticipate conducting. To start with, we have focused to collect a data material from which we can further trace these networks. This study must also consider the strong entanglement between PISA, media and politics – and, at least in the Swedish case – that school and education is a highly politicized field. To conduct this research only in media and apart from the political debates in the Swedish parliament would leave us with loose ends. Therefore, the initial phase of this research study comprises two related data searches and analyses of their respective results: one media search covering the most important Swedish newspapers and protocols from parliament debates.

## Results

As a point of departure we will start by illustrating the centrality of PISA in Swedish public school debate. We have collaborated with a big-data company, Gavagai AB, to review the use of PISA compared to educational research in 800 media sources, including almost all traditional media and a selection of social media, mainly blogs. In December 6, the last PISA report was released. Since then, or at least since the first of January 2017 up until fourth of August 2017, 530 peer reviewed papers in educational research [utbildningsvetenskap] were published in Sweden and 21 doctoral thesis in pedagogy [pedagogik] (source: diva-portal.org). During this period, we clearly see a predominance of PISA-references in media. Of course, it peaked when the report was launched but then on average PISA is referred to on 200 occasions more than educational research.

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<sup>2</sup> Instead of one notion for all educational research, several different are used in Sweden. The most common is "pedagogisk forskning" (research in Pedagogy). The widest one is "Utbildningsvetenskap" (Science of education) which is more interdisciplinary than "pedagogisk forskning".

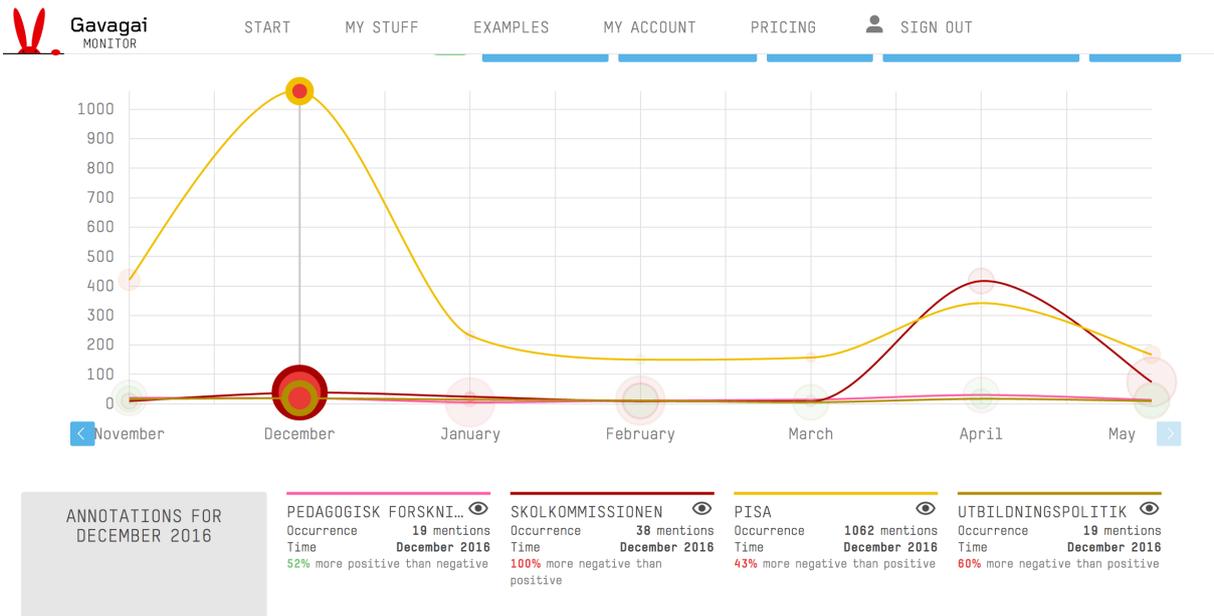


Figure 1. Use of PISA in 800 Swedish media sources, December 2016.

So, PISA is evidently more popular to refer to compared to educational research. But how is PISA used when used as a reference, and how is it used in relation to educational research? We start by looking at the media debate the last 15 years, and the turn to the political debates in the Swedish parliament. Sweden Participated in PISA for the first time in year 2000.

## PISA and educational research in media debates

### Media search - methodology

The results from the media search build on a systematic search in the Swedish data base *Retriever Mediaarkivet* aiming to find all published (i.e. also digitalised) school-related articles from year 2000 to 2016 in which references to both PISA and scientific research were made. The search was limited to articles in which scientific research (*forskning*) was mentioned, combined with PISA. The term “school-“ (*skol\**) was used to systematically omit articles other “Pisas” (such as tourist guides or articles on the Italian football team from the search result).

All Swedish media 2000–2016	Number of articles found in media search	Limited to the 8 main sources of print Swedish press <sup>3</sup>	After manual check for doublets and apparently irrelevant articles	In final sample for ECER analysis (2000-2015 only)
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<sup>3</sup> Dagens nyheter, Svenska dagbladet, Göteborgsposten, Aftonbladet, Expressen, Kvällsposten, Metro and Sydsvenska dagbladet

PISA + skol*	26 881	2 171		
PISA+ skol* + forsk*	8 619	695	562	454

Figure 2. Search result and data reduction, number of articles.

### Analysis

The purpose of the media analysis was threefold: to sort out the articles in which PISA was used as an argument to establish a certain truth about education, to describe how PISA and scientific research were used and referred to in Swedish media news articles about school from year 2000 to 2015 and in relation to what specific topics this discussion has oscillated.

To accomplish this, the articles were classified according to their respective 1) Use of PISA<sup>4</sup>; 2) Content and 3) Use of research. Each article was classified by 1-5 categories, for example: “PISA and politics”, “Mathematics”, “PISA the free school choice”, aiming at describing the sample by content labels to provide an overall picture on how research has been used in the PISA debate in Swedish media during this period, and what topics that have been added to, and thus mobilized into the discussion. Use of research was analysed according to if educational research, in the articles, was discussed in a primarily positive way, a primarily negative (or seemingly falsifying) way or in a neutral or ambivalent way (Waldow 2017).<sup>5</sup>

### Media analyses: some preliminary findings

To contextualize the sixteen years of Swedish PISA debate here studied, the following table has been constructed. It depicts the average position in PISA for Sweden during the period, as well as the political development (general elections etcetera).

	2000-2006	2007-2011	2012-2013	2014	2015-2016
<b>PISA score Sweden</b>	Above average	Average and declining	Below average		Average
<b>Defining events in politics</b>	2002: The Social democrats are re-elected  2006: The Liberal-	2010: General elections in which the Liberal-Right wing government	2012: Andreas Schleicher is invited to the Swedish parliament for the	Election year – two left wing parties form a new government (but are in minority)  “The School Commission” lead	

<sup>4</sup> If PISA is a) only mentioned *en passant*; b) used as argument to debate school/else or c) described/analysed in the article. Only articles classified as either b) or c) were categorized with respect to content and use of research.

<sup>5</sup> Only those clearly positioned in the extreme ends of this category have been classified as discussing research in a primarily “positive way” or “negative or seemingly falsifying way”.

	Right wing parties gain the majority in the general elections	is re-elected	first (but not last) time	by the OECD begins to work.	
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Figure 3. Time line showing defining events in Swedish politics during the period 2000-2015 that emerge from the media search. In addition, the overall Swedish PISA results for this period are shown.

In the following, we resume how PISA and scientific research were used and referred to in Swedish media news articles about school and in relation to what specific topics the discussion about research and PISA has oscillated. These results are presented in relation to how different actors have acted. We conclude this part on media analysis by reasoning about if and how PISA has been used to establish a certain truth about education.

#### Use of PISA and content of the debate

The first result to note is the increasing number of articles on PISA and scientific research from year 2000 to 2015 in Swedish media. The number of articles peaks during the election year 2014, and thereafter it declines but to a proportionately high number. Related searches, for instance a search only on “school” and “PISA” show the same pattern (but larger numbers).

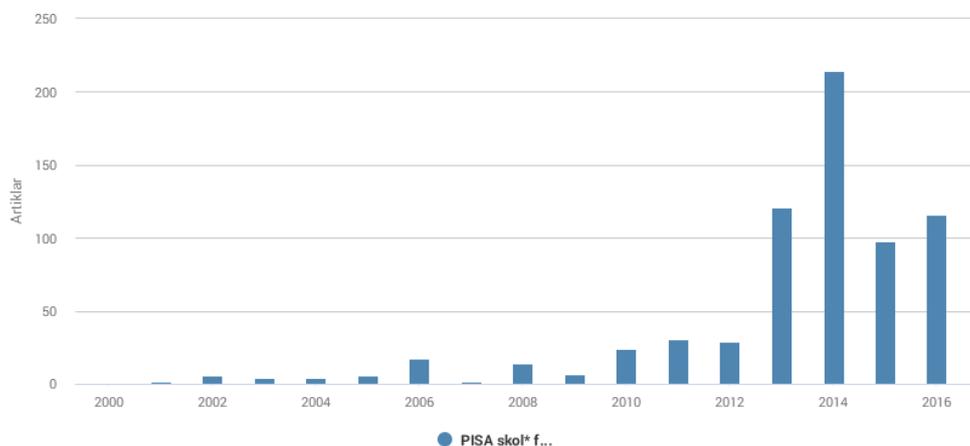


Figure 4. Number of articles found in media search up to 2016 (total 695). Source: Retriever Mediaarkivet.

All types of use of PISA – mentioning PISA *en passant*, using PISA to argue for different causes or describing/analysing PISA – increase over the years. The use of PISA to argue for a school-related cause, or reform, is the type of use that increases the most. However, as we will show, the use of PISA differs slightly among political commentators.

Use of PISA	2000–2013	2014–2015	In sum
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PISA is mentioned <i>en passant</i>	33 (2,3)	39 (20)	72
PISA is described or analyzed	83 (5,9)	48 (24)	131
PISA is used to argue for a school-related cause, or reform	80 (5,7)	130 (65)	210

Figure 5. Number of media articles 2000-2015 categorized by use (yearly average in parenthesis).<sup>6</sup>

As mentioned above, we also made an analysis concerned with describing content of the articles in order to provide a picture on what topics that have been added to, and thus mobilized into the PISA discussion. The overall picture, not surprisingly, is that more and more topics were added so that, by the year of the general elections in 2014 (eight months after the “disastrous” Swedish PISA 2012 result was getting public in December 2013), more or less all subjects related to school could be debated under the PISA umbrella.

To illustrate the scope of the debate, the table below shows examples of topics that were debated from 2000 to 2015. The table shows the number of articles coded in this media analysis in which PISA has been used to argue for or against various school-related causes. As we will discuss later in this paper, we view this as a way for the authors to legitimize or delegitimize various reforms or actions.

**Figure 6.** Number of press articles coded in which PISA has been used to argue for or against various school-related causes. 2000-2015. Encoding completed with NVivo 11.0.

Nodes	Number of items coded
PISA to discuss equity	33
PISA to discuss PISA ranking	20
PISA and free school choice	19
PISA to discuss grading and national assessments	15
PISA to discuss student effort	13
PISA to discuss teacher profession	13
PISA to discuss kindergarten	10
PISA to discuss digital tools	10
PISA to discuss smaller classes	8
PISA to question testing	7

<sup>6</sup> 41 articles are missing in the table, due to operational encoding problems with NVIVO. However, it is reasonable to believe that the large majority of these 41 articles should be within the two latter categories as the “en passant”-articles only were categorized as such. This part of the analyse has to be reconducted before paper submission to scientific journal.

PISA to discuss higher education	7
PISA to discuss the role of parents	7
PISA to discuss teacher education	7
PISA to argue for free schools	7
PISA to discuss the free school market	6
PISA to discuss children health	6
PISA to discuss teacher career and status	5
PISA to discuss teaching time	5
PISA to argue for school libraries	5
PISA to discuss leadership	5
PISA to discuss aesthetical and practical subjects	4
PISA to discuss lack of teachers	4
PISA to discuss special needs	4
PISA to discuss humanities and democracy issues	3
PISA to discuss homework	3
PISA to discuss student motivation	3
PISA to discuss practice-oriented educational research	2

The analysis of these sixteen years also suggest that the topics of the debate are reactions not only to PISA reports, but also to national media events that sometimes force politicians and policy makers, representatives of the teacher unions, teachers and principals to act and to react upon the conclusions drawn by these nationwide media events.

The media events that emerge from the reading of the 454 articles in this sample can be described as either 1) “investigative” (investigating, sometimes critically, PISA and the so called “Swedish school crisis”, 2) “Crisis affirmative” (describing chaotic schools or fuelling the notion of school crisis in different ways) or 3) “Domestically and internationally comparative” (providing the debate with elements from other places – often Finland). Examples of investigative media events are the two series of programs produces by the Swedish radio (SR) in 2008 (*Kris i skolan/Crisis in school*) and in 2015 (*PISA-doktrinen*). Two of the most influent crisis affirmative events were a series of critical articles by the journalist Maciej Zaremba in *Dagens nyheter* in 2011 (*Hem till skolan*) and the semi-documentary *Klass 9A* produced by Swedish television in 2011. Among the investigative media events the first reportages from successful PISA countries abroad were published in *Dagens nyheter* in 2004. All these events are noted in the media search because of Leads and debate articles written in response to their publication, often with a demand for politicians to act more strongly on the severe school crisis.

## Periods of negotiation, agreement and certainty

From our media analysis, we suggest the first ten years after the launch of PISA be characterized as *a period of negotiation (2000-2011)*. This means that during this period it was not yet clear or commonly agreed upon what the PISA assessment and its result stood for and could say<sup>7</sup>. Thus, during this first decade of the PISA era in Swedish politics, the meanings and possibilities of PISA were still at debate.

However, at a certain point PISA appears no longer be at debate. About the year 2011, possibly as a consequence of elements in the debate that strengthen the image of the “school crisis” in Sweden (to which we will soon return), the equivalence of PISA and “true picture of education” is becoming completely established in the public debate and appears to have reached the status of being uncontradictable. After this *period of agreement*, the four years to come (2012-2015) can be characterized as *a period of certainty*.

All though PISA up to 2010, on a general level, is a subject at debate and under negotiation, politically this is not entirely the case. This is illustrated by the reactions to the publication of the Swedish PISA 2000 results, at the time moderately above the OECD average. Immediately after, commentators representing the political liberal/conservative parties paid attention to what was described as the disappointing Swedish results with respect to classroom discipline. At the other political side, the governing Social democrats pointed out the Swedish PISA results in 2001 to demonstrate that Swedish school was approved even when internationally compared.

Swedish students report loud classes and devote little time for homework. Yet they are doing cognitively well in reading, science and mathematics.

These seemingly paradoxical results appear from the analysis of the OECD’s so called PISA study. As the study was presented in November, commentators from the side of the Social democrats chose to highlight the virtues of the Swedish school, whereas Conservative commentators gave their attention to poor classroom discipline. (Svenska Dagbladet 8 February 2002)

This political divide with respect to PISA use seems to have remained during the years to come. For the Social democrats, and the Left, PISA proved that Swedish school (historically most often governed by Social democrat governments) was doing good, and thereafter, following the decline in PISA (2006, 2009, 2012), PISA showed that the right-wing politics had been unsuccessful. For the right-wing parties and commentators, PISA showed that school was in crisis and needed to be fixed.

I believe more in the PISA assessment and in international expertise. (Prime minister Fredrik Reinfeldt (Kvällsposten 2014-04-13))

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<sup>7</sup> All though, clearly, some commentators and leads had certain convictions in that regard.

The political use of PISA is related to the political use of research (foremost educational research). Whereas educational research is often used by social democrats in their debate articles, this is not the case for conservative/liberal commentators.

In September 2006, the Swedes elected a liberal/conservative government with the new Minister of Education Jan Björklund. He and the Liberal party had gained many votes for their rhetoric on what was repeatedly called the “school crisis” (*skolkris*). Shortly after the elections, the PISA 2006 report was published, and showed a continuing slight decline for the Swedish results. Among the articles for this media analysis, Björklund’s name appears in almost one third of them (385 times in 137 articles).

#### *Use of ‘educational research’*

One apparent result from this analysis is the absence of academic scholars in the debate. During the first ten years (2000-2010), remarkably few academic scholars engaged – or were approached (in interviews etcetera) – in the Swedish media discussion concerned with PISA. In all, some forty individual researchers have been identified in the articles. However, most of them did not (or were not) engaged in the debate until the late 2013 after the “disastrous” Swedish PISA 2012 results.

Moreover, in the debate the educational researchers have been even more rare. The academics with the most frequent occurrences in the media debate on PISA between 2000 and 2016 are researchers from the fields of economics, linguistics and neuroscience. The sole exception is the Swedish PISA Project leader and PhD in Education, Magnus Oskarsson, who appeared in the discussion from 2010<sup>8</sup>.

Name of scholar	Field	Number of occurrences	Appears from year
Jonas Vlachos	Economics	15	2011 ff
Gabriel Heller Sahlgren	Economics	14	2011 ff
Inger Enkvist	Linguistics	14	2008 ff
Magnus Oskarsson	Education	13	2010 ff
Martin Ingvar	Neuroscience	10	2006 ff
Jan-Eric Gustafsson	Education	10	2008 ff
Anders Jakobsson	Education	7	2010 ff
Olov Sernhede	Education	5	2013 ff
Bo Malmberg	Education	5	2013 ff
Margareta Serder	Education	5	2014 ff
Alli Klapp	Education	5	2014 ff
Ulf P Lundgren	Education	3	2013 ff

<sup>8</sup> One explanation to why education researchers haven’t engaged more in the PISA debate is that in an early attempt to discredit Jan Björklund’s interpretation of PISA, they got the Right-wing press turned against them. Björklund’s politics were defended by the press as a politics against “a giant industry of hundreds of professors in Pedagogy who are responsible for the development of (Swedish) school in the last 40 years” (Expressen 2008-09-04).

Christian Lundahl	Education	3	2014 ff
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Figure 7. Academic scholars identified in the articles either as informants, authors or as the topics of conversation. Please note that the number of occurrences include occurrences also in 2016).

Actually, the absence in the public debate of education researchers was observed in 2009 by Professor in Education (Pedagogik) Bengt Persson who wrote a debate article in August 2009, in which he claimed PISA to have taken over the role of research as “director” in education politics ( “utbildningspolitisk riktninggivare”). Further, he wrote:

There are reasons to have concerns about the school debate regarding the absence of researchers and of research in Education. The politics of Education has lost its ideological dimension and is chopped by issues of detail.  
(Göteborgsposten 11 August 2009)

In 2010, following the release of the Swedish 2009 PISA results, the PISA debate is almost literally exploding and many want to share “their” explanation to the declining results. “Equity”, as measured by PISA, is getting publicity, not least thanks to two PISA researchers, Magnus Oskarsson and Anders Jakobsson. In Sweden, the question of equity almost immediately becomes interconnected to the “free school choice”-reform from the mid-nineties, a politically increasingly delicate question. A debate article of Oskarsson and Jakobsson (Newsmill, 2010-12-09) gets an aggressive response (Dagens Nyheter, 2010-12-15, Hans Bergström) in which their conclusions are claimed to be false. Oskarsson is also accused for not being politically neutral (as he is openly having regional positions for the Social democrats in his hometown Härnösand).

Politically, the trend continues: the Left-wing parties are regularly referring to educational research, whereas this is not the case for the conservative parties. Educational research is used as a reference in debates that are critiquing the free school choice, grading and in debates concerning more discipline and demands in classrooms. Implicitly, this means an alliance between the Left-wing parties and educational research.

In December 2013, the PISA 2012 results are released. As they are showing a steep decline in the case of Sweden, a nearly chaotic situation develops in the media. More or less everything is discussed and related to the PISA results in which Sweden is now below average in all areas assessed. As a response, demands on a so called “school commission” are raised, to be led by experts with the expertise to advise Sweden how to come out of this crisis. While the Social democrats are suggesting including Swedish researchers in Education in the commission, this is rejected by Jan Björklund and the government.

The social democrats (S), as opposed to the government, wants Swedish researchers to be included in the commission that now only will include international researchers and experts. I would have anticipated Swedish top researchers as well and not that they are excluded. Swedish top researchers might have more knowledge about the Swedish school system, says Ibrahim Baylan (S), spokesman for education. But Jan Björklund is hoping that the

international commission will be able to present "inconvenient truths". – An independent examination by international experts might very well draw other conclusions than we are doing here. A domestic debate risks getting blind, he says. (Dagens nyheter 2014-01-15)

Over time, the demands for more research with the purpose to solve the school crisis increase. While the political divide concerning the usability of educational research (“*pedagogisk forskning*”) is maintained, requests for a “new” type of research is starting to appear: practice-oriented research (“*praktiknära forskning*”) to replace (Swedish) “old-school” education research which according to debate appears too ideologically impregnated.

In 2015, Swedish radio (SR) broadcasted a series of programs (“PISA-doktrinen”) in which the results from PISA and the global role of OECD were at debate. Several national and international researchers in (among other) the areas of assessment, policy and educational philosophy were interviewed, as well as the PISA general Andreas Schleicher and other key persons in education. “PISA-doktrinen” set out to critically investigate the dominance of this one actor (OECD) in education. Many of the researchers in the program had critical comments about PISA. In the wake of the program, a loud and even sarcastic debate exploded in media. As an example, lead commentators referred to research referred to in the program as “research” (within quotes as to indicate it is not real; Expressen 2015-04-02) and research results were quoted ironically:

New Swedish research<sup>9</sup> questions whether the PISA results in scientific literacy with certainty shows that Swedish students’ knowledge in science has decreased. The knowledge of Swedish students, not only in science, is the best in the world. Everybody knows that! Swedish schools are all together an incredibly knowledgeable world and this situation – naturally – leads to the very best result in the world. (Aftonbladet 2 April 2015)

During the whole period (2000-2015), there has been an ongoing discussion oscillating around “Swedish educational research” and whether or not it is useful, dangerous, costly etcetera. In fact, just a handful of people have been involved as authors in this debate, at least to judge from the eight largest Swedish newspapers during this period. However, these authors reoccur year after year, and in many more articles than the (absent) defenders of educational research.

To illustrate the tone and the essence of the arguments of this discussion, the very last article found in this media search serve us well. It is a debate article published in *Dagens nyheter* December 30<sup>th</sup>, 2015 and written by one of the most active authors, Gabriel Heller Sahlgren at London School of Economics.

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<sup>9</sup> Referring to the doctoral thesis “Encounters with PISA” (Serder, 2015), referenced in “PISA-doktrinen”.

For Sweden's 'school of knowledge' (*kunskapsskola*) to be re-established in the year 2050, drastic measures have to be taken. Teacher education must be based on rigorous research instead of theoretical nonsense. The claims of the Education Act and in the national curriculum for student participation must be removed. National tests that increase the incitements for studying hard must be introduced, preferably combined with a relative grading system. Well-ordered competition must be stimulated. The politics of education must simply counteract, not fuel, the incitements of today that encourage students and their parents to whining instead of working hard. The promises of progressivism were happy and knowledgeable students. Instead progressivism contributed to lower the morale, to degraded teacher authority and to decreasing results. Only a wholehearted attack against its ideas and their underlying cultural expression, a restoration of the Swedish school of knowledge is possible. (Dagens nyheter 30 December 2015)

Heller Sahlgren's debate article is a crusade against "Pedagogy" which connects many of the important elements of this period's public debate about PISA and "Swedish educational research", and explicitly relates them to one another in the scapegoat position: progressivism as theoretical nonsense in Teacher education as opposed to rigorous research, order, morale and high results. Educational research can't solve educational problems since it constitutes the educational problem itself. The article really delegitimises educational research.

As described earlier, the articles in this media analysis were classified as follows: if educational research is discussed in a primarily positive way, a primarily negative (or seemingly falsifying) way or in a neutral or ambivalent way. Figure 8 illustrates the result. In sum, we can conclude that for the majority of the articles between 2000 and 2015, research is mentioned in a neutral, or sometimes ambivalent way. However, the number of negative or falsifying articles increases during the last two years. Swedish researchers are mainly occurring in interview articles or as authors of debate articles. Just a few are mentioned negatively by name. In many of the articles, international research is referred, not least in interviews with Finnish researchers.

	2000–2011	2012–2013	2014–2015
Research is discussed in a primarily negative (or seemingly falsifying) way	2	2	12
Research is discussed in a neutral/ambivalent way	31	37	108
Research is discussed in a positive way	6	15	8
The failure of educational research ( <i>pedagogiska forskningens misslyckande</i> )	6	1	4

Progressivism versus rigorous research, theory is "flum" or ideology			6
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Figure 8. How research is referred to in the articles (number of articles)<sup>10</sup>.

Departing from year 2000 when the PISA was unknown to the public, this media analysis has shown an escalation in the use of PISA in the Swedish school debate up to 2015, as well with respect to the number of articles referring to PISA as to the types of topics pulled into the debate. It also shows how media events such as reportages to successful countries or crisis-critical radio programs are getting attention by leading news media, and implicitly force politicians to act upon the school crisis that PISA is the evidence of. It also shows how PISA, in the debate, is used to delegitimize educational research. Over time, we see how the actors of this debate – commentators, ideologies, researchers from various disciplines, reforms and politicians, form and are pulled into the actor-networks of PISA. We will return to these networks in the concluding discussion. In the next section, we analyse the political use of PISA and educational research in the Swedish parliament.

#### The use of PISA in parliamentary debates

During the period from 2001 to 2017 PISA occurs in 176 parliamentary debates in Sweden according to the search engine at the Swedish parliament's data base. But only 151 is actually about OECD's PISA. The rest are faulty hits mainly from the Swedish words for friends "komPISAr". Anyhow we see a clear increase of references to PISA over the years. In each debate then, PISA can be used many times and by many different MPs. In total 581 times. Compared to the logic of media, the politics is not about reporting on information, but acting on it. They also might claim solutions that are not originally theirs. Politicians 'borrow' without making it explicit (Spren 2004, Waldow 2009) Therefore, their 'network' won't be as transparent as in a media analyses and consequently our analyses of parliamentary debates will be more discursive than that of media.

<sup>10</sup> In several of the 454 articles the connection to research is very vague. Such articles were not classified according to the above categories.

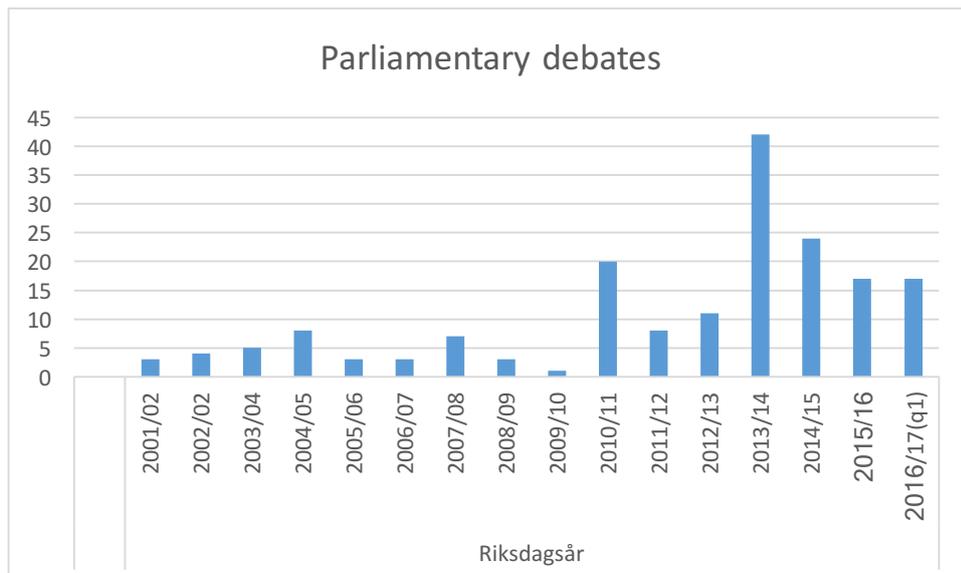


Figure 9. Number of parliamentary debates (N = 176) where the word PISA is used in the 2001/02 to 2016/17 (quarter 1). All protocols from parliamentary debates since 1971 have been digitalised so the increase in references to PISA reflects an actual change.

When it comes to how politicians use PISA results we find basically two different discourses. In the first one PISA is used to argue for ideas that do not necessarily relate to how other countries do but mainly that they perform better and that we have to do something (about our Swedish school results). We can call this a ‘result - reform discourse’. If politicians use PISA to actually study practitioners in other countries, we have a ‘learning - reform discourse’. These discourses can be illustrated with two examples:

That means that the actions we need to take during the next term of office, in addition to the [aforementioned] ICT strategy, are about giving formal grades to pupils already in Year 4. We need to have a clearer focus on results in the Swedish school. The fact that Swedish school policy has such an enormous fear of measuring and evaluating results has been devastating. It is the grade-free school that has created the decline in the PISA surveys - 30 years of grade-freedom, where you only have grades for the three last semesters. We start grading pupils last in the world. (Prot. 2013/14: 93. Education Minister Jan Björklund in an interpellation debate on the need for digital education in school)

In this example, decreasing PISA results are used to legitimize a reform of giving early formal grades to pupils, although the fact that OECD has never shown that there is such a relationship (Lundahl et al., 2015). In the quote, there are also no reference to specific countries that succeed in PISA due to early grades. PISA did not really have to be used here, but works well to reinforce a fairly general argument about falling results, and that is why something new is needed. As we mentioned in our media analysis, by 2013 the period of negotiation is over and replaced by a period of certainty with respect to the status of PISA.

Another way to use PISA is when debaters raise special and interesting examples from the OECD reports or from other countries participating in PISA, the ‘learning – reform discourse’:

What does the PISA survey show? In 65 countries, of which 34 OECD countries, 15-year-olds were studied in the main subjects of reading comprehension, mathematics and science. In 2000, Sweden is in the top class. In 2010 we have turned down straight. But there is another country near us that is in the top class, namely Finland. Why does Finland have such good results? One can point at some few things, namely that the school has a high status in Finland, the teacher is an authority in Finland, there are continuous follow-up tests and special support is given. If a student has been away for a few days or been ill, special support can be put in place directly so that the student is quickly taken care of. There is a teacher-centred teaching. Does anyone seriously believe that a ten-year-old himself can find the knowledge needed for such international tests compared to a teacher who teaches primary education? What have we already done about this? Well, Sweden has already tried to raise the schools' status. We have done this by raising the teacher's status with a licence [lärarlegitimation]. We have done this by talking about the importance of education for the social development and the development of knowledge so that we can retain Sweden as a knowledge society in the future. (Prot. 2010/11: 48 Yvonne Andersson KD, Current debate: Swedish pupils' school results)

Here, PISA is used to legitimize already implemented reforms, but it happens in a discourse that signals that you have looked at successful countries in more detail and attempted to learn from them. Here is a rational in the argument that can be seen and thus understood. However, if we look at the total use of PISA in parliamentary debates, the latter form is clearly more unusual. Explicit reference to what can be learned from other countries only occurs 22 times out of 581 uses. But we can of course assume that some 'silent borrowing' (Waldow 2009) is taking place.

Overall, in our material, PISA is pronounced in connection with education 581 times. Sometimes a pronunciation of the word PISA is used in connection to 2-3 different actions, which means that the amount of encoded PISA uses becomes slightly higher than the number of actual pronunciations, for example, "Pisa shows that our reforms X, Y and Z were correct". A pronunciation can thus be encoded in several different categories but of course never more than once per category. The numbers in the table below indicate how many times we have coded different opinions to different categories. The categories are based on what has been explicitly mentioned and can thus be regarded as fairly objective. However, in line with our media analysis coding has been done by hand and the amount of coded statements may differ plus minus one or two statements compared to the actual protocol. It is difficult to be accurate in such large text material and to check the coding is too time-consuming in relation to what it is worth to be more exact. The categories in the table are based on examples where PISA has been used to legitimize or delegitimize various reforms or actions. The table thus contains the use of PISA both as a pre- and counter argument, although PISA is most commonly used to argue for something, as a pro-argument. In total, PISA has been coded 356 times as arguments in connection with 34 different reforms or actions (Figure 9).

**Figure 10.** How often PISA has been used to argue for (and occasionally against) specific reforms and other political measures 2002-2017 (quarter 1). Encoding completed with NVivo 11.0.

<i>Nodes</i>	<i>Number of coding references</i>
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PISA to strengthen the family	1
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PISA to introduce assessment aid 1  
PISA for teacher licence 1  
PISA for smaller class sizes 1  
PISA for school based research 1  
PISA and international competitiveness 1  
PISA as the basis for new in-depth investigations 1  
PISA to focus on the talented students 2  
PISA for school library 2  
PISA and improved working environment 3  
PISA to develop teacher education 3  
PISA to discuss higher education 3  
PISA for increased teaching time 3  
PISA and the importance of leadership 3  
PISA and child health 4  
PISA and teacher-centred education 4  
PISA and private schools 4  
PISA and profit interest 5  
PISA and increased expectations from society 8  
PISA for and against decentralisation or re-centralisation 8  
PISA and immigration 9  
PISA and the free school choice 10  
PISA and upper secondary school 11  
PISA and youth unemployment 14  
PISA to set higher requirements or for a 'knowledge-based' school 17  
PISA and digital skills 20  
PISA in support of focus on preschool 20  
PISA for students in need of support 21  
PISA for increased order and discipline 22  
PISA for early grading 23  
PISA in order not to lower the taxes but invest more in education 26  
PISA to focus on the teachers 45  
PISA for increased equality in education 59

***Total number of coding references 356***

The overall most common way to use PISA is to argue that Swedish schools need to be more equal, although a few of these figures represent early examples from PISA 2000, which showed that Swedish schools were more equal than other countries. In other words, it is clear that PISA is used in a Swedish context where the issue of equality and equivalence, by tradition have engaged politicians in all parties. The question of equality and equivalence is also equally present throughout the study period. Perhaps these figures would be different in other countries where other issues had higher priority? The second most common way to use PISA is in an argument to focus on the teachers' professional prerequisites. Most of the material encoded here comes in the wake of PISA 2012. It also applies to the issue of PISA and more support at school. Arguments for more order and discipline and higher demands came mainly in connection with PISA 2009, which also concerns the issue of digital competence. Questions about PISA in relation to immigration have been unilaterally driven by the Swedish nationalist party [Sverigedemokraterna]. Similarly, order and discipline issues and questions about early grading have been driven primarily by the conservatives, and

resistance to profit on private schools or tax cuts associated with lower standards in education has been driven by the Left-wing parties. In other words, there are both historical changes and party-political differences in the question of what PISA is used to argue for. This is also a probable explanation to the political divide in use of PISA that was identified in our media analysis.

PISA can be used as an argument in different ways. The most common way is to promote a reform to be launched in the light of falling results. The material contains 68 examples of how to refer to sinking results over time and 21 examples of being below average. At the beginning and end of the period of investigation, there are also opposite examples, but they are fewer. This reflects Sweden's score development at PISA, but it is also a known phenomenon in political research that it is very effective to refer to a crisis or deterioration when seeking legitimacy for a new reform (Nordin 2014, König 2016, Landahl & Lundahl 2017). There are also some few examples in the material of debates about how PISA is being interpreted, if it does or does not provide a sufficient picture. In general, however, most debates are based on the fact that the PISA results are correct both in the decline and in the upturn of the Swedish results. Only 6-7 times reference is made to research in connection with PISA results. On the other hand, the Swedish National Agency for Education is often mentioned in these debates.

It is also evident that PISA is used in a purely political game: a 'blame game'. There are 32 examples in the material where the Left uses PISA to discredit the Right, and 24 examples where the Right blames the Left for the deterioration. However, there are also a few examples of reconciliation, nuance, shared responsibility, and wanting to avoid making PISA and school battleground in the political debate.

In sum, for those who have knowledge about the Swedish educational policy debate in the last 20-30 years, it becomes clear that PISA is used for a national political 'trench warfare' on issues such as: early or late grading, preschool or parental custody, private school or comprehensive public school, traditional teacher-centred or child-centred education, decentralisation or central governing, etc. We also note that rarely, the PISA debate is about real international comparisons and international influences. References to PISA are, in other words, examples of how politicians externalize in order to legitimize or delegitimize reforms. Falling or rising PISA results are a simple and easy-to-use argument. Yes, often the only argument needed for a reform. PISA is considered reliable. PISA is based on numbers, statistics and tables and extends far beyond its own borders. But the question is also whether PISA in this non-reflective manner, stands in the way for more research and experience-based arguments? If we now look at the use of educational research we find a complementary pattern.

#### The use of educational research in parliamentary debates

In the parliamentary debates January 2000 - April 2017, the term 'educational research' [pedagogisk forskning] is used on 94 occasions in 27 different parliamentary protocols (the search is completed here). Another term for educational research is 'utbildningsvetenskap', which is mentioned in 30 parliamentary protocols, and 'didactic research' which is mentioned in 23 protocols for the same period. If we look for more broadly by letting the terms

‘research’ and ‘school’ be within 50 words of distance, we'll find that in 100 protocols. This analysis, however, is limited to the use of ‘educational research’ [pedagogisk forskning].

Compared with our previous analysis of how PISA is used in parliamentary debates, it is an interesting result in itself that the explicit reference to educational research is around one-sixth of the amount of references to PISA in the same period. As with the term PISA, we further see that educational research is being used in the political game, where the Left accuses the Right to refrain from research and vice versa. Most commonly, however, is that pedagogical research appears in research policy contexts, such as in debates on research propositions and budget propositions (Figure 10).

**Figure 11.** How often "educational research" has been used in different ways in parliamentary debates 2000-2017 (quarter 1). Encoding completed with NVivo 11.0.

<i>Nodes</i>	<i>Number of coding references</i>
Blame the left for not taking on research	1
More research is needed to know what to do	1
Research and autonomy	1
Research is considered to be politicized	1
Questioning research results	1
Educational research is not practical enough	1
Blaming the left for how they uses research results	2
Criticism against higher education institutions not to invest in education	2
Educational research as an argument for something	2
Argument for specific research focus	3
Neuroscience versus educational research	3
Educational research and the school committee	4
Questioning interpretation of research results	4
How to spread research to school	5
Educational research as an argument against something	5
Blame the right for not caring about educational Research	7
Argues for more practical research	10
Blaming others for not investing in educational research	15
Focus on educational research	17
Financial focus on educational research	26

***Total number of coding references 94***

Findings from educational research are rarely used in an argument for specific reforms and actions. When using pedagogical research, the references are often vague and lofty, such as

In curriculum, no specific way of teaching is prescribed. However, there is no doubt that a subject-integrated and varied work approach with both theoretical and practical technical features has strong support in educational research and practice. (Prot. 2000/01: 61, Ingerd Wärnersson, S, Answer to interpellations)

At one point, actual references to research are actually used, and then in a debate about the grades in Year 4. Here it becomes clear that different parties make different assessments of educational research.

I have read some articles on the subject. Most of them are negative to grades in low ages. But most of these articles - most of them when you google on the topic - are based on a single source, and it is an interview with Christian Lundahl, professor of pedagogy. He thinks we here in the Parliament should make a decision on scientific, evidence-based grounds. But the interview with him was not evidence-based at all. If you look closer at the text you can see that he says what he thinks about the matter in many ways. I have looked up the sources [he uses], and there are extremely insufficient sources about this. (Prot. 2016/17: 76 Robert Stenkvis, SD [The Nationalist Party], An experimental activity with grades from Year 4)

The Left Party, on the other hand, shows greater confidence in the research on the issue:

Mr President, Parliamentary colleagues and listeners! In 2015, the Swedish Research Council presented a research report that rejected the idea of early grades. Christian Lundahl has been mentioned earlier here in the speaker chair. He is a professor of pedagogy, unlike the one who mentioned him. Lundahl led the work with the report and, together with colleagues, concluded that early grades have a negative impact on many students, especially those with the most difficult schooling. The students, on the other hand, perform better if they receive continuous feedback with positive information on how to improve their work. (Prot. 2016/17: 76 Daniel Riazat, V, An experimental activity with grades from Year 4)

Daniel Riazat from the The Left Party also questions what research support the Liberal Party have for early grades. In a reply, the Liberals contest referring to neuroscience, something they have done in other debates on educational research.

Mr President! I can start by referring to modern brain research. I think Daniel Riazat should read it and not just educational research. There is modern neuroscience that demonstrates the need for structure and order and schooling. (Prot. 2016/17: 76 Christer Nylander, Fp [The Liberal Party], An experimental activity with grades from Year 4)

This can be seen as a mistrust in some truth, but not in others. Overall though, politicians would like to invest more money in educational research, but not of any kind. They clearly prefer more of practical research.

Madam President! Thanks, Michael Svensson, for both the interpellation and your comment! Yes, I totally share the view that we need more research graduates in school. Everyone working in Swedish school will work on a scientific basis. All teaching must be carried out from a scientific basis. The support for doing so will be so much stronger if the teachers and colleges are doctoral graduates and people who choose to do research in parallel with their teaching profession. The development we are in today, where educational and pedagogical research increasingly is appreciating the school practice - what is actually happening in the classroom, which provides learning - is also strengthened by having more effective teachers who do research. The teaching

profession should primarily be an active researcher profession rather than a profession that is merely subject to research (Prot. 2016/17: 78 Gustav Fridolin, Mp [The Green Party], Answer to interpellations).

Throughout the political debate on pedagogical research, it is this practice oriented and didactic research that is requested and that is expected to be useful. The need for more systemic and argumentative or theoretical basic research is never raised.

A clear result from this review of the mentioning of educational research in parliamentary debates is that it does not happen very often. PISA is significantly more "useful" as argument and counter argument. At the same time, members of parliament safeguard the pedagogical research and find it important, if it is practice oriented and can become useful for schools, that is. One can only wonder why this is the case. One reason is probably that MPs do not read much educational research. There are, for example, a large amount of curriculum theoretical research and policy-critical research that could be useful at the system level, but they only talk about the school-based research which, moreover, probably is easier to intuitively understand the value of.

One way to understand why PISA is more popular among politicians compared with educational research is that PISA provides practical suggestions based on a policy perspective. The need for a school on a scientific basis and an education policy on a scientific basis poses possibly the educational science research for claims it could not live up to. The OECD seems to understand what politicians want in a way researchers do not ... or want to do. PISA delivers lots of results that can confirm almost any ideological stance around the school and justify e.g. both increased discipline in classrooms and increased student influence. And PISA "doesn't talk back!" There is no local OECD representative that goes out and says that, sorry you cannot interpret PISA in that way. As the media analyses showed, educational researchers that tried to talk back, got butchered in the press. In several cases they were accused to be too politically involved (Hans Bergström in Dagens Nyheter, 2010-12-15), but in some cases they were rhetorically portrayed as unreliable (Marteus in Expressen 2015-04-02) or as the very cause of the educational problems; the crisis of Swedish school (Heller Sahlgren in (Dagens nyheter 30 December 2015). Up until recently though, educational scholars have been involved in the analyses of the PISA results and probably contributed to more judicious and valid interpretations in the Swedish PISA reports. But from the next PISA, 2018, rumours say that the National Agency for Education have decided to do all of the analyses 'in house'. We have not yet been able to confirm that.

## Discussion/Solution

With this study, we set off to examine how educational facts/results are interpreted and used as arguments in a world that highly affects us as ANT-researchers – that is, in the world of politics and Mass media. In particular, we wanted to find and relate references to educational research to a taken-for-granted phenomenon in the Swedish educational landscape: PISA (cf Serder 2015). As, writes Gorur (2015, p. 96), the idea was... "to make visible the various translations and negotiations and compromises and controversies that attended the phenomena before they became taken-for-granted". By tracing social actors' referencing and externalisations, including or excluding concepts and phenomena, we see how different socio-material networks are produced. Educational results, researchers and theories are entangled

with political orientations and ideologies, with PISA ranking positions and with school crisis. To paraphrase Fenwick (2010), these networks are to be seen not “as metaphors, but as socio-material performances that enact reality” (Fenwick 2010). The reality in which we as researchers must act. From the view of an ANT-researcher, the point of this initial phase of our study, was to examine which networks grow, by what relations and with what actors. One tentative network entangles a few educational researchers (among them ourselves) with low school results/softness/school crisis/theory/ideology/biased research/past reforms. Another network that is being stabilized over time is order/large-scale studies/OECD/economics/psychology/neuroscience/future reforms. Over the years, these network more or less implicitly are mobilized into Left-wing vs Right-wing politics.

When it comes to the use of PISA and of Educational research in parliamentary debates we can clearly see that PISA becomes a more and more convenient externalisation. It can be used as an umbrella for almost any educational cause. Interestingly though, it is not really used for learning from others, but to strengthen the legitimacy of traditional Swedish educational Right or Left wing politics in education. At the same time, educational research becomes less convenient to use in externalisation (even if the Left Party still do). Rather it becomes an object of politics in itself. Educational researchers don't seem to offer what politicians need – simple explanations and straight forwards solutions to problems already defined by the political ideology; i.e. institutionally acceptable alternatives.

The Swedish example illustrates that concerning facts and truths in education, it is very difficult to convince any party that this or that fact or interpretation is more correct than others. We believe that we as researchers must be better to publicly demonstrate ‘the social order of truth versus facts’. In a paper Sørensen elaborates on these two very basic concepts:

In this society, people of different religious beliefs and of different ethnic kin could refer to the same scientific facts as a shared common ground. That facts were later revealed to be infused with political, economic, personal and other powers and interests does not change their core function as a common ground.

Why not? Because in contrast to the truths forwarded by religious, ethnic and other social groups facts can be challenged by evidence. (...) While truths are mobilized by authoritative institutions, such as churches and monarchs, facts are produced through the mentioned constitutive technologies of science. Facts rely on evidence and can thus be challenged by new facts that are produced in comparable, scientific ways and that also forward evidence. Truth, on the other hand, needs no evidence, and cannot be challenged. Truth is true, full stop. Unless you don't believe it, then it is just rubbish. (Sørensen 2017, not paginated online)

What responsibility can we, as researchers in pedagogy, take for a better perspective on truths versus facts in the political debate and the school policy reforms? First of all, we believe, we need to better understand political logic. Secondly, we need to be more active in social media and at least circulate high quality articles and information. We need to debate but we also need closer cooperation with established journalists to get our research public. Should not daily press be as interested in popularizing social science research as they are today of writing about science, if we showed what is available? We need to nuance and perspective policy-relevant results, not least around international large-scale quantitative studies (as in Landahl & Lundahl 2017), but also raise our claims - especially for qualitative studies. Thirdly, we also need to form alliances with other scholars. If educationalists don't have the skills in

statistics to analyse large scale assessments we must consult statisticians or economists, as Bergeron concludes in his critic of Hattie.

Statistics and modern data science offer an array of rigorous tools that allow for a better understanding of collected data and to extract useful and applicable conclusions. It goes without saying that the development of the education system must be analyzed in a scientific manner, and for this, the solution remains the same as the one proposed by Fisher many decades ago (cited in Allison et al., 2016): we must consult with a statistician before data collection. And during data collection. And after. But mostly, at each step of the study. We cannot allow ourselves to simply be impressed by the quantity of numbers and the sample sizes; we must be concerned with the quality of the study plan and the validity of collected data. Bergeron (2017, not paginated on-line).

At the same time, statisticians and economists often lack the historical and theoretical insights in education, that we as trained scholars in education have. They need our skills in making sound interpretations and recommendations concerning education as much as we need their skills in quantitative methodology and statistical analyses. Of course, we will always have to accept for the selective and legitimating strategic use of our data by others, but we must dare to have a politics of our own; a politics of transparency when it comes to production, interpretation and uses of facts and knowledge.

## References

- Andersen, J. A. (2009). *Organisasjonsteori. Fra argument og motargument til kunnskap*. Oslo: Universitetsforlaget.
- Bergeron, P-J. (2017). How to engage in pseudoscience with real data: a criticism of john hattie's arguments in visible learning from the perspective of a statistician. *McGill Journal of Education*. Vol 52, No 1, 2017. <http://mje.mcgill.ca/article/view/9475/7229>
- Fenwick, T. (2010). (un)Doing standards in education with actor-network theory, *Journal of Education Policy*, 22(2), 117-133.
- Gorur, R. (2015), Situated, relational and practice-oriented. The actor-network thory approach, in (eds) K. N. Gulson, M. Clarke and E. B. Petersen, *Education Policy and Contemporary Theory. Implications for Research*, 87-98, London: Routledge.
- König, P. D. (2016). Communicating austerity measures during times of crisis: A comparative empirical analysis of four heads of government, *The British Journal of Politics and International Relations*, 18:3, 538-558.
- Landahl, J. & Lundahl, C. (2017). *Bortom PISA. Internationell och jämförande pedagogik*. Stockholm: Natur och Kultur.
- Luhmann, Niklas. 2009. *Die Realität der Massenmedien [ e Reality of the Mass Media]*. 3rd ed. Wiesbaden: VS Verlag für Sozialwissenscha en.

- Lundahl, C., Hutlén, M., Klapp, A. & Mickwitz, L. (2015). Betygens geografi – forskning om betyg och summativa bedömningar i Sverige och internationellt. Delrapport från skolforsk-projektet. Vetenskapsrådet. Stockholm: Vetenskapsrådet.
- Nordin, A. (2014). Crisis as a discursive legitimization strategy in educational reforms: A critical policy analysis, *Education Inquiry*, 5:1, 240-247.
- Phillips, D.. (2004). Towards a Theory of Policy Attraction in Education, I Steiner-Khamsi, G. (ed.), *The Global Politics Of Educational Borrowing And Lending*, New York: Teachers College Press.
- Schriewer, J. (1990). The method of comparison and the need for externalization: Methodological criteria and sociological concepts, in Schriewer J. & Holmes, B. (eds.), *Theories and methods in comparative education*, Bern: Lang.
- Schriewer, J. & Holmes, B. (eds) (1988). *Theories and Methods in Comparative Education*, Frankfurt am Main etc.: Peter Lang.
- Schriewer, J. & Martinez, C. (2004). Constructions of Internationality in Education. In Steiner-Khamsi, G. (ed.). *The Global Politics of Educational Borrowing and Lending*. New York: Teachers College Press.
- Serder, M. (2015), Möten med PISA. Kunskapsmätning som samspel mellan elever och provuppgifter i och om naturvetenskap. [Encounters with PISA. Knowledge measurement as co-action between students and test assignments in and about science], doctoral dissertation, Malmö: Malmö University.
- Sørensen, E. (2017) The social order of facts vs. truths. *EASST Review*, 36(1). Retrieved from <https://easst.net/issue/easst-review-volume-361-april-2017/>
- Spreen, C.A. (2004) Appropriating Borrowed Policies: outcomes-based education in South Africa, in G. Steiner-Kamsi (Ed.) *The Global Politics of Educational Borrowing and Lending*, 101-113. New York and London: Teachers College Press.
- Steiner-Khamsi, G. & Waldow, F. (eds.) (2012). *World Yearbook of Education 2012: Policy borrowing and lending in education*, London: Routledge.
- Waldow, F. (2009). Undeclared imports: silent borrowing in educational policy-making and research in Sweden. *Comparative Education*, 45(4), 477-494.
- Waldow, F. (2017). Projecting images of the ‘good’ and the ‘bad school’: top scorers in educational large-scale assessments as reference societies. *Compare: A Journal of Comparative and International Education*, DOI: 10.1080/03057925.2016.1262245

*News paper articles references in the paper:*

- Heller Sahlgren, G. (2015, 30 December). Kunskapsskolans fall och återkomst. Dagens nyheter. <http://ret.nu/6mKeZbBZ>
- Martéus, A-C. (2015, 2 April). Försök inte babbla bort PISA. Expressen. <http://ret.nu/qHDz7pS>
- Östlund, S. (2015, 2 April). Svenska skolor är bäst i världen. Aftonbladet. <http://ret.nu/ooyvpLA>
- Larsson, M. J. (2014, 15 January). Utländska experter ska granska skolkrisen. Dagens nyheter. <http://ret.nu/IKI38fGE>
- Lundgren, J. (2008, 4 September). Professorernas kampanj. Expressen. <http://ret.nu/fDKNN29K>
- Reinfeldt, F. (2014, 13 April). Jag tror mer. Kvällsposten. <http://ret.nu/tOeprJBZ>
- Bergström, H. (2010, 15 December). Bluff om PISA. Dagens Nyheter. <http://ret.nu/UDByIUBH>

Persson, B. (2009, 11 August). Pedagogerna måste ta mer plats o debatten. Göteborgsposten.  
<http://ret.nu/sHAnGDYd>

Unknown auhtor. (2002, 8 February). Hög nivå trots stökiga skolor. Svenska elever klarar sig bra i internationell jämförelse. Svenska Dagbladet. <http://ret.nu/xxBpxhyt>

First draft - Do not quote