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The Director of Education and Research-Based Education: Exploring the Tensions between Policy and What Directors Actually Report

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Abstract: We examine how Swedish directors of education describe the conditions under which they lead research-based education. The empirical data was collected via questionnaires that were distributed via e-mail to all Swedish directors of education in charge of primary and secondary schools. Our results are based on a 'frame factor' theoretical perspective. Directors of education judge themselves as being well-prepared for the task of ensuring that research-based education is provided to the students. They envision their role as one where they read research reports, but they do not disseminate this scientific knowledge throughout schools. The directors assess teachers as having the least responsibility for ensuring that research-based education in primary- and secondary schools is provided to the students. From a cultural frame perspective, the results of the study reveal that school director considerably overestimate their ability to manage a scientific based education.

Keywords: director of education, primary- and secondary school, research-based education, legal requirements, cultural frame factors

1. INTRODUCTION

In many countries, there are special managers for schools within a defined geographical area. These managers can have different titles; in English, they often referred to as the 'director of education', 'superintendent', or 'district leader', for example. Directors of education are commonly linked to a school-board, and report to the top levels of the municipality organisation, whilst being simultaneously linked to their school leaders through strong network ties (Merok Paulsen, Nihlfors, Brinkkjaer & Risku, 2016; Hansen, 2016). This means that the director of education has a central function within the local school hierarchy. In some countries (e.g. Finland), there exist legal requirements for each school to have a director of education, and these requirements include demands that the director of education possess special competencies (Merok Paulsen et al., 2016; FINLEX: 14.12.986/98). In England, each municipal council is, to a considerable extent, free to decide its own organisation and arrangements. Many English councils do not have a director of education because this role has been subsumed by the role

of the director of children's service; a role which is required by the Children's Act, 2004 (Freeman, 2012). Directors' of education work with overall quality issues, in order to offer students an education of high quality.

Scientifically-based methods and approaches to education have taken on an increased importance during the last decades. This approach is informed by proponents of 'evidence-based- approaches, such that school management decisions must be based on the most reliable knowledge that is currently available (Minten & Lindvert, 2011). Although one might assume that school education systems are built on scientific knowledge, Hultman's (2015) meta-analysis of the school system covering the years between 1990 and 2015 reveals that research has little influence on the teaching that is provided at school.

In the present study, we examine how Swedish directors of education describe the conditions under which they lead research-based education as they satisfy the legal requirement of leading the delivery of educational programs that are based on scientific knowledge. Studies of Swedish directors

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of education are rare, and the present study contributes to a rather poorly explored area, namely how research-based education is provided in local schools.

1.1 The director of education and a scientifically-based school system

In Sweden, each municipality includes an education board which is in charge of the schools that are located within the geographic bounds of the municipality. Ultimately, such education boards have to fulfil the laws concerning education that the Swedish parliament and government pass. Every local school board has a chief officer, who is titled as 'director of education'. This director is not legally regulated and is therefore, from a juridical point of view, not responsible for actually executing what is legislated (Rapp, 2011). Depending on the size of the municipality, the director may have none or several organizational levels beneath him or her; each level coordinating the next hierarchical level. Nihlfors and Johansson (2013) argue that directors of education are perceived as the link between the head teachers and the politicians, and as such, instantiate the highest level of management at the principal organizer level. The majority of the Swedish directors were school leaders earlier in their careers, (Johansson, Nihlfors, Jervik Sten & Karlsson, 2016), but, for the most part, possess weak research qualifications.

In order to strengthen the connection between 'school education' (in general) and 'scientific knowledge', the Swedish Parliament has stated that education has to be based on scientific knowledge and proven experience (see the latest Education Act (SFS 2010:800). A definition of 'research-based education' is described, to a certain extent, in the government bill (2009/10:165) that was part of the preparatory work for the Education Act. Despite that fact that descriptions of the educational content and the pedagogy that should be used in research-based education are included in the requirement, these descriptions are somewhat brief and provide little guidance regarding how such educational content and pedagogy should be implemented in the classroom. Due to the vagueness that is present in the legal documents, divided opinions on the requirements of a research-based education system abound. Interpretation of the Education Act is further complicated because two national school authorities – the Swedish National Agency for Education and the Swedish National School Research Institute – define what is required of a research-based education system differently.

Sweden is not unique by having a legal requirement for research-based education; for instance, a similar demand can be found in the American 'No Child Left Behind Act'

(NCLB, 2001). Nevertheless, such a legal requirement is not as common as one might expect, and we note that it was *not* a requirement in the previous Swedish Education Act (SFS 1985:1100). However, it is not explicitly stated in the current Act who is responsible for ensuring that this requirement is met. Instead, it is merely implied who this might be in the second paragraph of the second chapter of the Education Act. In this paragraph, the municipality, through its education board, is put in charge of satisfying the legal obligations or legal requirements that are stipulated in the Act. Consequently, if a teacher, a head teacher, or a director of education does not fulfil the said legal requirements, the ultimate responsibility rests with the municipal education board (SFS, 2010:800).

The current Education Act has not been followed up by any governmental implementation strategies (Rapp, Segolsson and Kroksmark, 2017). However, since the implementation of the Act (SFS, 2010:800), the Swedish National Agency for Education has produced a several of publications on the Act (Skolverket, 2012; 2014). Additionally, Håkansson and Sundberg (2012) have published a study of a very large number of research reviews about teaching and learning that are related to this legislation.

As a result of a legal requirement in the Education Act, a new national authority, the Swedish National School Research Institute, was established in January, 2015. If research results are expected to influence the education system, then such results need to be disseminated to the schools. At the present time, this does not seem to be the case, however (Rapp, Segolsson & Kroksmark, 2017). Accordingly, one of the main objectives of the School Research Institute is to disseminate research results and to enable school staff members to plan, carry out, and evaluate their teaching in a manner which is informed by scientific methods and approaches (Skolfi, 2015).

1.2. Aim and research questions

The aim of this study is to examine how Swedish directors of education describe the conditions under which they lead research-based education, as they satisfy the legal requirement that education at primary and secondary schools be based on scientific knowledge and proven experience. In this paper, only the first part of the requirement, namely, that education must be based on scientific knowledge, is investigated.

The following research questions are raised:

1. What expectations are placed on the directors of education regarding the requirement that educational activities must be research-based?
2. What skills do directors of education possess so that they can successfully lead research-based educational activities?
3. Are there any consequences for directors of education if educational activities are not research-based?

Studies of the relationship between (i) directors of education and (ii) the creation and delivery of “research-based education” are quite rare. Notwithstanding this, knowledge about the extent to which legislation can affect directors’ professional practice is needed. Such knowledge is also of international interest. Accordingly, this study contributes to an unexplored field, and this contribution might help to elucidate the municipal educational-chief-officer’s role regarding the requirement of scientific-based education in local schools.

2. Frame-factor theoretical thinking

The requirement that education be based on scientific knowledge is based on a legislative decision that is made by a nation’s parliament.¹ The parliament can be thus viewed as the ‘arena for formulation’ for specific policies. In the next arena – the ‘arena for transformation’ – the policy is interpreted, transformed, and mediated in a manner that is based on the interpreters’ values. On the third level – the ‘arena for realisation’ – the law is supposed to be realised. At this level, teachers (for example) interpret the law in accordance with the conditions under which they already work (Lindensjö & Lundgren, 2000). These three arenas mentioned above, from a general perspective, are the levels that are commonly referred to as ‘the steering chain’ (SOU, 2015:22). This description is a metaphor for how the school system is governed, and is built on a rationalistic point of departure which states that each school is a part in a system where the upper levels control the subordinate levels.

In the present study, the quantitative outcomes are presented by using a frame-factor theoretical perspective (Dahllöf, 1967). A frame-factor theoretical perspective is a perspective which can be taken to explain how economical frames and judicial rules restrict and affect educational processes (Lundgren, 1986; 1999). By adopting such a perspective, one is able to explain why something happened but one is unable

¹ Levin (2003) and Åman (2011) argue that the identification of the best school policy is not a scientific question but a political one which is largely dependent on people’s values.

to more precisely explain what made it happen. The ‘prediction’ that can be thus made is to state *what could not occur, given certain circumstances* (Broady & Lindblad, 1998; Lindblad, Linde & Naeslund; 1999). Lundgren (1999) claims that the frame-factor theory can be used as an analytical theory and as a model for school development. He also considers frame-factor theory to be of particular relevance today, where a decentralised steering system prevails. Lundgren (1999) further claims that the main body of the theory is built around the idea that changes in external frames limit and regulate changes in internal processes indirectly. The theory has later been developed within a curriculum theory perspective through studies of the government’s control of education.

Lundgren (1986) argues that staff members at schools at a national level are mandated in their professional tasks by the Education Act and the Curriculum. He presents this argument schematically in the following model:

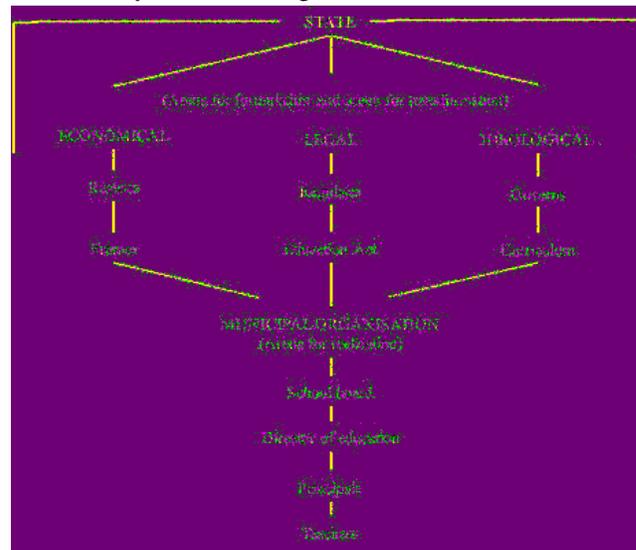


Figure 1. Parts of Lundgren model (1986, p. 26), complemented with elements from the local municipal organization.

In the frame-factor theoretical approach, economic-, legal-, and ideological incentives can be used. These three incentives can be interpreted in a frame-factor theoretical approach as constituting three frameworks for different possibilities (e.g. Broady, 1999; Svingby, 1978; Rapp, 2001; Sjöstedt, 2013). If one considers the theme of the present study as *education based on scientific knowledge* against the three frames, one can note:

Legal frame: The Education Act (2010:800) states that education has to be based on scientific knowledge and proven experience.

Economical frame: The state has not devised any national implementation strategy for the above-mentioned aspect of the Education Act. No funds for implementation followed the new requirement (Rapp, Segolsson & Kroksmark, 2017).

Ideological frame: There are no legal documents (e.g., National Guidelines issued by the Swedish National Agency of Education) that explain how school principals and teachers at schools are expected to work in order to fulfil the legislative requirement.

The above-mentioned frames can be complemented by a fourth frame, namely a 'cultural frame' (Rapp, 2013). A schools' culture is abstract and consists of an informal system of rules that governs the organisation's possibilities and limitations. It can, for example, include the values of the political majority; the prevailing values of knowledge; and the competence level that school staff members possess. Even if one cannot assume that an organisation contains one uniform culture (Hatch, 1997), a dominant culture can be often identified. The representatives of this culture (so-called 'code bearers' are often informal leaders, and not the school's official leaders (Berg, 2005; 2011).

3. Method

We used a quantitative case study method (Yin, 2014) in our research, which garnered results which were analysed by employing a frame-factor theoretical approach (Lundgren, 1986; 1999). Data was collected by means of a questionnaire that was distributed via e-mail to all Swedish directors of education who are in charge of primary and secondary schools. The e-mail addresses were retrieved from the Swedish Association of Local Authorities and Regions (SKL), which is both an employers' organisation and an organisation that represents and advocates for local government. The questionnaire was based on information gathered from an earlier qualitative interview study with this target group (Rapp, 2011). The results of that study formed the basis for questions that were included in the questionnaire.

Sweden has 290 municipalities in total, all of which are members of the SKL. Sweden's municipalities vary widely in terms of the number of inhabitants registered in each municipality. The smallest municipality has approximately 3,000 inhabitants, while Stockholm has approximately 1

million inhabitants. The majority of Swedish municipalities have between 10,000 to 40,000 inhabitants.

After retrieving the e-mail addresses, the questionnaire was sent to each municipal director of education ($n = 290$), and a total of three reminders were sent to those directors who did not initially respond to the questionnaire. The purpose of the reminders was to increase the number of respondents (Kaplowitz, Handlock, & Ralph, 2004). The majority of the replies ($n = 127$) were obtained after the first mailing, whilst the reminders generated 14 additional responses.

It is to be noted that not only did the directors in the research sample hail from municipalities with varying population densities, but also their work history varied; some were fairly new to the profession, while others had been in the profession for longer periods. Both of these factors may have influenced the results reported on below.

Table 1 shows that the proportion of respondents, this generally conformed to the numbers that apply to Sweden, which leads to the conclusion that the answers provided were reliable for the group of directors of education in Sweden.

Table 1. Respondents in proportion to the number of inhabitants in each municipality.

	Proportion of municipalities in Sweden $n=290$	Percentage of respondents $n=129$
0 - 9 999	27 %	32 %
10 000 - 39 999	51 %	50 %
40 000 - 79 999	13 %	10 %
80 000 -	9 %	8 %
Total	100 %	100 %

The 290 questionnaires elicited 141 responses in total ($n = 141$); the overall response rate was thus 49 %. The response rate in relation to the proportion of potential respondents (51 %) was not unusual for web-based surveys. Given this response rate, the response rate did not bias the results of the study. Those respondents who declined to answer more than 5 % of the questions were defined as 'no response'. Such partially completed questionnaires accounted for a loss of a total of 12 respondents. The analysis sample, ($n = 129$), consisted of 61 women and 68 men. The distribution of the respondents in terms of gender, number of years experience as a director of education, and size of the municipality (per thousand inhabitants) are shown in Table 2.

Table 2. Distribution of the respondents with respect to gender, number of years experience as a director of education, and the size of the municipality (per thousand inhabitants).

		<i>F</i>	Percentage respondents <i>n</i> =129 %
Gender	Female	61	47,3
	Male	68	52,7
Number of years as director	0-3 yr	45	34,9
	4-6 yr	33	25,6
	More than 6	51	39,5
Size of municipality (1000 inhabitants)	Up to 10	45	34,9
	10-40	63	48,8
	40-80	11	8,5
	More than 80	10	7,7

3.1 Design of the questionnaire

The questionnaire consisted of a total of 18 questions/assertions divided into two parts. The first part contained three demographic questions about gender, the number of years experience as a director, and the size of the municipality (Table 2). The second part consisted of 15 questions/assertions about research-based education.

The respondents were provided with a four-point Likert-scale that ranged from “strongly disagree” to “strongly agree”. It was also possible to answer “no opinion” to each assertion. One item in the questionnaire (see Table 3) concerned ranking a number of assertions and was therefore analysed separately. The analysis of the responses to the questionnaire as a whole began by reviewing and grouping the answers as responses to three-research questions. The groupings were such that four items provided answers to research question (1),² and three other items provided answers to research question (2). One question was a ranking question and thus was different from the others that used Likert-scales. Consequently, this question is reported separately under research question (2). Two assertions provided answers to research question (3).

3.2 The analysis of the quantitative data and issues of reliability

All of the data was analysed with the use of IBM’s ‘Statistical Package for Social Sciences’ (SPSS v19). Descriptive statistics and one-way ANOVAs were used to

² The research questions are repeated here for the reader’s convenience:

1. What expectations are placed on the directors of education regarding the requirement that educational activities must be research-based?
2. What skills do directors of education poses so that they can successfully lead research-based educational activities?
3. Are there any consequences for directors of education if educational activities are not research-based?

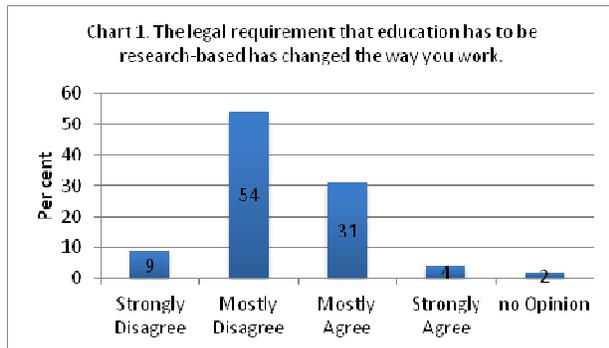
describe the results. The questionnaire’s internal reliability was tested with a Cronbach Alpha reliability analysis. The survey data that was presented in Charts 1, 2, 3, and 4 constituted one group with Cronbach’s $\alpha=0.69$, and the data presented in Charts 5, 6, and 7 constituted another group with Cronbach’s $\alpha=0.51$. The reliability in the second group is slightly low; the value is strongly influenced by the number of questions (in this case responses to only three questions constituted this data (sub)set). Consequently, we chose to use this value in a wider analysis. Because of the nature of the values in Chart 8 and Chart 9 it is not possible to carry out Cronbach’s reliability analysis. To determine whether there were any statistically significant differences in the data with respect to gender, the number of years experience as a director, or the size of the municipality, one-way ANOVAs were employed.

All of the respondents were informed via a letter that accompanied the questionnaire of the survey’s purpose, that their participation was optional, and that the data would be treated confidentially. Furthermore, the respondents were informed that the collected data would be used only for research purposes. In practice, this meant that none of the informants were forced to complete the questionnaire and that no external person would have the opportunity to connect any part of the collected data to a single respondent.

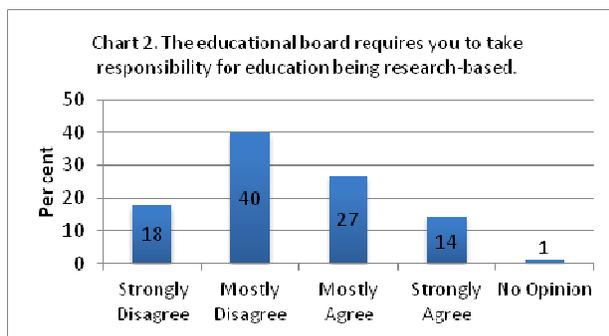
4. Results of the survey

This study examined how Swedish directors of education describe the conditions under which they lead research-based education. The surveys included three background factors: (a) gender, (b) the number of years experience as a director, and (c) the size of the municipality (Table 2). These were analysed to determine whether there were any differences in these background factors in relation to the survey responses. One-way ANOVA tests revealed that there were no significant differences in the background factors in terms of the respondents’ answers. In the analysis of research questions 1 and 2, one-way ANOVA tests resulted in $F(128)=1.70$, $p=0.195$ (ns) respective $F(128)=0.03$, $p=0.865$ (ns) regarding gender-related differences. Regarding the number of years experience that the respondent had as a director the results were $F(128)=0.96$, $p=0.384$ (ns) respective $F(128)=0.17$, $p=0.842$ (ns). With respect to the size of the municipality, the results were $F(128)=0.78$, $p=0.463$ (ns) and $F(128)=1.36$, $p=0.260$ (ns). The results are thus reported descriptively, and each research question was answered separately.

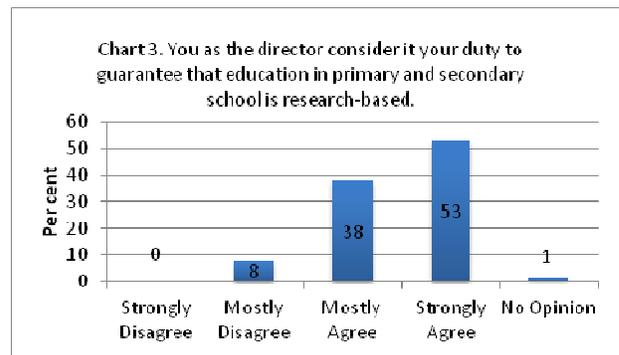
1. Question 1: What expectations are placed on the directors of education regarding the requirement that educational activity must be research-based?



One might assume that the new legal requirement would affect the directors' work. The requirement ultimately rests with the municipality's top management (the political board), and as officers of municipal management, this requirement should be part of the directors' work. However, 63 % responded that they had not altered their manner of working to any large extent due to the new legal requirement. Less than 5 % fully agreed that they had had to change their manner of working due to the new Education Act.



As previously mentioned, the political board is mandated to fulfil this requirement of the Education Act, and so it would be natural to think that its members would require the chief officer to undertake this responsibility. However, opinions regarding this issue were divided. Fifty-eight per cent of the directors did not think that the board required them to take real responsibility for ensuring that research-based education is provided at the schools that they are putatively responsible for, while 41 % thought that the board did require them to take such responsibility.



Based on these responses, we note that the school boards do not seem to be confident of the legal requirement, and the demands they place on their own officers thus differ. However, the directors themselves seem to be quite clear about their responsibility when they discuss their own roles. Ninety-one per cent of them "mostly agreed" or "strongly agreed" with the assertion that it is their task to guarantee that education in primary and secondary school is research-based.

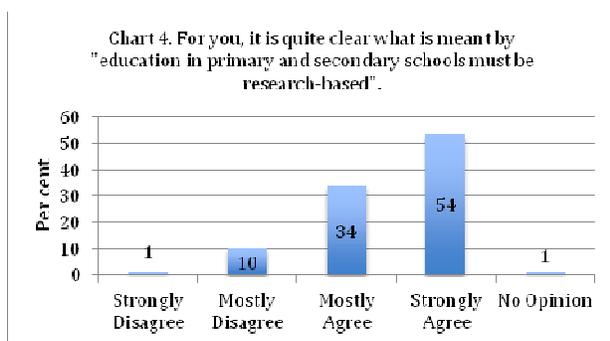
In table 3, the ranking-based question, question (7) is presented. A rank of "one" represents the greatest responsibility, and a ranking of "five" represents the least responsibility.

Table 3. Responsibility for ensuring that education is research-based (relative ranking) (n=129).

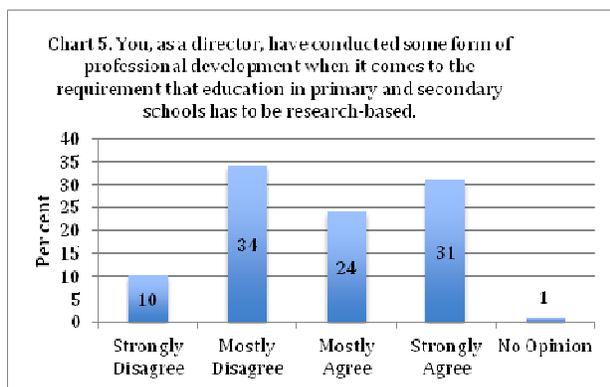
Responsibility for research-based education	Mean	Rank
It is the responsibility of the political board.	3,20	4
It is the responsibility of the director.	2,80	2
It is the responsibility of the principal.	2,63	1
It is a responsibility of the teachers.	3,21	5
It is a responsibility of everyone.	3,16	3

When the directors were asked who they considered responsible for the implementation of the requirement that education be researched-based, the results were mixed. However, two separate clusters can be identified. In the first, the directors and principals exhibited the highest scores. In the second cluster, the responsibility was distributed across all parties including the political board and the teachers. Here, the directors confirmed their earlier statements by placing themselves at a high level on this "responsibility ladder".

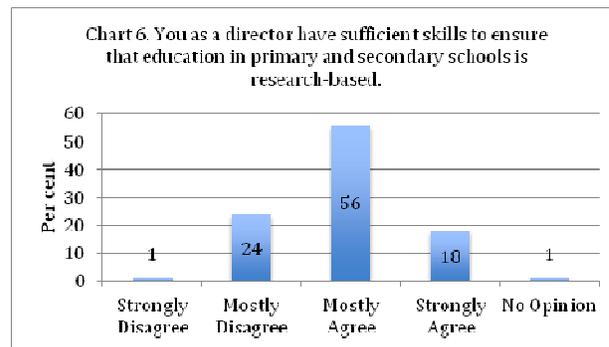
Question 2. What skills do directors have to possess to successfully lead research-based educational activities?



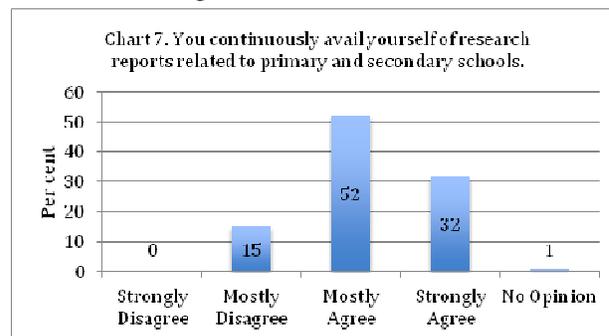
One might assume that the fulfilment of the legal requirement would correlate with how clearly this requirement was stated in the Education Act. If there are doubts about the requirement and how it is formulated, then it would be difficult for the director to know what was required of him/her. However, the answers that were given to us revealed that the directors felt confident in their interpretation of the relevant parts of the Education Act; 88 % “mostly agreed” or “strongly agreed” with the assertion that this was quite clear to them.



One might safely assume that directors are well-educated professionals who, in many cases, have many years of work experience behind them. However, the responses that were given to the statement “You, as a director, have conducted some form of professional development when it comes to the requirement that education in primary and secondary schools has to be research-based.” indicate a varied picture in that number of directors who declared that they *had* conducted professional development was similar to the number of directors who *had not* conducted any professional development in this area. One interesting question in this context is what types of professional development had been conducted.

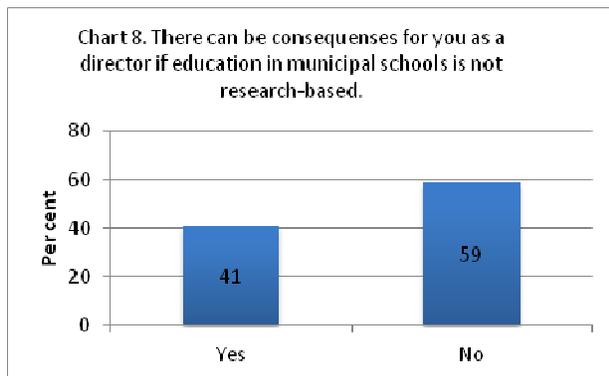


Do directors of education believe that (i) they have sufficient skills to transform their knowledge in their municipalities and schools practically, and that (ii) they can successfully lead their employees so that their employees base their teaching on research? Above, we noted that the directors felt confident with the meaning of the concept of ‘research-based teaching’, but in terms of practical implementation, the responses provided by the directors revealed some degree of uncertainty. Although 56 % “mostly agreed”, the number of “strongly-agree” responses was less, when compared to the number of similar responses given to the former statement. Moreover, approximately one quarter of the respondents exhibited hesitancy regarding whether they were sufficiently skilled for this assignment.

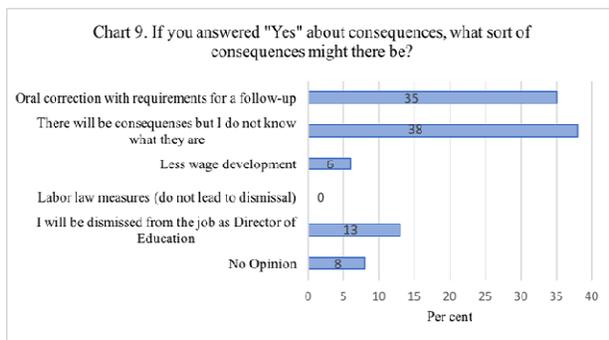


One substantial challenge that is faced by the directors of education is the effective and widespread dissemination of research results in schools. Regarding the assertion made in Chart 7, the directors had to consider the extent to which they continuously took part in research that is related to primary and secondary school. Eighty-four per cent “mostly agreed” or “strongly agreed” that they did so.

The next chart is related to research question (3), namely: Are there any consequences for directors if the educational activities are not research-based?



The above question actually enquires whether a director of education can be punished in some manner if the director fails to ensure that the education that is provided at the schools is research-based? The responses to this item in the questionnaire were difficult to interpret. The responses were divided into two large groups: 41 % answered that they were at risk of punishment, whilst 59 % provided the opposite response. Those who answered that they were at risk of punishment were then asked to describe the type of punishment that they could possibly be subject to. 38 % of the respondents who declared that they could be subject to punishment could not describe the type of sanction that might be applied. The second-most frequent answer (35 %) was a “verbal correction”. Nearly 13 % thought that they might be forced to terminate their employment.



4.1 A frame-factor discussion of the results

Since the main interest in this study is to learn more about the effects of a particular piece of legislation, a frame-factor theoretical approach was judged to be of use.

In Figure 1, we note that on the state level – the ‘arena for formulation’ – the discourse of economical restrictions, legal regulations, and ideological governments are formulated. These decisions pass on to the arena for transformation, and, in turn, are revealed in the arena for realisation. In this arena, the municipal level, legal requirements are supposed to be

put into practice. Here, the directors are considered to be the legal agents, and thus the way in which they should lead a research-based education is of main interest. The legal requirement that education has to be based on scientific knowledge was not followed up by any funding and/or implementation strategies (see left side of Figure 1). Therefore, the implementation has to be made at the municipality level using already-allocated financial resources and using a local/personal understanding of the legal requirement. Frame-factor theory is built around the idea that changes in external frames limit and regulate changes in internal processes indirectly. Furthermore, the theory can be used to explain why something happens, and also the opposite, what could *not* occur, given certain circumstances. From this theoretical perspective, one can assume that the lack of state funding and the lack of implementation strategies impeded the requirement that research-based education be instituted in local schools.

From an ideological perspective (see right side of Figure 1), it can be noted that the legal preparatory work that is provided in the Education Act gives little information about the ideological basis of the legislation. We also note that national authority guidelines are missing, and thus school staff can make their own judgment about what is actually required by the law. From a cultural point of view, one can say that the staff members at the schools can interpret the legal requirement in accordance with their already existing work practices, and as a result of this, they do not think they have to make any significant changes (Lindensjö & Lundgren, 2000). Finally, it can be noted that no uniform national definition of the law’s requirements has been presented since the law was enacted. The issue has become even more complicated because two educational state authorities define the requirement in different ways.

4.2 Expectations of the school director differ

The main focus of this analysis is on the legal regulation discussed above (see middle of Figure 1). Note that there is no legal requirement for the director of education to take responsibility for the provision of research-based education. Indeed, the provision of such education is not even legally regulated. Moreover, local political board requirements seem to differ greatly, and as a result of this, it could therefore be stated that the external claims for the implementation of research-based education are weak. (This is an example of a tension between policy and governing schools.) However, the internal claim, i.e., the claim that can be derived from directors themselves, is strong. Notably, the vast majority of the officers already perceive themselves as having a duty to

guarantee the provision of research-based education in primary and secondary schools, and they have therefore, depending on the legal requirement, not had to alter their manner of working to any large extent. These responses can be understood in different ways. A first alternative is to claim that the director already fulfils what is demanded; whilst another interpretation is to claim that the director does not understand what is demanded of the role. A third alternative is to claim that the director does not care about the legal requirement. However, if this is considered from a cultural frame perspective, the director has to do nothing; the directors argue they already work in accordance with the legal requirement, and have done so for a long time. Accordingly, nothing has to be changed.

The directors ranked the school principals together with themselves as the two roles with the greatest responsibility for ensuring that research-based education in primary and secondary schools is provided to the students (Table 3). Nevertheless, the results are not so easy to interpret. A summary of those roles assessed as having the highest- and second highest levels of responsibility reveals that the directors have very different opinions of who is responsible for ensuring that a research-based education is provided to the students. It should be noted that, although the differences are small, it is somewhat surprising that the directors assessed *the teachers* as being the least responsible for providing research-based education in primary and secondary schools.

4.3 School directors consider themselves as highly skilled

Our findings indicate that directors of education believe that they understand the meaning of what leading research-based education entails. Furthermore, many of them declared that they have conducted some form of professional development and assessed themselves as sufficiently skilled to lead research-based education. To the assertion: "For you, it is quite clear what is meant by 'education in primary and secondary schools must be research-based'", 88 % of the respondents "mostly agreed" or "strongly agreed". Because there is not much explanation provided in the legal preparatory work and there are no legal national guidelines about what 'ensuring that research-based education is provided at school' actually means, the directors of education themselves are left to interpret what their mandate is in this regard. To the statement: "You continuously avail yourself of research reports related to primary and secondary schools", 84 % of the directors "mostly agreed" or "strongly agreed". We take this report, together with the observation that the school directors consider it their duty to guarantee that education is research-based. As informing us that they are

also required to disseminate research results within the school(s) for which they are responsible.

However, the responses to the above statements can be critiqued. Firstly, the majority of the Swedish school directors hold weak research qualifications themselves and secondly, one main reason for establishment of the National Swedish School Research Institute was to strengthen the poor dissemination of research results to schools in Sweden.

We however note that the external claims on the director to take responsibility for implementation of the legal requirement are weak and, with reference to their responses to the questionnaire, the legislation has not changed the way in which the directors work.

4.4 School directors are not held to be accountable

Against the results reported in the previous section, it should be noted that the school directors, notwithstanding the legal regulations that govern their role, not have changed their way of working. Do they then fear that they can be held accountable if they fail to satisfy the legislation? Surprisingly, the majority of the respondents (59 %) said "no" to this question. These responses were supported by another majority response (58 %) which claimed that the educational board does not require the director to assume this responsibility. Consequently, it seems that failing to fulfil the requirement of a research-based education in primary and secondary schools is quite without risk. Although 13 % of the respondents declared that they thought that they did run the risk of being dismissed from the position of director of education if they failed to ensure that research-based education was provided at the Swedish schools, no such dismissals are known to have actually occurred in Sweden.

4.5 The school director and the frame of school culture

The school director, in as much as the director represents the school principal, is a part of the "steering chain" (SOU, 2015:22), a hierarchical structure which is constructed from a rationalistic point of view. From such a perspective, schools are part of a system where the upper levels control the subordinate levels. However, the law, namely the constitutional framework which governs the school's operations has not been defined in national legal documents. Furthermore, this legislature has its point of contact with the school practice the cultural framework. These cultural frames are built on the local school's history, the school's internal and external expectations, the staff's view of knowledge and competence, and so on. In the present investigation, the director of education is a part of the local cultural framework and this person uses his/hers view of knowledge and

competence to interpret what a school ‘built on scientific knowledge’ actually entails. The school director, who usually lacks research training, is thus governed by *different* cultural frameworks but still has to understand the legal requirements from within these different frameworks.

In Sweden, no national decision has been made about what a ‘school based on scientific knowledge’ actually means and entails, and there was no planned national implementation for the relevant legislation when the law was first introduced. Because of this state of affairs, each individual director has to understand what is required by the law *from his/her own point of view*. Consequently, the local school culture constitutes the frame for each teacher’s work – hence the variety of interpretations of the law. Furthermore, it is natural that directors and teachers alike continue with and defend their current working methods.

It is from this perspective we discover what the director values, for example, what is revealed in this investigation is that the directors overestimate their own ability to ensure that a scientific-based education is provided at school. The danger is that the director continues to work in a delusion, based on his/her misguided beliefs and misinterpretation of the relevant legislation.

5. Conclusion and future research direction

‘School steering’ is a practice that is undertaken from a distance, and it is, not unreasonably, expected that school leaders lead their schools in accordance with the national legislation. There exist several studies of different points of school leadership (Waters & Marzano 2006; Lumby, Crow & Pashiardis, 2008; Pashiardis & Johansson, 2016). However, studies of Swedish role undertaken by school directors are rare, and research about this role’s connection to the provision of “research-based education” is currently absent.

In addition to the observations made in this study, it would be of interest to investigate whether legislation (and the proper implementation of the same) governing the provision of research-based education affects student achievement. One might assume that we wait some years before the results of implementing the legislation appear in school outcomes; enough time must pass before we can fairly evaluate whether the current Education Act will achieve its aims. However, we note that the Education Act has been in force for six years now, and even if the Swedish PISA-results have improved slightly in the last survey, one cannot merely assume that this is a direct result of the legislation about a research-based school system; further research into the matter is needed.

At this point, it can be noted that the present study’s purpose has been achieved; the research questions have been answered and several observations have been presented. However, our results reveal a somewhat fuzzy picture of how directors satisfy the requirement of providing research-based education, and this raises several new questions of interest for future research. One question we might ask is: *Why do the directors claim that they avail themselves of research reports but then fail disseminate the results of these reports to their local schools?* Other interesting questions that can be asked are: *Why do the directors hold such different opinions about who is responsible for the provision of research-based education?* and *Why were the teachers characterized as having the least amount of responsibility in this area?*

This study about the roles of, and attitudes held by, directors of education provides a contribution to a currently somewhat unexplored field and has increased our knowledge about how this municipal officer on the local arena relates to and works with a legal requirement. It has further increased our knowledge about what facilitates or hinders a legal regulation’s potential to affect schools. In democratic countries, the parliament and the government are mandated to legislate on national areas of interest, such as education. Therefore, the extent to which a piece of legalisation is likely to influence work done at school is an issue of significance for many countries, and, because of this, the contribution that this study makes should be of international relevance.

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