Size matters: contextual factors in local policy translations of National School Digitalisation Policy

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Abstract

National policies on school digitalisation take shape in their local contexts. Consequently, to understand the outcome of national policy, the local translations must be set within a contextual perspective. This article explores how four contextually different municipalities in Sweden translate national school digitalisation policy. It draws on a comparative cross-case study with data gathered from interviews, and over 150 local documents dating from 2018 to 2020. The results show how contextual aspects affects responses to national policy, and that municipalities approach school digitalisation in two distinct ways. The first, general approach, emphasises competitiveness and the creation of an enabling environment for the teachers. This is manifested in the development of special support organisations, and generous access to digital technology. The second, specific approach, emphasises local consensus in policy translations along with unity in policy adherence. Here, critique of national policy is explicit. The two approaches exemplify how translational power may be distributed differently, the former prioritising individual translational precedency for teachers over a unifying policy translation controlled through local governance. The paper suggests that contextual factors matters in the choice of approaches, one in which size matters. The paper concludes that policy makers need to acknowledge contextual dimensions within governance by weighing translational power in relation to translational coherence.

Keywords Policy translation · Context · Local governance · Digitalisation · Case study

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1 Introduction

School digitalisation is considered to offer many affordances. Expected outcomes have been strengthened knowledge production by educational development, enhanced democracy and equality by supporting social development, and enabling leverage for economic prosperity in an increasingly globalised market (Alghamdi and Holland 2020; Eickelmann 2018; Selwyn 2018). Therefore, countries all over the world have shown increased policy activity in this area (see Voogt et al. 2018). The outcome of these policy efforts, however, has been criticized among scholars for falling short (Bulfin, Johnson, and Bigum 2015; Hammond 2014; Kozma 2011; Selwyn 2018). Some critics claim that this is due to overly simplistic policies with loose boundaries. Notably, with present trends moving towards more flexible, network-orientated and decentralized school governance (Fan and Popkewitz 2020), national policies tend to be formulated as visionary documents setting simplistic, 'loose' goals rather than specific ones (Kozma 2008). Additionally, contextual issues, which are considered of particular concern for school digitalisation, have been insufficiently acknowledged (Hammond 2020; Lund 2021; Ward and Parr 2011). Hence, considering the trends of decentralisation described above, the issue of context in relation to policy comes forward as of special concern in understanding the digitalisation of schools.

Research has been called upon to pay more attention to contextual factors when studying school policy on digital technology (Selwyn 2012, 2018). In line with this call, school policy has been studied at the global level bringing forward the influence of transnational actors and the technology industry (see Williamson, Bergviken Rensfeldt, Player-Koro and Selwyn 2018; Dubé and Wen 2021). The school level has also been studied with a focus on professional teachers, and classroom practice in relation to policy. Research has touched upon contextual issues, for example, concerning teachers' understanding of digitalisation policies, their digital competencies, and their motivation to engage in policy work (see Conrads et al. 2017; Fransson, Lindberg, and Olofsson 2018; Rolf, Knutsson, and Ramberg 2019; Thorvaldsen and Sollied Madsen 2020). However, national policy takes place at various levels (Pettersson 2020). Before enacted in a classroom, policy is translated through local governance where terms for school practice are set. Hillman, Rensfeldt, and Ivarsson (2020) argue the importance of contextualising local governance to understand how digitalisation shape schools and education, and they emphasise this within decentralised school systems. Policy implementation research has highlighted challenges, for example school policy uptake and policy coherence. Here, gaps between national policy intentions, and local school practice are described as translational divides (Ärlestig and Johansson 2020; Jarl and Rönnberg 2019). These divides could be viewed as policy refractions, in which policy coherence is shattered by multiple translation at many levels (Supovitz and Weinbaum 2008). Similarly, divides are described as policy drifts, detailing how policies (when translated) slide away from the initial policy intentions (Ärlestig and Johansson 2020).

Aiming to develop an understanding of how national school digitalisation policy takes shape, this study examines the ways local contextual differences may affect policy translations. The study is designed as a comparative cross-case study of four Swedish municipalities with nationally diverse contextual settings, which seeks to

answer the following research questions: (1) How do municipalities translate national school digitalisation policy into actions based on local context? (2) What similarities and differences can be found in these translations between different local contexts? (3) Do contextual differences affect the local translations of policy concerning the digitalisation of schools, and if so, in what ways?

2　Local Governance of Schools in Sweden

Sweden has a school system characterised by a locally decentralised governing structure (Jarl and Rönnberg 2019). Policies on school digitalisation have become less regulated during the last fifty years (Rensfeldt and Player-Koro 2020), shifting from being nationally centralised to emphasising local responsibility (Gu and Lindberg 2021). In the last decade, three national policies have targeted school digitalisation: a visionary national strategy (Ministry of Education 2017), a revised curriculum in which digital competence is integrated within all school subjects (Skolverket 2018), and a national plan of action suggesting both local and national priority initiatives (Swedish Association for Local Authorities and Regions [SALAR] 2019). These three policies are 'loose' written documents (see Kozma 2008) in which local translations are needed before they can be realized. Thus, it is reasonable to suggest that translations of these policies may differ between different contexts.

The 290 municipalities in Sweden are the primary providers of kindergarten through twelfth-grade education (Jarl & Rönnberg 2019). The locally elected assembly of each municipality governs the local matters of schooling, for instance, the conditions set for national school policies which are of relevance to this paper. Notably, this includes the budget for schools. The assembly often appoints an education committee to govern the schools through a local education office. Within the office, a school superintendent and assisting civil servants act as links between politics and school practice (Nihlfors and Johansson 2015). In the school digitalisation work, teachers with ICT responsibility at each school (Sw. *IKT-ansvariga*), as well as the so-called ICT facilitators (Sw. *IT-pedagog*) have become two new features within Swedish municipalities. The former is used as a term for a supportive colleague whereas the latter is an informal and unregistered working title often linked to some kind of overall management of school digitalisation.

National support to implement the school digitalisation policies is provided by the National Agency for Education (NAE; in Swedish, Skolverket), for example free online material for teachers' collaborative learning and the organising of supportive projects (in need of co-funding from the municipalities). Additionally, the Swedish Association for Local Authorities and Regions (SALAR), a non-governmental organisation which has been particularly active in this national policy work, has developed assessment tools for teachers and principals' digital competence (LIKA; SALAR 2019). SALAR has also been involved in the national policymaking process through the national plan of action in which governing initiatives have been suggested (Gu and Lindberg 2021).

3 Theorising about School Digitalisation and Local Policy: Translations and Contexts

In this paper, policy is conceptualised in a broad and pragmatic way, enabling explorations through contexts, texts, and consequences (Taylor 1997). Following Fan and Popkewitz (2020), policy is conceptualised as a dynamic process that shapes and reshapes within practice, which is similar to when Gorur (2011) speaks of policy as doing and as a practice in itself. This conceptualisation means that policy is not fixed but constantly moving, or as described by Clarke et al. (2015), continuously translated into understanding within the contexts. Taken together, this paper builds on an extensive conceptualisation of policy. This means that translations may be understood by the policy-doing, more precisely, the acting or enacting of school digitalisation that takes place within the local context (see Ball, Maguire, and Braun 2012).

Furthermore, the concept of school digitalisation is central in the Swedish national school policy texts. However, as Sandén (2021) points out, the concept is not specified in the national policy documents. Nevertheless, in the national strategy (Ministry of Education 2017), it is clear that the outcome of school digitalisation should be digital competence for all, improved learning, and a more efficient school organisation. Thus, in this paper, actions understood as intended to promote this outcome will be conceptualised as acts of school digitalisation policy.

Context may be described as the broad situation in which something is understood to happen (Hornby and Turnbull 2010, 326). Thus, this study intends to explore factors that cause school digitalisation policy ("something") to become translated ("happen") in a particular way.

To understand how policy is acted upon or enacted in practice, the diversity of contexts needs to be brought forward in school policy (Maguire et al. 2020). As support in the analytical work of this study, the contextual aspects presented by Ball et al. (2012) are used: material contexts, professional cultures, situational contexts, and outer contexts. Within this framework, the material context relates to tools and physical assets; professional culture relates to the organisation of and the competence within schools; situational context relates to local prerequisites such as history and student uptake; and outer context relates to issues that go beyond the preferences of what can be decided upon within schools (Braun et al. 2011). The four aspects (which

a) *Material contexts*: technology assets and financial means as well as "stuff" related to school digitalisation such as computers, program apps, and internet access

b) *Professional cultures*: digital competence and attitudes towards digitalisation, as well as supportive organisational structures for work on digital technology in school

c) *Situated contexts*: local history and factors such as population size and demographics

d) *External contexts*: connection to national governance in relation to local self-governing, issues that go beyond the preferences that can be decided upon locally

Box 1 Contextual factors of school digitalisation

sometimes are referred to as dimensions) are interconnected and sometimes overlapping. However, to clarify the framework in relation to the study, the aspects were outlined in relation to the local governing level and school digitalisation (see Box 1).

4 Methods

The study was conducted as a comparative cross-case study (Tight 2017; Simons 2009) in which data were collected from several sources (Yazan 2015; Stake 2006). The data were analysed first as single cases (within-case analysis), followed by a cross-case (between case) analysis. The method used is further described in this section.

In terms of empirical units, four municipalities were selected based on three criteria. The first criterion was signs of initiating work with the national school digitalisation policy. Hence, the decision was that the municipalities should have reported

Table 1 Categories of the municipality cases

Category	Major cities		Large towns			Small towns and rural areas			
Population	>200,000 *		50,000-200,000 *			15,000–40,000		15,000	
Group	A1	A2[1]	B3	B4[1]	B5[2]	C6	C7[1]	C8	C9[3]
Number	3	43	21	52	35	29	52	40	15
Case		Jupiter	Saturn			Venus		Pluto	

* In city centre

[1] Adjacent municipalities with close commuting pattern=40%

[2] Adjacent municipalities with far distant commuting pattern=30%

[3] Tourist industry

Table 2 Data collected for each case

Municipality and group	Interview transcripts	Local policy documents	Education committee meeting minutes (number of meetings)	Additional information
Jupiter: A2	59 min	Local strategy	2018–10 2019–10 2020–11	External revision Webpage Educational site for collaborative learning
Saturn: B3	52 min	Local strategy 1 (vision) Local strategy 2	2018–12 2019–13 2020–13	External revision Webpage Educational site for teaching material and planned lessons
Venus: C6	58 min	Local strategy Local plan of action	2018–20 2019–18 2020–14	Webpage News articles
Pluto: C8	49 min	Local strategy Local plan of action	2018–10 2019–10 2020–13	Webpage News articles Other municipalities webpages

data to the two SALAR assessment tools (LIKA). The second criterion was different geographical locations within the country (ranging borders north to south, approximately 1500 km). The final criterion involved structural parameters. For this purpose, the SALAR categorisation of municipalities for 2017 was used (SALAR 2016a). This categorisation is similar to the group divisions used by Eurostat and OECD (e.g., population size and density as well as commuting patterns) although adjusted to the relatively less populated Swedish context (SALAR 2016b). The four municipalities selected from the nine separate categories (see Table 1) were the following: The first municipality (Jupiter) from Group A2, the second municipality (Saturn) from Group B3, the third municipality (Venus) from Group C6, and the fourth municipality (Pluto) from Group C8.

Following Simons (2009), the data-collection process was initiated by detailed studies of the local policies retrieved from either the municipality webpage or the superintendents. Thereafter, data were gathered from documents and interviews (Table 2). The Swedish municipalities are required by law to be transparent in their work. Therefore, information from the work of the education committee (e.g., minutes from their meetings), and the education office (e.g., posts and links) were accessible through the municipality web page (e.g., www.municipalityname.se), and all online data were retrieved in the autumn of 2020.

Interview data were gathered in October of 2020 through semi-structured interviews with superintendents (Galletta 2012). The interviews were conducted as online video-meetings, and recorded with permission from the participants. Before used as data, transcripts from the interviews were sent out to the participating superintendents for approval, and they were welcome to remove, correct, or add to the data. The interviews had four themes: (a) school digitalisation in the municipality in the past, (b) the present work based on the national policies, (c) factors that lie ahead in the local work on school digitalisation, and (d) considerations of the translations of national school policies in general.

When asked, the superintendents appreciated the offered discretion when participating in the study. Therefore, acknowledging the principles of conducting ethical research (Swedish Research Council 2017), the municipalities were renamed, and identifying information was removed. However, individuals with a developed knowledge of a particular municipality may recognise certain characteristics, making each case possible to identify.

4.1 Within-Case Analysis

The within-case analysis was conducted using Simons' (2009) description–analysis–interpretation model. This means that an initial reduction process is needed to transform data into descriptions. The process included following up on information retrieved from the data (e.g., searching news articles, information given in relation to other municipalities, and references to additional earlier unknown local documents). Thereafter, a process of systematic analysis followed to study themes, patterns, key factors, and relationships. In this process, three similar themes emerged within each of the four cases: resources and political engagement; organisation and competence; and the local policy documents. The within-case analysis was finalised by interpreta-

tions (Simons 2009) in which summaries were written, and structured by the themes emerging from the analysis.

4.2 Cross-Case Analysis

After the cases were summarised, a cross-case analysis was conducted (Tight 2017; Simons 2009). Based on the summaries, similarities and differences between the four cases were explored and analysed in relation to the contextual factors developed earlier (Ball et al. 2012; Braun et al. 2011): (a) material contexts, (b) professional cultures, (c) situated context, and (d) external contexts (see Box 1). The findings from the cross-case analysis are presented and discussed as the results of the study.

Table 3 Cases versus contextual aspects

Case	Material contexts	Professional cultures	Situated contexts	External contexts
Jupiter: A2	Large investments in digital resources. Partaking in cutting-edge research on educational robots and artificial intelligence in schools.	Trust that teacher professionals enable school digitalisation. Support from variety of experts and developed local networks.	Co-created local policy documents inviting all stakeholders. Efficiency demands from politics on behalf of digitalisation. Strong regional network.	Highly involved in national ICT policy efforts. Aspirations on being national front-runner in ICT.
Saturn: B3	Invested in a newly centralised organisation for technology resources and support, all of which are efficiency conditioned.	Trust in coming generations of tech-savvy teachers. Two uncoordinated supportive networks of ICT facilitators/ strategists.	Tensions between professionals/ local office, and politics and IT office. Policy documents argue on "the best" lessons/ teaching.	High aspirations in national compere. NAE support directed to ICT. Argue for stronger national governance.
Venus: C6	Budget stretches due to required investments in digital devices.	The local ICT facilitator focus on teachers' collaborative learning. Detailed and yearly revised local policy documents.	Politicians engaged through school-partnership. Emphasis on collaborative learning and education equality. A small regional network.	National support is distant due to regulations, short-terms, and lack of local expertise.
Pluto: C8	Challenging financial situation with budget cuts. Formalised and strategic purchases of apps/programs	Collective responsibility for policy goals. ICT facilitator coordinates local networks and follow up on educational ideas. Detailed and yearly revised local policy documents.	Financial strains. Strong political support and locally prioritised work (politics, local offices, teacher professionals collaborating). Strong and developing regional network.	Well-established and developing regional network. Attempts to attract attention from the national government.

5 Within-Case Summaries

The cases are presented in the following order: Jupiter, Saturn, Venus, and Pluto, and the themes are used to add structure and readability. A cross-reference table provides guidance on how the cases are transcribed into contextual aspects (see Table 3).

5.1 Case 1: Jupiter Municipality

Resources and political engagement Jupiter, which is adjacent to a major city, has prioritised investments in school digitalisation for the past decade. They now supply all schools with a wide range of resources such as digital hardware and software (e.g., computers, tablets, and programs) and a digital infrastructure (e.g., internet access and networks). With a one-to-one school policy (one digital device per student) from fourth grade and a local "digitally first" policy, they aspire to become a progressive national front-runner in school digitalisation. Jupiter is also involved in several cutting-edge projects, for example, educational robots and artificial intelligence in school. The local efforts have increased with the launch of the national policies, and additional training has been provided, particularly directed at head teachers. Despite local investments and general support for the work, the superintendent claims that the education committee expects unreasonable efficiency from school digitalisation given the tightening budget. However, questions concerning an increasing teacher shortage has made the superintendent accept that efficiency made by digital technology in some ways must be part of the solution.

Organisation and competence Jupiter has organised a local support network for teacher professionals, including two ICT coordinators, nine ICT facilitators, teachers with ICT responsibility at each school, and two informatics specialists linked to the IT office. The network hosts learning events, develops communities for the teachers, and administrates an open website for teachers to share educational resources on digitalised education. The latter enables collaborative support between users through posting comments. Despite the local support, the issue of digitally competent teachers is considered challenging. The education committee is regularly informed on the local work of school digitalisation at its meetings. However, according to the superintendent, delivering this information requires thorough preparation and whereas presenting school digitalisation policy in terms of local possibilities and challenges is difficult. Thus, one of the ICT coordinators regularly accompanies the superintendent to these meetings.

Jupiter benefits from a well-settled regional network with a dozen municipalities organised within several strategic councils. One particular council with local ICT coordinators/facilitators and a regionally employed manager engages in issues of school digitalisation. The network council coordinates purchases, engages in competence sharing, and assists with a variety of issues (i.e., assessment guidance, school inquiries, and project-funding applications). Jupiter has been active in national policy work on school digitalisation both within the policy-formation work of the national

plan of action (SALAR 2019) and the development of LIKA. Additionally, Jupiter is involved in numerous national projects of all kinds, which has occasionally meant pausing school digitalisation work. Nevertheless, the support from NAE is highly regarded although it is said to affect the degree of local self-governing.

Local policy documents Jupiter has two local policy documents on school digitalisation: a local strategy and a local plan. The latter clarifies the expectations of various roles in the school organisation. For example, teachers should be able to choose adequate digital tools and be open to new methods; education committee members should develop their digital competence and see to it that networks are organised. Noteworthy is the number of stakeholders invited to contribute to the policy process, including parents, students, collaborating experts from education technology companies, and researchers. Concerning the general writings of the local policy documents, the superintendent argues that the professional teachers be in charge of policy translations. However, local governance must gently push teachers out of their "comfort zone" to do so.

5.2 Case 2: Saturn Municipality

Resources and political engagement In Saturn, a large town, all schools have internet access with a one-to-one policy for all teachers and secondary school students, including shared laptops for younger students. Investments in digital technology are made within the limits of the school budget, and local documents state that efficiency in teaching and school administration is expected accordingly. Since the national policies were launched, the local office has become more active in governing school digitalisation, meaning that access to computers and computer support is now distributed equally in the municipality. The local office now decides on tools (hardware and software, internet access, educational apps, etc.), the function of ICT facilitators, and IT support, which was previously in the hands of each head teacher.

Although local goals are set high and in compare to other municipalities, the school digitalisation issues are not particularly visible within the education committee work. The superintendent argues that the committee members are too easily manipulated into following trends, and that the efficiency attributed to digitalisation strains the relations with the head teachers. Hence, the head teachers continually criticise the local school digitalisation policy, and to make local agreements is therefore considered difficult.

Organisation and competence Saturn is a large municipality that include several small surrounding villages. The municipality organisation is unusual because there are two education committees but only one serving local office. One committee directs upper-secondary schools and adult education, and one committee the kindergarten through ninth-grade schools.

Concentrating on the work of the latter, the local office has set up two separate and uncoordinated local, support networks on school digitalisation. One has been around for a couple of decades and works with digital learning and school improvement work. The second is a small network of recently hired ICT facilitators linked to various school districts. This divided organisation is the result of an NAE-supported school equality project, and although appreciated for the additional funding, the superintendent criticises the construction for preventing transparency and collaboration within the municipality. Relations between the local education office and the IT office are tense with disagreements of administrative character (e.g., handing out and repairing computers) and on education-related issues (what should be purchased or provided). The superintendent sees a rescue in coming generations of tech-savvy teachers to stop the IT office interfering in educational matters, and to regain governing independence.

Saturn is neither involved in a strong regional network nor has it been engaged in national policy formation work. However, it has taken part in several NAE projects and continuously works with the collaborative learning materials provided.

Local policy documents The municipality of Saturn has two local policy documents on school digitalisation written by the local office. First, an administrative and operational plan that addresses students' school registrations, GDPR, students suffering from health issues (i.e., absentees), and the expansion of digital technology. The second policy document is a visionary folder in bright colours promising that the outcome of school digitalisation will be the best lessons and that the best teaching material available will be provided.

While proposing a stronger national governance, the Saturn superintendent emphasises the challenges of managing the loosely termed nature of the national policy, adding that a patchy local adherence increases school inequality.

5.3 Case 3: Venus Municipality

Resources and political engagement In Venus, a small town, recent school budgets have been stretched due to a large influx of students and increase in computer thefts. As a result, supplying technology for school digitalisation in relation to efficiency has become a hot topic between the local education office and the education committee. The superintendent claims that to ensure rescores to enable school digitalisation, the challenge is to appear loyal within the limits of local conditions and engage local politicians in the work of schools.

Organisation and competence The Venus School Partnership Program is set up to introduce politicians to the work of schools. Through planned visits organised by the education office, politicians discuss given topics with pupils and teacher professionals at schools. For the same reason, head teachers attend an annual education-committee meeting and present school improvements. Despite these efforts, the

superintendent emphasises a lack of understanding among the education committee members in terms of policy work on school digitalisation.

The local supportive network has one ICT facilitator as well as teachers with ICT responsibility at each school. They arrange activities together such as teacher learning events and other supportive activities. In Venus, school digitalisation is emphasised as one of many processes for school improvement characterised by challenges stemming from a lack of competence due to head teacher and teacher shortages. The view on policy is that it needs contextual relevance and that top-down implementation will always be challenged and ineffective.

Venus has a small supportive regional network cooperating on both purchases and issues of additional teacher training. Within the regional network, two people work part time as strategic support. Larger municipalities nearby have been welcomed to join. However, according to the superintendent, their interest in collaboration is non-existent.

Venus has received additional support from NAE through a project directed at municipalities that have schools serving the country's lowest achievers as assessed by the National Inspectorate. Besides this project, Venus has had limited involvement in national supportive efforts or national policy work. The superintendent argues that NAE initiatives in general are unmanageable for small municipalities by (a) being too regulative for what local conditions can manage; (b) being too short-term for the slow, iterative process of school improvement; and (c) demanding (unavailable) application expertise.

Local policy documents The first draft of the school digitalisation plan in Venus was written on the initiative of a single teacher. Now, the plan is revised yearly by a group of 15 people (e.g., the ICT facilitator, the local education office, and head teachers), and it specifies local goals for each school level. The plan expresses minimum student expectancy and the teacher competencies needed to facilitate this. For example, it states that preschool children "have been introduced to [digital] photo and [digital] filming tools for creative purposes", primary school children "know how to use Office 365 programs", and secondary teachers know "keyboard functions and important buttons, such as shortcuts through ctrl and alt". The superintendent problematises local self-governing; on the one hand, it enables explorations of new ideas related to school and education, and on the other hand, it lacks guidance and places a heavy burden on small municipalities on issues such as equality. However, the local document is considered offering at least some remedy for that matter.

5.4 Case 4: Pluto Municipality

Resources and political engagement Pluto, in a rural area, has prioritised school digitalisation for the past decade. There is strong political support from both the education committee and the municipality assembly although the superintendent says that they sometimes need a push to move forward. National policies have reinforced

local efforts which now include a local one-on-one policy from first grade. However, these investments are challenged by the municipality's difficult financial situation.

Organisation and competence The local support network constitutes one ICT facilitator on a short-term contract, and teachers with ICT responsibility at each school. The ICT facilitator supports the superintendent and head teachers, and furthermore organises the network of teachers with ICT responsibility. This network of teachers discuss the local strategy, support colleagues, and function as a referential group when new digital tools or ways of working are on trial. Pluto has a well-established regional network that collaborates closely with similar nearby municipalities (see Category C, Table 1) that have developed due to the work with school digitalisation. Through online network meetings, various stakeholder groups (i.e., politicians, superintendents, and ICT facilitators) collaborate by discussing issues of local importance. Within the local governance, these highly regarded meetings have resulted in, for example, a shared, part-time digitalisation strategist.

Accessing not just digitally competent but any teachers is a challenge in Pluto. However, the teacher shortage has meant that Pluto for several years has advanced in distance-based teaching. According to the superintendent, recruiting these "distant teachers" has raised education quality and invigorated local discussions on ways to improve schooling and educational practice as a whole. C-category municipalities, the superintendent argues, are rethinking how to provide quality education and enable learning by school digitalisation, and thus they are the true national frontrunners when it comes to ideas and ambitions in educational progress. In addition, there is a clear acceptance of variation in teachers' digital competence as long as everyone helps each other out. What is important is students' possibilities of acquiring adequate digital competence within the ten years of compulsory school. Teachers, particularly technology enthusiasts, are therefore encouraged to explore digital technology, and this investment is considered an asset for all municipality schools.

Pluto's involvement in national-level initiatives is limited. Nevertheless, the regional network has occasionally sent representatives to a particular event in Stockholm lobbying for the school digitalisation work of rural municipalities. However, these efforts are considered wasted.

Local policy documents Pluto has two local policy documents written by a group consisting of teacher professionals, IT office representatives, and local politicians. First, the local strategy describes the local undertakings and priorities when scaling up digital technology in schools. Second, a yearly revised plan of action specifies how to promote digital competence in kindergarten pupils through ninth grade within the following four areas: digital technology, digital creativity, ethics and values, and communication. Within each area, goals are specified in relation to grade and subject. According to the superintendent, specified local translations are essential when national policies are so imprecise.

6 Translations in Relation to Contextual Factors: Two Approaches

In this section, the cross-case analysis of the summaries is presented and discussed. Using the aspects of context described in Ball et al. (2012), similarities, differences, and their influence on policy translations are addressed (see Box 1).

Starting with similarities, the study lays clear that within all cases, the *material contexts* (e.g., access to digital technology) are prioritised in local policy work on school digitalisation. Here, access to a digital device for each student is emphasised by all, particularly for secondary school students. It is also clear that material investments stretch school budgets. Further similarities are found in the *professional cultures*. Emphasis on the importance of digitally competent teachers and the need for some type of local competence network in the policy work is similar between the four cases. Furthermore, in the *situated contexts*, tensions are seen between local officials (e.g., superintendents) and local education committees. A variety of efforts are made within the municipalities to inform and/or engage politicians in school digitalisation, which is considered an important part of the policy work. In that sense, policy translations as policy doing (Clarke et al. 2015) are in all cases portrayed as work made through dialogue for mutual understandings. It should also be noted that all municipalities, contextual challenges set aside, are quite confident in their particular way of doing school digitalisation, and that their way of doing policy is the best. Finally, concerning the *external contexts*, similarities are seen in the projection of national governing as important, that a close relation is considered favourable and, additionally, that national school digitalisation policy is something important and relevant.

I will now turn to how contextual differences between the cases can relate to different views on policy translation. Also, I will argue that two separate approaches to school digitalisation policy can be seen in the cases. First, regarding the *material contexts*, Jupiter and Saturn have invested extensively to supply schools with technology resources. The translation of policy into practice is here turned into making tools and programs available for teachers. Choosing from a broad pallet, teachers are invited to engage in digitalisation efforts based on their own interest. In contrast, Venus and Pluto have made investments more explicit. For example, in Pluto, schools and teachers formally apply for digital resources that they are interested in. Then, resources are attained (purchased) small scale, tried out, and assessed on quality and usability. If the resource is considered valuable, a purchase is made to include access for all potential users, possibly becoming imperative for all by being added to the specified local policy document.

Regarding the aspect of *professional cultures*, the view on policy translation in Jupiter and Saturn is reflected by their investments in large additional supportive structures and networks. Here, different kinds of professionals are brought into the school organisations for their special competence on digital technology issues. In contrast, Venus and Pluto primarily invest in teacher enthusiasts already working within the school organisation. These enthusiasts are supposed to take the lead in the policy translation process, which means that the network is kept close to the practicing teachers in schools.

In relation to the *situated contexts*, it is clear that Jupiter and Pluto have long-standing collaborations through regional networks and experience a stronger political

support in their policy work than Saturn and Venus do. However, both Jupiter and Saturn translate school digitalisation policy in an emphasised spirit of competitiveness. Such statements of competition, or comparing policy outcome, are not found in Venus or Pluto. On the contrary, they highlight educational equality, the need for holistic perspectives on school education, and the collaboration among teachers, and all other stakeholders. A reflection of the latter is the way Venus and Pluto organize local policy groups, engaging representatives from teachers, politicians, and education and IT offices. These local policy groups work iteratively on policy translations, assess the work yearly, and revise the local policy documents accordingly.

As to the final aspect of *external contexts*, Jupiter and Saturn may be considered closer to national governance. Although Saturn expresses more of a struggle in relation to national governance, both municipalities are involved in several NAE and SALAR supported initiatives and projects. Venus and Pluto, on the other hand, argue their distant position. Pluto even describes some unsuccessful attempts to attract national governing hopeing for some recognition for their ideas on school digitalisation and policy work.

From this presentation of the cross-case findings, I argue that contextual differences affect local policy translations of school digitalisation. Undeniably, as Hillman, Rensfeldt and Ivarsson (2020) argue, contextual perspectives of local governance are important for the understanding of school digitalisation. The findings show that school digitalisation policy in these cases is approached in two distinct ways. In the "general approach", exemplified by Jupiter and Saturn, teachers are given the role of primary policy translators where local authorities act as enablers of national policy, supplying with technology resources and providing a large supportive organisation. Competition is emphasised in the policy work and efficiency is seen as an outcome of school digitalisation implicitly makeing teachers more responsible for the policy outcome.

In contrast, the "specific approach", exemplified by Venus and Pluto, projects more active local governance in which policy translations are worked on in close collaboration with local stakeholders. Competence among teachers and others are thus considered in the policy work, which enables alternative policy translations to be tried out in an agile and iterative process. The collaborative process also results in more specified local policy to which teachers are expected to adhere. Thus, the responsibility for school digitalisation is linked more to the local governing level, which resonates with a holistic view of schooling and school as a safeguard for equality.

So, what do the findings suggest regarding policy work on school digitalisation? What are the potential implications of these examples of contextual differences? First, and most obviously, the two approaches distribute translational power differently. In the specific approach, local authorities are strong. Governing efforts are aimed at maintaining local policy coherence, and a lowest bar is set for the sake of education equality. In contrast, in the general approach, teachers are strong, which is possible through the local authorities letting go of translational power in favour of the teachers. This resonates with a view of support for teachers' digital competence being premiered in the policy work.

Secondly, it stands to reason that the outcome of the national school digitalisation policy will differ between the cases on the basis of the chosen approaches. The

likelihood of policy refraction processes seems greater in a general approach where alternative translations are more likely (Supovitz and Weinbaum 2008). Similarly, how far the policy may drift in relation to the initial intentions of the policy could be discussed on this basis (Ärlestig and Johansson 2020). This leads to the question of how visionary, simplistic, or 'loose termed' (Kozma 2008) school policies on digitalisation can be and still safeguard an acceptable level of national equality. Moreover, this highlights the challenge of decentralized national governing: mastering national policy coherence while simultaneously consent to local authorities (and teachers') ownership of policy. As the study indicates, there may be an issue here considering the critique coming from the municipalities on national governance.

As a final matter, I argue that from this study, it is clear that in the choice of policy approach on school digitalisation, size matters. From the cases described, two distinct approaches appear. The general approach builds on a large organisation that includes many people with expert competence in different areas, which supports policy work and facilitates aspects of school digitalisation in a large municipality. In contrast, the specific approach builds on a small network of local stakeholders who are to evaluate and continuously adjust policy work more actively, which are aspects of school digitalisation that the smaller municipalities can handle with more ease. To clarify the local motives for choosing one approach or the other, further study is needed. It is also beyond the scope of this study to assess if one policy approach is better than the other. What can be said, however, is that students, teachers, and local policy makers likely experience school digitalisation differently, and also digital competence, based on the local approach to policy work.

7 Conclusions

Focusing on the local governing level, this paper provides insights into how contextual factors affect translations of national school digitalisation policy. Examining contexts of four municipalities the study lays clear that policy on school digitalisation can be approached in at least two distinct ways. Furthermore, the paper suggests that the contextual aspect of size is relevant in the choice of policy approach for municipalities.

The study shows the complexity of school digitalisation policy work due to local contextual differences. It raises a number of questions and in this final section, three of these are highlighted. First, in a nationally decentralised school system, addressing contextual aspects in policy is complex. Considering the apparent critique of national policy on school digitalisation, it may be relevant to ask the following question: If municipalities vary considerably in constitution and circumstances in parallel with contexts becoming more important, (how) can policy coherency be managed? This is something that policy makers need to acknowledge. Secondly, a contextual aspect raised in all studied cases is professional competence, specifically, the importance of well-educated and digitally competent teachers. This issue, I argue, should be considered both in the light of teacher shortage, and in the need for adjustments in teacher education. Clearly, if school digitalisation is based on the idea of education equality, access to digitally competent teachers is paramount. This relates to the question of

what approaches to policy on school digitalisation are possible in different context, and who can be liable for taking translational power of school policy work. This is something both local governing bodies and teacher education need to reflect upon. This leads to the third and final question which concerns translational power of policy issues regarding school digitalisation. In the studied cases, the general approach transfers translational power to the individual teacher whereas the specific approach works strongly through local governance. One could ask why these various balances of translational power, what are the rationales behind these two approaches, and what this means for the students and the teachers being part of this policy work. Here, research needs to examine the underlying views of teachers, schooling, and school digitalisation. Knowing that these questions are not exclusive, I would argue that they pose the need for further studies of school digitalisation policy based on contextual aspects. These studies need to examine the local governing level within nationally decentralised school organisations, for it is here translational power of policy is distributed.

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