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Keywords:
Education policy
Education reform
Policy space
Overcrowding

Scandinavian Journal of
Public Administration
21(4):97-119
© Angelica Börjesson, Lars
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School of Public
Administration 2017
ISSN: 2001-7405
e-ISSN: 2001-7413

Abstract

Education has always been a reform-intensive policy sector, perhaps more so now than ever before. In studying education reforms, analysis has typically emphasised elements and/or the entire policy process of individual reforms. The same is essentially true for the management of education reforms, which tends to treat an individual reform as a cycle in which every element is subject to organisational management practices. In contrast to approaching education policies as stand-alone phenomena, we argue that policies exist in context: they are occupants of a “policy space”. In this paper, we draw on a contemporary Swedish teacher certification (STC) reform to explore what happens when a reform is implemented in a policy space that can potentially be portrayed as crowded, or even overcrowded. The main results indicate that while diverse local implementation strategies have been employed, STC has ended up in an overcrowded educational policy space. In this space, new and former reforms jostle against each other, giving rise to various unforeseen problems that are difficult or even impossible to solve locally. Based on these observations, we identify several different interactions and unintended consequences or “policies by the way”, thereby adding components useful in refining the theory of policy space.

Introduction

Since the early days of the welfare state in the 1940s and 1950s, education has been a reform-intensive sector, and perhaps more so in the last two decades than ever before. Governments worldwide have made considerable efforts to improve the performance of schools and education systems through reforms. A wave of common reform themes is reported across countries, often focusing on structural aspects of educational systems such as decentralisation, choice and competition, educational leadership, teacher quality and effectiveness, student assessment, evaluation, and accountability (OECD, 2015a). Terms such as “policy overload” (Ball, 2013), “policy epidemic” (Levin, 1998), and “turmoil” are also used to describe today’s fast and turbulent education policy world, the pace of which “leaves those charged with implementation confused and weary” (Perry et al., 2010, p. 40).

Research into education reforms and policies is a large and well-established field of research, concerned with courses or principles of action adopted by an actor as solutions to perceived problems or to help reach certain objectives or effects. In this paper, we use the words reform and policy interchangeably, as though they were the same thing, and in a sense they are. Reform, and in many cases policy, implies change and improvement, doing things differently, but policy can also be used to describe a static (unchanged) course of action (Ball, 2013). As in the closely related and more general field of policy analysis in the social sciences (e.g. Parsons 1995), education policy researchers often define policy as “both text

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and action, words and deeds ... what is enacted as well as what is intended” (Ball, 1994, p.10).

In studying policies, whether enacted or intended and in education or elsewhere, the focus is typically on *individual* policies and policy processes (i.e. the problem to be solved, policy design, implementation, outcomes, etc.), on the interrelationships between different levels of a certain policy process, or on comparing individual policies across countries (e.g. Ball 1994, 2013; Calderhead, 2001; Hardy, 2010; Ladwig, 1994; Levin, 2010; Ozga, 2000; Rizvi & Lingard, 2010). The same is essentially true for the management of education reforms, which tends to treat an individual reform as a cycle in which every element is subject to “best proven practices in organisational management” (Harvard University, 2015; Hopkins, 2013).

Argument and aim of paper

In this paper, we dispute the individual perspective and argue that since no policy is implemented in a vacuum, there is a need for a more systemic approach to policy analysis. Many policies entail making incremental changes to existing policies, and new policies usually end up in a policy arena where they encounter and interact with other policies. Moreover, several actors at different levels are often involved in implementing a policy, and these actors’ resources, understanding, and willingness when engaging in policy adaptation are essential to successful implementation. Hence, when studies focus exclusively on one policy at a time, without considering the surrounding policy context, important points are missed, as are factors affecting the outcomes of the policy under study.

Given the complexity of policy implementation, our paper is informed by the understanding of policies as occupying a “policy space”. The term was introduced by Wildavsky (1979), who contended that the consequences of one policy are likely to interfere with the working of other policies, and that the possibility of such interference increases in a crowded policy space. Accordingly, we argue that an education policy is a policy in its own right which also constitutes an integral part of a country’s education policy space. Within this space, an education policy may solve perceived problems and achieve certain objectives, but it may also have unintended consequences for itself and for other education policies. A policy in a crowded policy space may, for example, transform a problem that another policy is intended to solve (Majone, 1989) and/or give rise to new “policies by the way” resulting from processes inside a policy space rather than from intentional decisions (Drery, 1998). The actual content of such unintended policies that might arise, however, is not specified.

The idea of a crowded policy space was developed by American policy scientists to describe the cumulative expansion of policies and programmes after World War II, for example, the 200 pieces of legislation that were part of President Lyndon B. Johnson’s “Great Society” programme (Tumulty, 2014). Since then, we have experienced five decades of policy making in most sectors, not least education. Though not unique, Sweden is a case in point, implementing a wave of more than thirty education reforms and programmes starting in the

1990s, and increasingly so since 2001 in response to dramatically declining student performance and increasing inequality between students and schools. While the minister in charge of education from 2007 to 2014 spoke about the “largest education reform undertaking since 1842” (Skolöverstyrelsen, 2014), an OECD review concluded that the same reforms were tackling the challenges of the Swedish school system piecemeal (OECD, 2015b). Lack of oversight has in fact been deemed a major threat to the success of education reforms in many countries (OECD, 2015b).

In this paper, we draw on the example of the Swedish teacher certification reform (hereafter STC) to explore what happens when a reform is implemented in a policy space that could be portrayed as crowded or even overcrowded. The specific research question is: What unintended consequences or “policies by the way” are generated by the interaction of STC with other policies?

STC requires that, as from 2015, all teachers on permanent contracts must have professional certification so as to raise the skills level of teachers, improve the status of teachers and improve educational quality and student achievement. STC did not come out of the blue; rather, it reflects a global policy trend in which teacher certification and the raising of skills levels among teachers are seen as key measures to improve the quality and outcomes of education services (Akiba, 2013; Darling Hammond et al., 2005; Hanushek & Rivkin, 2010; Hattie, 2009; Ingersoll, 2011). We do not set out to investigate the argument that a crowded policy space exists, which is an important issue, as the consequences of education reform overcrowding are as yet largely unresearched. Our aim is to take a first step towards resolving the issue by considering the STC reform in order to explore, in depth, the benefits of policy space theory. In doing so, we hope to add elements to the theory and advance education policy research and education management. Our findings can, for example, be used to construct hypotheses for further research into the possible unintended consequences of a crowded education policy space. The findings presented here are also likely to be of value to politicians and managers involved in the practice of education policy making and management.

Theoretical framework

As indicated, a policy implies an intended or enacted course or principle of action, adopted by an actor as a solution to perceived problems or to help reach certain objectives and targets. The term “policy space”, or “policy environment” in the terminology of Hecló (1975), implies the existence of a fixed “space” or “environment” inhabited by pre-existing policies. The question is what this means for a new policy being implemented in the policy space. To answer that question, we first need to look into the concept of policy space and how such a space is constituted.

Policy space

The policy literature defines policy space in at least two ways. Heclo (1975) and Wildavsky (1979) regard it as synonymous with policy sector, which creates the opportunity to define, for example, a housing policy sector and a corresponding policy space a priori. Majone (1989), on the other hand, defines policy space in a narrower, a posteriori sense as “a set of policies that are so closely interrelated that it is not possible to make useful descriptions of or analytic statements about one of them without taking the other elements of the set into account” (p. 158). This definition seems to imply that it is difficult to define a policy space in advance, as doing so is an empirical question. This contrasts Heclo’s and Wildavsky’s definitions in, which a policy space is equivalent to a policy sector. In the latter case, the policy space is consequently defined without considering the relationships between the policies inhabiting it. In this paper, we use the concept of policy space in accordance with this last definition.

Unintended consequences and policies by the way

The fact that a policy space is crowded has several implications, the most important of which is that a new policy interferes or interacts with other policies to a greater degree the more the policy space is filled. The results of these interactions can be difficult to predict, which is why policies often have *unintended consequences*. Wildavsky (1979) argues that a result is that policies in a crowded policy space become their own causes, meaning that a solution to a policy problem can create an effect in the policy space that “dwarfs the problem as a source of worry” (p. 62). This is especially true for large solutions that, according to Wildavsky, occupy much of the policy space: the more densely packed the policy space, the more severe the effects of the solutions. The result of this policy interference can also be described in terms of new policies. Drery (1998) uses the term “policy by the way” to describe these unintended policies that are not the result of intentional policy decisions. Policy development then becomes to a larger degree the result of processes inside the policy space, rather than the result of external changes or changes in economic or political constellations (Majone, 1989).

An important aspect of the argument that policies affect other policies is the nonlinear character of such interactions. The relations between policies in a densely packed policy space tend to be reciprocal and the causation mutual. Let us say that a new policy, A, is being implemented. When implemented, policy A affects policy B, and the unintended interactive effect in turn produces effect C. In a next step, C changes the initial problem that policy A was meant to solve. This reciprocity and mutual causation, of course, makes it even more difficult to predict the consequences of a policy (Wildavsky, 1979).

That policies have unintended effects, reciprocal relations with other policies, and a policy space characterised by mutual causation is an argument also found in historical institutionalism as well as in the system perspective in international relations (Jervis, 1997; Steinmo, 2008). The system perspective, for example, implies that the whole differs from the sum of its parts – the whole is not more,

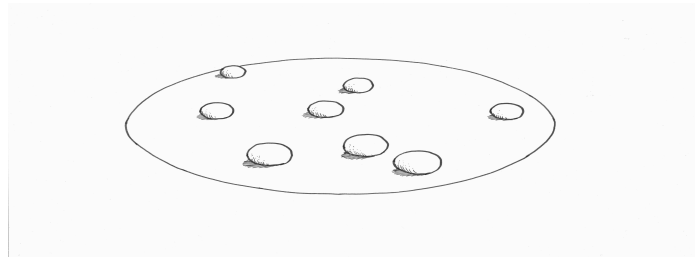
Jervis stresses, just different. Like the policy space literature, the system perspective also calls attention to the dynamic character of the interactions. A change in one part of a system changes the starting point of the next change. This dynamic character implies – bringing us back to the interests of historical institutionalists – that it is necessary to use a historical perspective to trace the dynamic sequences of causes and effects that lead to a policy outcome.

The policy space as a system

The policy space perspective differs from traditional policy analysis and from implementation studies. As indicated, in traditional policy analysis the focus of analysis is normally a distinct part of or stage in the process through which a policy is realised, from the initialising stage to the final implementation and evaluation (Parsons, 1995). In implementation studies, the focus is also typically on specific reforms, with the objective of locating factors and actors impeding or enhancing the implementation (Hill & Hupe, 2014), for example, considering how a certain policy idea translates into objects and actions (Czarniawska & Joerges, 1995). A policy space perspective, on the other hand, makes the interactions between different policies in a given policy space the focus of interest, especially in relation to new policies being implemented into the space. The unit of analysis is primarily the system, or policy space, not an individual policy. However, the system effects or interactive consequences that emerge in the policy space influence the implementation and outcomes of individual policies. This means that a single policy could be used as a lens through which to study the interactions with concurrent and past policies in the policy space.

This implies that policy space theory is in some respects rudimentary. Figure 1 illustrates this, though it does not specify or characterise the interactions, unintended consequences, or policies by the way generated by a crowded policy space.

Figure 1: A policy space



In this paper, we use policy space theory in two ways. First, we use it to put forward the paper’s main argument, i.e. that the STC reform interacts with concurrent and past policies populating the Swedish education policy space and that this interaction has implications for the local implementation of the reform

in Swedish municipalities. Whether and how this interaction happens and how it affects local implementation is unknown. Second, to enrich policy space theory is what we aim to achieve by this study.

Methodology

For a start, available studies and reports have been used to map out key pieces of legislation regarding education reforms or policies enacted from 2001 to 2015 (OECD, 2015b; SOU 2013:30). As for STC, our description is based and elaborated on an existing synthesis of policy documents (Börjesson, Karlsson & Lindgren, 2015). The map constitutes an empirical overview of the current Swedish education policy space and the policies populating it (see Table 2). It also highlights our theoretical point of departure, i.e. that policies exist in context and occupy a policy space that can be portrayed as crowded or even overcrowded.

Next, we analyse the implementation of STC and its potential interference with other education policies in light of a theoretical framework based on notions from the policy analysis literature and indicating our prior understanding of the issue at stake. A comprehensive study of the implementation of STC and its interaction with other education policies would ideally require that the intended functions of all reforms be mapped out and their actual implementation, effects, and interactions with each other be examined empirically. This would indeed have been an important approach. Our more modest intention is to take a first step towards this issue by exploring whether and how the implementation of an individual reform, STC – probably the most extensive current Swedish education reform – interacts with other reforms, and by examining the consequences of any such interaction.

Our use of a single reform, STC, as a case in studying interactions in a policy space is based primarily on theoretical considerations. Policy space theory makes the policy space the unit of analysis, not single policies or phases of the policy process. With an explorative orientation like ours, however, it is preferable to use STC, as discussed above, as a lens through which to examine the interactions, and their consequences, in a policy space. In a next step, the present results might be used in a more comprehensive study applying a more deductive approach.

In line with this explorative orientation, the main research method used is the semi-structured qualitative interviewing of key informants with special insights. In our case, this means the heads of municipal education departments who act as nodes in the policy space and have first-hand experience of policies and their potential interactions. In Sweden, 290 municipalities are responsible for organising, financing, and managing pre-schools, compulsory schools, upper secondary schools, and adult education. We interviewed 22 heads of education departments, representing 18 municipalities and four independent school providers, about their experiences of the local implementation of the STC reform and its consequences. The respondents, who represent a wide range of municipalities and independent school providers (generically called “local school au-

thorities”), were selected based on a common categorisation of municipality types developed by the Swedish Association of Local Authorities (SALAR). The interviews were semi-structured and the respondents were thus invited to talk fairly freely about how their individual local school authorities have managed the implementation and consequences of STC. The interviews were analysed in two steps. First, we extracted statements containing arguments about the interaction of STC with other educational policies. Thereafter we extracted the statements containing arguments about STC’s unintended consequences and creation of policies by the way.

The method chosen implies that our conclusions regarding interactions and potential consequences are based primarily on the statements made by the 22 heads of education departments. To a minor extent, we have moreover used findings of a national survey about the implementation and consequences of STC, conducted by SALAR and the Swedish Association of Independent Schools in 2015, and covering education managers representing all municipalities and independent school providers. Finally, we have also used existing research into the STC reform (Frostensson, 2014; Gustavsson & Fransson, 2012; Lilja, 2009) and into reforms with which STC interacts (Alvunger, 2015; Bunar, 2010; Böhlmark & Lindahl, 2015; Statskontoret, 2015).

The Swedish education policy space

A political landscape characterised by constant flux

The Swedish school system, which was once comprehensive and considered among the most centralised in Europe, has over the last 25 years been redesigned into something entirely different. Beginning around 1990, the formerly detailed regulation was reduced, the responsibility for schools was shifted to municipalities, and a transition to management by objectives and results was introduced. A few years later, this decentralisation of power was supplemented with the “free school” reform, based on publicly funded school vouchers and the right of parents and students to choose freely between schools owned and organised either by municipalities or independent school providers. The rules concerning teacher qualification were also liberalised. In response to dramatically declining student performance and increased differences between students and schools, the decentralisation of the 1990s has, over the last decade, steadily been giving way to reforms and policy instruments pointing towards the reregulation and recentralisation of education governance (Jarl & Rönnberg, 2015).

Even so, the formal structure of today’s education governance implies that the central government and its agencies (primarily the National Agency for Education – NAE, and the Schools Inspectorate – SI) retain overall responsibility for the school system, set national goals and guidelines, and conduct national monitoring, evaluation, and inspection. At the local level, 290 municipalities and several independent school providers are responsible for implementing educa-

tional activities, organising and operating school services (including the hiring and in-service training of teachers), resource allocation between schools, and ensuring the quality and results of schools. Principals are responsible for their school's results, evaluated on the basis of national goals, but can receive additional assignments from municipal politicians (SFS 2010:800, SFS 2011:85; Skolverket, 2013). Swedish education policy and governance are thus shaped via a complex interplay among actors at several layers.

As mentioned, the average level of student performance has declined dramatically, captured over the years by several metrics in international tests, such as PISA. The high past level of outcome equity between low- and high-performing students within and between schools has also deteriorated. Moreover, teachers' working conditions have worsened, partly due to the extensive documentation and other administrative burdens imposed by external demands for monitoring and evaluation. To address these and other problems, a flow of education reforms and programmes, including STC, has been enacted between 2001 and 2014. Table 1 presents an overview of these.

Table 1: *Enacted education reforms and programmes, 2001–2014*

Year	Reform/Program
2001	Teacher education: Eight strictly defined degrees are merged into a flexible, common degree
2003	Government agencies: NAE is divided into two, NAE and the Agency for School Improvement
2006	Student assessment: More rigorous rules for teachers' handling of individual development plans
2007	In-service training: "Teacher Lift I" (2007–2010) to increase the competence of teachers of subjects they already teach but for which they are not formally qualified
2008	Government agencies: The Agency for School Improvement is closed and its tasks taken over by NAE, whose inspection and quality audit tasks are taken over by the newly established Schools Inspectorate (SI) Student assessment: More rigorous rules for teachers' handling of individual development In-service training: i) Voluntary training for school principals is made mandatory; ii) "Mathematics Lift" (2008–2016) to increase the competence of teachers of mathematics; iii) "Counselling for learning" (2008–2018) for teachers of reading and writing
2009	Student assessment: Mandatory national tests are implemented in year 5 in three subjects
2011	A new Education Act with amendments including: i) harmonisation of regulations on public and independent schools; ii) clearer basic values for all types of schools; iii) a new curriculum with distinct learning goals, guidelines, and course assessments; iv) new provisions for systematic and documented

	<p>quality-enhancement procedures; v) a legal basis for the SI to impose sanctions and fines on schools; vi) clearly defined powers for school providers, school heads, and teachers to take actions to guarantee student security and good working conditions in school; vii) strengthened rights for students and parents to appeal decisions made by schools; viii) new and additional mandatory national subject tests in years 3, 6, and 9; ix) grades to be assigned starting from year 6; x) tests of skills and entrance examinations may be used from year 7 in compulsory school.</p> <p>Student assessment: Mandatory national tests in school year 5 are replaced by tests in year 6</p> <p>Education system: The complex upper secondary school system is made more stringent</p> <p>Admission requirements: Stricter admission requirements for upper-secondary school and higher education</p> <p>In service-training: Additional mandatory training for school principals</p> <p>Teacher education: Four strict degrees replace a flexible and common teaching degree</p> <p>Teacher certification: Professional certification and subject specialisation is required for all teachers on permanent contracts</p>
2012	<p>Student assessment: A new grading scale and earlier grading</p> <p>In-service training: “Teacher Lift programme II” (2012–2016), continuation of programme I</p>
2013	<p>Career structure: Teachers who stand out as excellent and/or have a licentiate academic degree can be appointed First Teacher or Lecturer with increased salaries and responsibilities</p> <p>Student assessment: Individual development plans abolished in years 6–9, reduced in years 1–5</p>
2014	<p>School organisation: i) New rules for resource allocation based on students’ different abilities and needs; ii) reduced requirements regarding action programmes for students at risk</p> <p>In-service training: “Reading Boost” (2015–2018) to improve teachers’ skills in teaching reading and writing</p>

Sources: The table was compiled from several studies and reports: Börjesson, Karlsson and Lindgren (2015), Gustavsson and Fransson (2012), OECD (2015b), and SOU (2013:30).

The Teacher Certification Reform (STC)

Declining student performance, growing gaps between schools, deterioration of the teaching profession, declining demand for teacher education programmes, a large increase since the 1990s in the number of teachers without teacher education (reaching 60% in 2005), and unclear and unobserved teacher hiring rules were the reasons for appointing a government committee in 2006. Based on this committee’s report, the government decided on a comprehensive reform to raise the skill level of teachers and improve the status of teachers and teacher education, so as to improve education quality and student achievement (SOU 2008:52).

The original STC reform legislation enacted in 2011 specified that, with few exceptions, teachers (including preschool teachers), both beginners and those with many years of service, must apply for certification to the NAE, which would determine the type of school, subjects, and years teachers were qualified to teach, based on their formal education. Beginner teachers must have an Education Diploma, have successfully completed a probationary year supervised by an experienced (and certified) teacher, and be assessed by a school principal. Teachers with a diploma predating 2011 and who have been teaching for at least one year will be granted certification upon application without a probationary year. As of July 2012, only certified teachers are eligible for permanent employment and to assign grades independently. If a teacher seriously neglects his or her work, the certificate may be withdrawn by the Teachers' Disciplinary Board, a new institution set up under the NAE (SFS 2010:800; SFS 2011:326).

Since its enactment, the implementation of STC has been problematic, mainly due to the complex nature of the reform. Actors at and between both the national and local levels need to operate independently, but they are also highly dependent on each other's activities to bring about the changes planned in STC. Several elements of the reform have consequently had to be changed over time. For example, the original deadline has been advanced twice, first to 2013 then to 2015, both times due to complexities and delays in handling applications at the NAE. In addition, because of an apparent lack of potentially qualified teachers in certain subjects, some teacher categories have been exempted from the main rule according to which only certified teachers are eligible for permanent employment and to assign grades. Also, the probationary year for graduates of teacher education programmes has in practice been ruled out (Börjesson, Karlsson & Lindgren, 2015; Gustavsson & Fransson, 2012).

If, as is the case here, STC is conceived of as a policy, i.e. an organised and planned effort designed to ameliorate certain social problems or conditions, we can now depict its logic and basic underlying key assumptions as follows:

Table 2: The logic of Swedish teacher certification reform

If	the key actors involved make necessary arrangements, local school authorities map out their teachers' competences and send those who lack qualification for in-service training, and teachers apply to NAE, which makes decisions on certification based on the rules that applied when the teacher took his or her degree;
then	in the short term, more teachers are certified and qualified for the type of school, subjects, and years in which they teach, and teacher competence requirements are clearer;
and then	in the intermediate term, the status of teacher education and the teaching profession is enhanced, as are the quality of educational services and students' achievements;
and so	in the long term, the quality of educational services and students' achievements is improved, as is Sweden's international competitiveness.

Source: Börjesson, Karlsson and Lindgren (2015).

Past and current education policies that interact with STC

As demonstrated above, the STC reform has been implemented in an education policy space that has been in more or less constant flux over the last 25 years. The two most important past reforms that interact with STC are without doubt the free-school reform with its introduction of school choice and competition in the early 1990s, and the 2001 teacher training reform. As regards more concurrent reforms, our study indicates that the Teacher Lift reforms and the career development reform interact with STC in a way that seems to have brought about unintended consequences. In analysing interactions between STC and other education policies, we can expect to find various kinds of interactions. One distinction regarding the character of these interactions can be made in advance, i.e. between intentional and unintentional interactions.

The free school reform

Since the free school reform in the mid 1990s, parents and students have been able to choose freely between schools owned and organised by either municipalities or private school providers, both of which receive public funding on the same terms. The introduction of market forces into education was intended to increase efficiency and innovation by enhancing competition between schools and impelling schools to improve quality and student achievement as well as reduce costs. The reform has been subject to much political debate, and research evidence regarding its outcomes is also ambiguous (Bunar, 2010; Gustafsson, Sörlin & Vlachos, 2016). Some studies find a slightly positive effect on student achievement, particularly in independent schools (e.g. Böhlmark & Lindahl, 2015), while others question this, suggesting that this apparent positive effect might instead be due to low grading standards or particular student mixtures in independent schools (e.g. Vlachos, 2010). Prevailing research is also ambiguous regarding whether the free school reform has increased social and ethnic segregation (e.g. Holmlund et al., 2014).

A key assumption of the theoretical framework employed here is that the implementation of the STC reform could interact in various ways with other reforms in the policy space, in this case, the free school reform. Well, does it and, if so, how? Findings from the present study indicate that the implementation of the STC reform has indeed interacted with the free school reform, doing so in a way that *reinforces* the above-mentioned negative effects of the free school reform. STC stipulates that only certified teachers are eligible for permanent employment and are permitted to assign grades independently. This rule has obviously led to increased competition for certified teachers, especially in subjects in which there is a shortage of such teachers and in schools in socially deprived areas. This in turn has led to a situation in which schools in prosperous areas tend to draw qualified teachers from schools in socially deprived areas, increasing social and ethnic segregation. The reinforced competition has also led to rising salaries for some teachers, which has also affected the financial resources of poorer local communities. These tendencies, brought up by several

informants, are expressed in a characteristic manner in the following quotation from one informant:

Local governments compete, even here around Stockholm, for certified teachers. They are competing with higher wages and other benefits. We have probably only seen the beginning of this phenomenon. The market forces will increase this competitive behaviour and overbidding, and could lead local governments to conclude that they cannot afford it.

The above quotation is selected to illustrate a pattern in our findings that indicates the existence of a type of unintended consequence that involves the reinforcement of an existing unintended consequence. This kind of consequence is triggered by a reform already populating the policy space.

Teacher education reform

Another reform that interacts with STC is the teacher education reform of 2001, a reform characterised as timely, stressing the need to support the development of professional teachers' ability to handle the complex and largely unknown demands of future schools. The reform created latitude for considerable variety in the teacher training courses offered by universities and university colleges. The eight existing teaching degrees were transformed into a single common degree offering students great flexibility essentially to decide for themselves what kinds of teachers they wanted to become through their own choice of courses. Teachers could therefore be qualified in unique mixtures of subjects (Prop. 1999/2000:135). The reform dramatically increased the diversity and organisation of teacher training programmes as all programmes could develop their own profiles and unique courses.

Our findings indicate that the STC reform has interacted negatively with the 2001 teacher training reform in a way that can be described as a *collision of logics*. As the 2001 reform created the form of teacher training prevalent until 2011, when the system was replaced with one involving four strictly defined professional teaching degrees, a great majority of teachers based their applications for NAE certification on diplomas of education awarded under the previous system. It is unsurprising that STC has interacted negatively with the teacher training reform of 2001, which is more or less contradictory to the logic of STC, according to which teachers need certification with specialisation in clearly defined subjects. The 2001 teacher training reform has thus caused great difficulty for the NAE in its processing of applications for certification.

An example, cited by several respondents, is that there is a discrepancy between the preferred and expected competences of teachers and the decisions made by the NAE. While each application is reviewed and assessed by the NAE based on the rules applying when the teacher obtained her or his diploma, some diplomas cover subjects that no longer exist or are no longer demanded by

schools. This in turn greatly affects teachers’ employability, as one of the interviewed municipal education managers explains:

The competences employed by the NAE in certifying teachers are very problematic. How can we employ a teacher whose diploma includes the subject “Youth in society blah, blah, blah ...”? Who knows what that subject entails, the Swedish language, social science, or what? Some teachers have drawn winning tickets because they studied at a university with less flexible teacher training degrees, while others have drawn blanks because they were trained at other universities with extremely flexible views of what teacher training could be.

Another example often cited in our interviews with municipal heads of education departments is that teachers who apply for certification are in danger of becoming qualified in subjects other than those they actually teach. The difficulty of predicting NAE decisions regarding subject competencies, in conjunction with a fear of becoming certified in subjects they have not expected or never taught, has discouraged teachers from applying for certification.

The logic of the 2001 teacher training reform collides with the logic of the STC reform, particularly its intermediate-term goals of enhancing teacher professionalism and bolstering students’ and parents’ legal security. The underlying logic of STC is that a teacher’s certificate should clearly indicate the type of school, subjects, and school years in which the teacher is qualified to teach. The above examples instead illustrate increased uncertainty among teachers and a lack of predictability that, in turn, undermine STC’s logic. The key dilemma here is that the local school authorities are responsible for implementing STC, while simultaneously being dependent on another actor at another level of governance.

Teacher Lift I and II

Our findings have so far indicated that the interactions between the STC and existing reforms populating the education policy space can be more or less intentional. In more contemporary reforms, such as the Teacher Lift I and II reforms, the interaction is even more intentional, as in-service training is a direct prerequisite for implementation of STC. What does this mean for the type of interaction that occurs between the reforms?

Several in-service training reforms or programmes have been enacted since 2007: Teacher Lift I (2007–2010), Mathematics Lift (2008–2016), Counselling for Learning (2008–2018), Teacher Lift II (2012–2016), and Reading Boost (2015–2018). While all these programmes are connected with STC, the Teacher Lift I and II programmes are in practice prerequisites for the effective implementation of STC. Both are largely government financed and coordinated by the NAE, which procures programmes and courses from universities and university colleges. Central government subsidies, which amount to SEK 5 billion (2007–

2011) and SEK 860 million (2012–2016) for universities and university colleges, are provided to local school authorities to cover the costs of substitute teachers, travel, etc. The aim is to increase the competence and certification of practising teachers who already hold teaching diplomas but lack formal qualifications in subjects they already teach (Prop. 2006/07:1; Prop. 2013/14:1).

Our findings reveal that while the two Teacher Lift programmes might have had the hoped-for effects, they have also had another more troublesome effect, which concerns their different financial conditions. Teacher Lift I, which was enacted several years before STC, included central government financing and did not place a significant financial burden on local school authorities or individual teachers. A great many teachers used this opportunity to complement their education in order to become certified teachers. However, when Teacher Lift II was enacted in 2012, at a time when there was a much more urgent need for complementary teacher training, central government grants were severely reduced, greatly increasing the financial burden on local school authorities to finance substitute teachers, travel costs, etc. The result was that many fewer teachers could be sent for the necessary complementary training, meaning that many could not apply for teacher certification. The teachers in greatest need of complementary training to become certified were often teachers in mathematics, technical subjects, and the like, areas in which there was, and still is, a lack of formally qualified teachers.

Above, we characterised the interaction between the STC and the Teacher Lift I and II reforms as intentional, because the in-service training programs were prerequisites for STC. Judging from our findings, the interaction did not fully meet expectations due to financial obstacles and other problems. These problems cannot be described as colliding logics, as in the case of the teacher training reform, because they mostly concerned lack of financing. A more adequate description of the interaction would therefore be *financial imbalance*.

In addition, the Teacher Lift programmes have provided incentives to cheat, leading to a kind of *collective dilemma*. To be eligible for Teacher Lift courses, a teacher must be employed as a teacher in a school and have taught a subject in which she or he is not formally qualified. Our study demonstrates that, in a number of instances, teachers wished to complement their education even in subjects that they did not already teach. To make this possible local school authorities have tried to bend the programme rules in a creative way. Amid the heightened competition between schools caused by the free school reform and STC, the incentives to cheat have become stronger: no school or school provider wants to be one that obeys the rules perfectly, and therefore loses the competition for certified and qualified teachers. The creative bending of rules was brought up by several of our informants, and a characteristic way of describing this is illustrated in the following:

We will manage it! I must admit we are pretty good at solving problems, but not always by the book, so to speak. We try our best to get qualified teachers, and if we don't succeed, we have to invent a

solution by ourselves, and we will continue to ... make the best of the situation, but it messes some things up a bit. In a critical situation, when certified teachers are required in all subjects for us to be able to hand out marks, and so on, well, maybe it will not be possible to fully live up to the rules.

This kind of interaction is similar to that of the free-school reform described above. The implementation of STC has led to interactions with other reforms, in turn resulting in *reinforcement of the unintended consequences* of the existing reforms. In addition, our findings indicate that the interaction between the STC and the Teacher Lift I and II reforms gives rise to incentives to cheat in a situation that can be described as a *collective dilemma*. That is, if everyone else is believed to be cheating, individual actors have strong incentives to cheat themselves.

Career development reform

A third contemporary reform that intentionally interacts with STC is the career development reform, which introduced new categories of teachers, i.e. First Teacher and Lecturer. Here, the STC reform is a prerequisite for the successful implementation of the latter reform. Consequently, the implementation of STC may potentially affect the workings of the reform already in place, i.e. the career development reform.

The idea of the career development reform was originally proposed in the same government committee report as was STC, but was not enacted until 2013 (SOU 2008:52, Prop. 2013/14:1). By creating the positions of First Teacher and Lecturer for particularly qualified teachers, and by raising their salaries by means of targeted government grants, the reform is intended to construct a career path that is supposed to strengthen the professional status of teachers. A report of the reform reveals that while the reform has attracted broad participation among local school authorities, many small local school authorities have not taken part. When allocating career positions it also appears that local school authorities have not generally prioritised weak schools, largely because of the difficulties of recruiting particularly qualified teachers for those schools (Statskontoret, 2015). Findings of another study indicate, among other things, that the reform challenges existing collegial structures through increasing the need for collaboration and interaction among both principals and First Teachers (Alvunger, 2015).

Findings from our study indicate that the STC reform has delayed and sometimes even blocked the implementation of the career development reform. This is largely because the career development reform is dependent on the implementation of STC in the sense that an approved teacher certificate is a prerequisite for applying for a First Teacher position. The NAE’s very long processing time for certification applications delays and sometimes prevents municipal implementation of the career development reform. The problem was highlighted by one respondent:

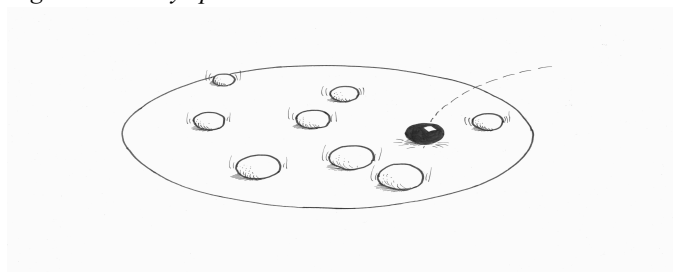
The teaching faculty sees it as an unnecessary evil right now. Precisely because it takes so long to get the certification, it becomes like a mockery of the whole. Teachers cannot apply for a First Teacher position as they have not received their certifications, and so we have to apply for an exemption from the NAE. It gets a little ridiculous.

The above quotation illustrates how the STC reform is not only affected by other education reforms, but in turn also affects those reforms. In the case of the career development reform, this is a consequence of the timing of reforms and thus of an overcrowded policy space. In this context, it should also be mentioned that the Parliamentary Ombudsperson has received many complaints from individual teachers. In these complaints, teachers express dissatisfaction with the NAE's slow processing times and ways of managing their teacher certification applications, which they claim severely affect their career advancement as well as school principals' opportunities to apply for government grants to appoint First Teachers. In its report, the Ombudsperson refrains from assigning blame, but notes that it should have been possible for the government, in effect the minister in charge, to have predicted the large number of applications to the NAE (approximately 200,000) and the processing problems that would arise as a result (Justitite-ombudsmannen, 2015).

The interactions between the STC and the career development reform differ from the three interaction cases already described, in that the implementation of STC directly affects the implementation of an existing reform. Because the implementation of STC is a prerequisite for the career development reform, internal problems in STC implementation cause problems for the implementation of the prevailing career development reform. This kind of interaction can be described as *interceptive*, because STC impedes the implementation of an existing reform.

The five types of interaction between educational reforms identified above can now be used to fill in the gaps in the policy space (Figure 1), as illustrated in Figure 2.

Figure 2: Policy space interactions



Unintended consequences and policies by the way

The STC reform has ended up in an education policy space that, to our understanding, is overcrowded, and in which the implementation and effects of one policy or reform tend to interfere with the workings of other policy occupants of the space. In the above section, we observed four education reforms that in various ways interact with the STC reform: the free school reform, the teacher training reform, the Teacher Lift I and II programmes, and the career development reform. We also called the different kinds of interaction *reinforcement of unintended consequences*, *financial imbalance*, *collision of logics*, *creation of collective dilemmas*, and *interception*. In this section, we discuss whether and how the observed policy interactions generate any unintended consequences or policies by the way, i.e. problems that need to be solved or situations that need to be improved by means of new policies.

Enhanced competition and segregation

One major policy by the way caused by the implementation of STC is the increased competition between schools and between local governments. The type of interaction that led to this was the *reinforcement of unintended consequences*. The original source of this state of affairs is the free school reform, while STC has enhanced the competition in that schools and local governments now must compete more intensely for certified teachers, especially in subjects in which they are in short supply. The enhanced competition is not in itself a policy problem; rather, it is a more neutral policy by the way that has in turn led to unintended negative consequences. One such negative consequence is the enhanced segregation that benefits schools and local governments that are already attractive and located in attractive areas. According to our interviews, these attractive schools will be even more eager to attract certified teachers, and the less attractive schools will increasingly lose out in the competition.

Collective dilemmas

A second policy by the way is an effect of the type of interaction that we called the *creation of collective dilemmas*. The bidding among schools for certified teachers could lead to budgetary strains for some schools and local governments. This bidding can be perceived as a collective dilemma in that all schools lose out if wages for some categories of certified teachers rise steeply, while it is in the interest of individual schools to recruit attractive teachers. STC also creates a collective dilemma in that schools and local governments are looking at what other schools and local governments are doing to implement STC. Since there are not enough certified teachers, schools and local governments occasionally bend or twist the rules in order to get by. The argument, manifesting a collective dilemma, could consequently be: “If other schools and local governments cheat, why shouldn’t we?”

A deteriorating working and learning environment

The unintended consequences described so far have all resulted from interactions with other reforms in the policy space. Our findings also indicate that the implementation of STC gives rise to unintended consequences that are not the result of any interaction with other reforms. Instead, the implementation of STC causes problems in itself by negatively affecting the working and learning environment in schools. An example of such an unintended consequence is that teachers of some subjects in smaller municipalities now must travel more between schools in order to teach and assign grades, because smaller municipalities and schools cannot employ full-time teachers in some subjects. The working environment of these teachers has deteriorated because of the increased travel they must undertake. This is not a new phenomenon, according to our interviews, but the STC requirement that only certified teachers are eligible for permanent employment and to assign grades has tended to increase the amount of travelling.

Teachers' working environment has deteriorated because of STC in another way as well. Since non-certified teachers are ineligible for permanent employment, municipalities and independent school providers now hire more teachers on short-term contracts, reducing the employment security of these teachers. STC's unintended consequences not only affect teachers' working conditions; younger pupils are negatively affected as well, as they are now forced to deal with more teachers during a school week than before. This conflicts with the goal of providing a secure learning environment where younger pupils interact with only a few adults during their school day.

Undermining the professionalisation of teachers

So far we have discussed unintended consequences or policies by the way that affect or cause problems inside or outside the policy space. Our interviews as well as existing studies of STC also suggest that implementation of the STC reform has influenced goals that the policy itself was meant to attain, for example, enhancing the professionalisation of teachers. The unpredictability of the application process has resulted in many teachers being certified in subjects they have never taught, a situation that in our view cannot be described as enhanced professionalisation. On the contrary, being eligible, or even obliged, to teach a subject that one has never taught, on the basis of having received certification in it, can reasonably be perceived as the opposite of increased professionalism. The surprise that those teachers, and their school heads, experienced when their certifications arrived from the NAE was described by several interviewees. On top of this, existing studies of the reform point out that STC constitutes a discursive transformation of what teacher professionalism implies, and is part of the ongoing re-professionalisation and control of Swedish teachers (Frostensson, 2014; Gustavsson & Fransson, 2012; Lilja, 2009).

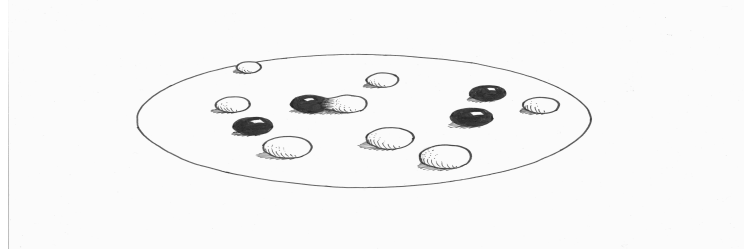
Feedback effects

STC implementation has also had feedback effects on the policy itself, in that policy implementation has given rise to problems that have had to be solved by changing the policy. We have presented many changes that the policy has undergone during its implementation. These changes were made because of problems caused by the policy implementation itself. Examples of such changes are the elimination of the probationary year for graduates of teacher education programmes and the exemptions from the main rule regarding the subjects that only certified teachers can be permanently employed to teach and grade.

Filling the gaps

We can now complete the policy space based on our results, as shown in Figure 3.

Figure 3: Consequences of policy space interactions



Conclusions and discussion

We have used the STC reform as an empirical case in order to explore what happens when a reform is implemented in a policy space that is apparently crowded or even overcrowded. Our analysis has produced several findings that we believe can enrich the policy space framework and, we hope, advance education policy research, education management, and more general policy research.

First, during its implementation, and as predicted by the policy space framework, the STC reform interacted with education reforms that were already in place. However, the policy space framework predicted neither the timing aspect, i.e. new reforms being launched before older reforms had been fully implemented, nor the multi-level character of the policy space, i.e. different levels of the governance system being responsible for different interacting policies in the education policy space.

Our analysis also revealed several unintended consequences of STC implementation, which could be negative, positive, and even neutral. The enhanced competition for teachers is, for example, neutral in itself, but the increased segregation is clearly negative. Another finding that we believe may enrich the policy space framework is the dynamic character of the reform consequences, i.e. STC has given rise to unintended consequences, which in turn have given

rise to other unintended consequences. For example, the implementation of STC gave rise to unintended consequences regarding the very goals that the reform was supposed to attain and to changes in the reform itself, in what we call feedback effects.

The explorative character of our study makes its findings suitable for the construction of hypotheses for use in further empirical research. Five hypotheses (H) accordingly follow from the findings:

H1: Implementing a new policy in an overcrowded policy space will undermine the goals and activities of other reforms pre-existing in the policy space.

H2: Implementing a new policy in an overcrowded policy space will worsen the problem it was supposed to solve.

H3: Implementing a new policy in an overcrowded policy space will enhance existing or create new problems inside and outside the policy space.

H4: Implementing a new policy in an overcrowded policy space will undermine the goals that it was supposed to attain.

H5: Implementing a new policy in an overcrowded policy space will give rise to problems that make changes in the policy itself necessary.

The present findings and the above hypotheses constitute our suggestions for refining the policy space perspective developed several decades ago and that we believe is perhaps even more useful than ever for understanding policymaking and implementation. A more general conclusion from our findings that contributes to the policy field is the recommendation that implementation studies, evaluations, and practices should not necessarily focus on the linear, vertical process of a single reform or policy. Our study identifies the relevance of adopting a more organic approach in which various reforms or policies in a policy space interact with each other dynamically, often giving rise to unintended consequences. A focus on these dynamic interactions and their consequences would often be preferable to the traditional focus on vague goals and management.

Finally, we can conclude that an overcrowded policy space in the Swedish education arena is worsening some of the policy problems identified there. For example, the uncertainty of both the process and content of the STC reform (which in turn are results of the interaction with the teacher training reform of 2001) reduces teachers' perception of their professionalism. Over the long term, this could undermine the policy goal of improving educational service. In our opinion, educational research would benefit from employing a policy space approach, as some of the problems identified here, for example, concerning the teaching profession and working environment, appear to be partly the effects of an overcrowded policy space.

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