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Two Faces of Radical Digitalization in Education: An Institutional Logics Perspective

Completed Research

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Abstract

The outbreak of the global pandemic COVID-19 meant an extreme intensification of digitalization in education. Around the world, technology became a prerequisite for continuing education, as schools were to switch to distance education. Drawing on an institutional logics perspective, this paper aims to explore school leaders' experiences and insights from running a virtual school overnight. Data includes a survey of 105 school leaders in Swedish high schools. The results show clear challenges for schools as institutions, yet most of the school leaders perceived that the shift to virtual classrooms went well and can lead to lasting value for the school. Still, when facing a new situation, organizational problems are uncovered, and the importance of brick-and-mortar schools becomes visible. Contributions include analyzing an extreme case of digitization in schools and conceptualizing two faces of digitalization, that constitute both a preservative and disruptive force in institutional logic.

Keywords

Digitalization, Education, School leaders, Institutional Logics, COVID-19.

Introduction

For decades, digitalization has been a driver for change in Swedish schools. It has been manifested through ambitious policy as well as through many competence development initiatives in the state, municipal or private accommodation (Olofsson et al., 2021). It is safe to say that Swedish schools and their leaders and teachers have been challenged during the COVID-19 pandemic as they were forced to move their entire educational practices to a virtual environment. In Sweden, as in many other countries, schools met demands for an immediate transition to conducting teaching and learning at a distance that challenged established practice with sudden, and unexpected calls for change (Forster, Patlas, & Lexa, 2020). Hence, the organizing of education as a practice was heavily disrupted. In information systems research (IS), digital transformation has arisen as an important issue in strategic information systems research (e.g. Magnusson, Koutsikouri, & Päivärinta, 2020; Svahn, Mathiassen, & Lindgren, 2017). It has been suggested that digital transformation is initiated by a process where digital technologies create disruptions that trigger strategic responses from organizations (Vial, 2019). As of today, there is a stream of research that addresses the digitalization in education in the light of the pandemic from different stakeholders' perspectives. For example, Loeb and Windsor (2020) have studied the effects of pandemics from the students' experiences, and how it causes mental illness and insecurity about how to handle their studies in the new educational landscape. Furthermore, a stream of research showed how teachers need to establish rich, diverse, and supportive communities to handle the situation (Hartshorne, Baumgartner, Kaplan-Rakowski, Mouza, & Ferdig, 2020). For example, Carpenter, Krutka, and Kimmons (2020) explored teachers' social media usage, to navigate the transition to virtual classrooms, and how it acted as 'just-in-time affinity' spaces

meeting educators' cognitive, social, and affective needs. Whalen (2020) studied teachers' experiences during the crisis and identify an important variation in teachers' readiness to use technology to teach in virtual classrooms. Willermark (2021) investigated teachers' experiences of interaction with students in virtual classrooms and draw a multifaceted picture that involves both increased and reduced contact with, and control over, the students and their activities. There are also emerging insights about educational leadership during the pandemic. Studies stress that the principles of successful leadership remain for example building a collaborative culture and distributing leadership (Leithwood, Harris, & Hopkins, 2020). Moreover, as a consequence of the social disruption, distributed leadership has gained ground among school leaders as a way to address the challenges by collaborating, learning, and networking their way through different kinds of issues (Azorín, Harris, & Jones, 2020). Recent research on leadership during a crisis in an educational context points out several challenging situations for school leaders. Ahlström et al (2020) studied Swedish school leaders and found that they needed new leadership strategies. One of the dimensions that were highlighted was trust. Due to the high degree of anxiety in the organization, the school leaders' challenges were highly connected to creating trust and stability and argue that trust is a crucial leadership factor in turbulent times. This study has similarities to the previous research described as it examines the pandemic effect in an educational context. However, only a little knowledge exists on the organizational processes that are related to *institutionalizing* digitalization. That is making digitalization a "(...) *more-or-less taken-for-granted repetitive social behavior that is underpinned by normative systems and cognitive understandings*" (Greenwood, Oliver, Suddaby, & Sahlin-Andersson, 2008, p. 4). For this to be realized, digitalization needs to become a part of the organizational identity (Hanelt, Bohnsack, Marz, & Antunes Marante, 2021; 2021). Recent IS research has also pointed out that the digitalization of institutions can be paradoxical as it both disrupts existing institutional practices and enables and develop new practices (Hanelt et al., 2021). Drawing on the concept of institutional logic this paper explores education in Sweden during the COVID-19 pandemic, from school leaders' perspective. The context of schools has been useful when studying the process of institutionalization (Hallett, 2010). First, the core of the purpose of the school, that is teaching, has heavily relied on teachers' autonomy and earlier research suggests that there has been little managerial interference in the planning and interaction in the classroom (Alvehus & Andersson, 2018). Second, schools as societal institutions have been heavily interfered with by societal norms, political agendas, and social policies that have created a complex institutional context. With the outburst of the COVID-19 pandemic, the educational system, faced its largest disruption in our time, worldwide (Pokhrel & Chhetri, 2021). This has brought far-reaching changes in the educational system that is likely to have consequences on educational practices over a long period. Against this background, this study aims to explore the rapid digitalization of schools and therefore asks the following research question: *How can the rapid transition to running a virtual school be understood from the school leaders' perspective?* Here, we investigate how the dominant logic of education was challenged by the enforced digitalization during COVID-19.

Institutional Logics

Institutional theory has the last decades been widely used in management and organization studies as an analytical tool to show how changes and decisions in institutions are not grounded in rational factors but in social values (DiMaggio & Powell, 1983). Therefore, in institutional theory, it is relevant to regard organizations as representations of social values and socially negotiated norms (Gümüşay, Claus, & Amis, 2020). Hence, these theoretical perspectives shed light on how organizations are social systems and are led by both internal and external institutional logic (DiMaggio & Powell, 1983; Thornton, Ocasio, & Lounsbury, 2012). The present paper uses the theoretical concept of *institutional logics* (Friedland, 1991) because it can be useful when evaluating how institutions like schools, change over time due to norms, values, and assumptions (Willcocks, Sauer, & Lacity, 2015). It can therefore be helpful when studying the social and organizational context in which institutions are active and that restrict or support social behavior, or as Thornton and Ocasio (2008) put it; "filters through which we see the world" and "a metatheoretical framework for analyzing the interrelationships among institutions, individuals and organizations in social systems". The concept of an institutional logic was developed within neo-institutionalism, which suggests that organizational structures and practices are influenced by socially constructed rules and norms that guide practices within an institutional context, such as an organization (DiMaggio & Powell, 1983; Scott, 2001). Furthermore, the discussions in the *neo-institutionalism* discuss that organizations are forced to adapt to innovations such as new technologies and regulations but also what society expects of them

(Boxenbaum & Jonsson, 2008). This standpoint makes neo-institutional theory relevant when studying public administrations, such as schools, as for them the idea of digital transformation is not necessarily a result of more efficient organizations (Willcocks et al., 2015). Furthermore, this theoretical lens is also relevant when studying education, as its perspective is not interested in a single organization, in this case, one school, but all schools, creating *an institution of shared characteristics*. Besides, neo-institutionalism drew attention to organizational structures and routines that embodied cultural norms and conventions. Institutions are established by social interactions and involve norms and actions taken for granted which are shared between actors in the institution and its surroundings' actions (Mignerat & Rivard, 2015). These shared understandings reproduce existing practices and structures but also shape future ones (Scott, 2001). Many studies have looked at social, historical, and contextual influences on how techniques are used in institutions and illustrate and analyze how technologies can be carriers of change in existing institutional structures. Hence, implementation and use of technology are considered to be facilitated by normative, regulative, and cultural cognitive institutional pressures where the technology brings institutional logic and therefore influences organizational practices (Liang, Saraf, Hu, & Xue, 2007).

Method

In this section we give a brief introduction to the context of Swedish education systems, followed by data production and data analysis.

Empirical Context

Nordic countries are frequently positioned as digital front-runners both in a European and a global context (Randall & Berlina, 2019). The Swedish education system is one of the most digitalized in the European Union. Most schools have so-called 1:1, that is one computer (or tablet) per student and even pre-schools have a high computer density. A clear majority, approximately three-quarters, of the Swedish school leaders believe that they have sufficient competence to be able to lead the school's strategic work with digitization and the proportion has increased over time. However, Swedish school leaders are located at a crossroads of different tasks and responsibilities. They are expected to be accountable decision-makers and take responsibility for economic, regulations, work environment, and personnel issues as well as monitor the quality of work and take action to curb any deficiency (Liljenberg & Andersson, 2020).

Data Production and Analysis

An online questionnaire was designed to explore school leaders' experiences and insights from running a virtual school overnight in the light of social disruption. The questionnaire contained a total of 13 fixed and open-ended questions. The questionnaire included the following three themes concerning the transition to running a virtual school: 1) *Evaluation of everyday work*. Examples of items include "How do you perceive that communication with staff, students, and parents has worked?" The item is answered by a five-point Likert scale and free text answer, 2) *Opportunities and challenges*. Examples of items include: "In your opinion, what has worked best at the school since the transition to distance education?" or "In your opinion, what has worked worse at the school since the transition to distance education?" The items are answered by free text, 3) *Effect on leadership and the school as an organization*. Examples of items include: "In your opinion, how has the transition to distance education affected your leadership?" or "What experiences do you take with you when returning to regular schooling?" The items are answered by free text. The questionnaire was available for two weeks, between weeks 20-22 of the year 2020. The questionnaire was distributed via email to 143 Swedish school leaders spread across the country, from both metropolitan and sparsely populated areas, and who were representing both practical and theoretically oriented schools. The questionnaire received 105 answers, which means a response rate of 73 %. The data were analyzed using a software program (MAXQDA) supporting computer-assisted mixed methods. First, descriptive statistics were used to analyze the fixed answers to create an overall picture of school leaders' experiences of the transition, as a basis for the qualitative analysis. Thus, no multi-variate analysis was conducted. As for the free-text answers, these were analyzed through a deductive open coding process. The data was analyzed by a spiral procedure focusing on the meanings of the parts and then linking them with the whole in an integrative manner. Initially, the answers for each question were read in their entirety and given one or more labels reflecting the respective answers, for example, "Structure becomes more important" or "Effective meetings across schools". Thereafter the labels are clustered according to emerging categories, to

provide an opportunity to discover patterns in the data. The analysis was characterized by an iterative approach, with adjustments of categories and mergers of labels and categories were refined (See Table 2). As for the free-text answers, the analysis focused on capturing school leaders' descriptions of digital leadership in the light of social disruption. The respondents have been assigned different numbers (RX) which are reproduced in quotations.

Results

First, school leaders' overall experiences of transition to new institutional logics i.e., to running a virtual school overnight are presented followed by an exploration of school leaders' acquired experiences and insights including scrutinizing institutional logics.

Transition to new Institutional Logics

As for school leaders' general experiences of transition to distance education, a total of 89% states that they perceive that the distance period has worked very well or pretty well (See Table 1). In the free-text answers, school leaders give different explanations to the answers. One important and recurring explanation of the relatively positive experience of the transition is that school leaders felt prepared in different ways. Thus, even though the situation was completely unexpected, previous investments in digital infrastructure, professional development of staff, and established working methods are emphasized as important to cope with the intense digitalization. However, while many school leaders state that the transition has worked well, they also make a reservation that the transition should be seen in the light of the crisis with minimal opportunities for preparations and that concerns a limited period. In this situation, the focus has been on managing the core mission, i.e., remaining teaching and learning while long-term development work and school development have been down prioritized. A clear majority also experience that the contact with staff students and parents has worked very or pretty well. Interaction is maintained by email, telephone, and platforms such as google classroom, Microsoft Teams, and Discord. Some school leaders emphasize opportunities to conduct meetings without having to travel and that this can facilitate, for example, contact with staff from other schools or parents. However, school leaders also stress that it in some cases is more difficult to reach parents and not least certain groups of students who have come further away from the school. Furthermore, the lack of spontaneous interaction and informal meetings 'on the go'. Close to 80% of the school leaders state that the collaboration between teachers and student health has worked very or pretty well. A recurring reason is that good existing structures and routines enabled the transition to a virtual school.

Question	Scale					Total
	Very well	Pretty well	OK	Pretty bad	Very bad	
Overall, how do you perceive that distance education has worked?	38.7%	50%	10,4%	0.9%	-	100 %
How do you perceive that your contact with staff, students, and parents has worked after the transition to a virtual school?	28%	54%	13%	5%	-	100 %
How do you feel that the collaboration between teachers and student health has worked after the transition to a virtual school?	39,6%	39,6%	16%	4.8%	-	100 %

Table 1. Distribution of results from fixed response options about everyday work. N=105.

Scrutinize Institutional Logics: Consolidate and Reconsider Norms, Values, and Practices

A total of 91 respondents answered the related free-text question of what experiences and insights they had acquired. A total of 197 excerpts related to the question was identified and categorized (see Table 2). Each category is elaborated on below.

Category	Amount
The institutions' ability	22
The importance of brick-and-mortar school	18
The importance of coordination and collaboration	10
Revealing institutional problems	15
Developing Techno-Pedagogical methods	30
Opportunities with distance work & education	46
Total	197

Table 2. Acquired experiences and insights.

The Institutions' Ability

A recurring statement in the data relates to the fact that the crisis has been handled thanks to a competent and flexible organization. As one respondent states: *"We can handle a crisis but prefer not to"* (R30). School leaders express a sense of pride and sometimes amazement at how well the schools have dealt with the crisis as illustrated by; *"It has worked beyond expectations, with great support centrally and committed employees who grew with the challenge"* (R98) or *"As an organization, we are fast, efficient and creative when it comes down to it"* (R41). School leaders emphasize support structures, functioning digital infrastructure but above all the teachers' commitment is crucial when facing the crises as illustrated by: *"I will take with me the incredible will of our teachers to create solutions for the students and who go the extra mile."* (R67).

The Importance of Brick-and-mortar School

In several cases, the school leaders state that they have gained new perspectives on the value and function that the brick-and-mortar school has, especially for the students, as illustrated by; *"We realize the enormous importance of the [physical] classroom meeting for learning but also for creating the sense of community, it is irreplaceable"* (R67) or *"We have been made aware of how important school as a physical place is for many students"* (R9).

The Importance of Coordination and Collaboration

The importance of coordination and collaboration within different constellations within the organization, such as between teachers, work teams, student health, and management is emphasized by the school leaders. Collaborating around individual students but also sharing experiences, providing feedback on each other's work, and communicating is emphasized as central, as illustrated by; *"We need each other and in our work team we are dependent on each other to function optimally."* (R71) or *"As always, cooperation, trust, forums for discussion, transparent decision-making paths are the most important ingredients for making transformation work in practice"* (R4).

Revealing Institutional Problems

In several cases, the school leaders highlight how various institutional problems have been discovered during the crisis. It includes identifying shortcomings in their leadership such as changing their communication with the staff, which can be illustrated by: *"I also take with me the importance of paying attention to the staff's well-being and their need for attention, confirmation, and support"* (R99). It also includes questioning established activities or habitual patterns as illustrated by; *"Only meetings that are necessary and have a specific purpose should be realized"* (R46). Additionally, reflections are raised on the teaching situation and the extent to which the study environment is satisfactory as illustrated by: *"Why do our students perceive that they have better opportunities to focus on their studies during distance education than when they are at school?"* (R45) or *"Teachers signal that they do not have time to help all*

students via [Google] Hangout - but these students want and need help otherwise as well but are not noticed..." (R44).

Develop Techno-Pedagogical Methods

Through increased use of digital technology and the development of pedagogy adapted for distance education the development of technological pedagogical methods is identified. The situation forced development and creativity in teaching, which can be illustrated by; *"So much more is possible if you just try. Now we were forced to do so. Every cloud has a silver lining"* (R95). The development of technological pedagogical methods can be linked to strategies of innovative and creative teaching models and an increased digital repertoire which adds value to the teaching situation, as illustrated by; *"We have identified several technical possibilities that make teaching more creative and sometimes easier to adapt to the individual [student]"* (R45) or *"Better digitally equipped staff, more tools to work with, better follow-up and organization of the pedagogical work"* (R88). It is emphasized how clarity and structure have become more prominent in distance education and that it needs to continue to be prominent in the future as well.

Opportunities with Distance Work and Education

Opportunities with distance work and distance education are recurring in the data. As for distance work, opportunities that can also benefit the interaction among different stakeholders is emphasized as illustrated by: *"All parent/teacher meetings will be conducted via meet [video calls] in the future"* (R75) or *"There will be shorter paths to effective meetings, both collegial and educational. We will cancel fewer meetings as we will have a habit of communicating digitally instead"* (R43). Furthermore, school leaders address possibilities with distance education as a complement to brick-and-mortar schools. It covers everything from offering distance education in selected courses to opening up for more flexible forms of teaching in the event of temporary illness or for making students with long-term absence in-school opportunity to participate in teaching, as illustrated by; *"I hope we will be able to use this [distance education] in subjects where it is difficult to recruit qualified teachers"* (R70) or *"I see opportunities for some students to participate online to not fall behind"* (R76).

Discussion

In this section, we discuss the results from an institutional logics perspective on the rapid digitalization of schools and how it has disrupted established institutional logic, followed by the limitations of the study.

A (Relatively) Effective Transition

Many school leaders perceive that the transition to running a virtual school has gone well and beyond their expectations. In a time of crisis, many school leaders experienced that the staff adapted to the situation that arose and came together to deal with the consequences. It is consistent with previous research that shows that it is common for people to join forces in a crisis (Ahlström et al (2020). Thus, that there was such a widespread acceptance for the *immediate* and *transformative* changes in teaching practice must be seen in the light of a crisis that lasted over time (and is still at the time of writing highly evident and continues to affect people's everyday lives). Relating to the perspective of institutional logics, this can be viewed as the "logic of crisis" developed by both teachers and leaders during the rapid transition to the virtual school. The long-term aspect of the crisis means that if teaching were to be put on hold it would have major and far-reaching consequences for the individual student as well as society at large. In such a situation, a radical technology-mediated intensification of teaching practice became the only opportunity available to continue the societal functions of education. The results should also be seen in the light of the digitalization of schools has been on the political agenda for a long time (Olofsson et al., 2021) and how school leaders have been forced to respond to what society expects from schools as institutions. These changes challenge the existing institutional logic, which can be viewed as the "logics of such as new public management of societal digitalization (Boxenbaum & Jonsson, 2008). For decades, there has been wide-ranging investment in technology and professional development initiatives to promote the digitalization of education. In Sweden, such political and societal initiatives are particularly distinctive in several ways. For schools that already apply 1:1, have an established digital infrastructure, and rely on digital technology for teaching, communication and administration, the transition will be less disruptive. Such conditions can explain the

school management experiences of a relatively effective and successful transition. At the same time, previous research shows that many Swedish teachers still feel unprepared to use technology in teaching and, that there is an inequality regarding access to, and use of technology between schools (Willermark & Pareto, 2020). This also illustrates how the institutional logic, in this case mainly conventions and organizational structures, has been challenged and things were taken for granted in the context of schools as an institution has been shaken (Thornton & Ocasio, 2008). This is illustrated both by elevating the value of the brick-and-mortar school, both as a space for learning but also as an important social institution that creates structure, context, and meaning for the individual. All the above variations in terms of access to technology as well as teachers' and students' digital competence constitute framework conditions that favor or hinder a transition to a virtual school and may also explain school leaders' varied experiences of transition. In summary, it can be stated that schools and school leaders have different conditions when it comes to transitioning to and leading a virtual school. It is well established that leadership cannot be separated from the context of (Bruch & Walter, 2007). As for the school leaders in this study, the context changed in the transition from brick-and-mortar to virtual schools.

A (new) Digital Normal

The sudden and transformational change offers new perspectives on the school as an organization but also on the leadership. Consequently, school leaders are beginning to question the state of affairs. It includes fundamental questions about the meeting culture, interaction, and study environment. As such, the school leaders "filter" through they see the world, and therefore also their negotiation institutional logics (Thornton et al., 2012), has been reshaped. In a time of crisis, everyday life is disrupted, and the school leader is forced to prioritize among tasks, perspectives, and responsibilities which raises new questions about what is truly important (Håkansson Lindqvist, 2019; Liljenberg & Andersson, 2020; Townsend, 2013). Furthermore, it shed light on the leadership and the school leader about the organization (Harris & Jones, 2020; Netolicky, 2020). In a way, the institutional logics in the context of school is grounded and understood through its physical building, and when it "disappears" and is replaced with a virtual school there is a need for a more structured and formalized communication and collaboration among school leaders and the staff and find ways to show presence and participation in the new virtual context. This also illustrates how disrupted shared understandings, that is the institutional logics of the school and education as practice, need to be reframed and reproduced to form new practices and structures and the role of actors, such as school leaders, teachers, and students, in institutional logics (Scott, 2001). It is obvious from the data that the transition not only has led to the increased use of various digital technologies and the identification of new technological affordances but also technological pedagogical methods and questions. Due to the radical transformation of schooling, there is an imminent question of what lessons have been made and which transformations 'will stick' and become a constant in the 'new normal' – or new institutional logics - after the obvious threats of the pandemic subsided (Yıldırım, Bostancı, Yıldırım, & Erdoğan, 2021). Brick-and-mortar school is identified as important to nurture social relationships and create informal conversations. However, the potential digital interaction is unveiled to eliminate barriers to participation and interaction in education. This includes being able to increase collaboration with students' legal guardians; enhance the interaction between stakeholders such as students' health and teachers or teachers from a different school or be open for more flexible forms of teaching in the event of temporary illness or students with long-term absences in school. It seems like the shift to virtual schools raises questions about interaction and participation in a broad sense and who is favored and disadvantaged in different contexts. On the one hand, how students with weak internet connections and overcrowding should be able to take part in the teaching from home. On the other hand, it also raises questions about who is disadvantaged in traditional school and how to cope with a lacking study environment in school, or how to address students with problematic school absenteeism who are shielded from teaching. These are school-wide strategic issues that go beyond dealing with a global pandemic, and where leadership has a central institutional role.

The two Faces of Digitalization

The data shed light on that the digitalization of schools during the pandemic arguably had two faces, which also relates to recent IS research concerning digital transformation (Wessel et al, 2021; Hanelt et al., 2021). On the one hand, it followed earlier actions to create value in schools by introducing and using digital technologies and hence innovating the didactic design (Willermark & Pareto, 2020). However, this process

was much more rapid than it usually is, due to the pandemic crisis mode and disrupted existing institutional logics. On the other hand, the focus was to preserve and enable students' schooling during a crisis, which involved preserving institutional logic (Thornton & Ocasio, 2008). Also, the translation of schooling to a digital arena sheds light on the external pressure (DiMaggio & Powell, 1983) of schools as institutions. That is, the formal structures of schools have been negotiated by society over hundreds of years, and conformed to societal norms and values (Alvhus & Andersson, 2018). One example of this is the “brick-and-mortar” school, which has given the school its legitimacy in society and has been an important factor in maintaining how schools are led and structured. The physical classroom is another good example of this. The teachers' role and legitimacy in the classroom are highly orchestrated by its architecture. With the transition to a digital classroom, light has been shed on new forms of interactions between teachers and students which have also challenged existing institutional logic (Thornton & Ocasio, 2008) and created new ones. The physical presence is one logic that has been disrupted. The need to create social distancing during the pandemic generated a need for virtual classrooms where pupils and teachers were not present in the same room. Hence, were heavily disrupted. This is illustrated in the data e.g., by the descriptions of forced innovation and creativity to create teaching in a virtual classroom. However, the lack of the “brick-and-mortar” school also emphasized schools as an important institution in society. An institution that brings structure and routines to students' daily life and provides social interactions, lunches, and meetings with adults. With the rapid and forced digitalization of schools, the legitimacy of schools as institutions has been challenged and heavily disrupted and understood as double-faced. That is, on one hand, emphasis is put on preserving and maintaining schooling, and its existing institutional logics, and on the other hand, it emphasizes organizational problems within schools and hence can contribute to transformation and development of the digital school, and hence a renegotiation of institutional logics and digital transformation (see Figure 1). Interestingly, as suggested by Wessel (2021), digital transformation in this context emerges as a response to a societal disruption, creating challenges that can be managed by digitalization.

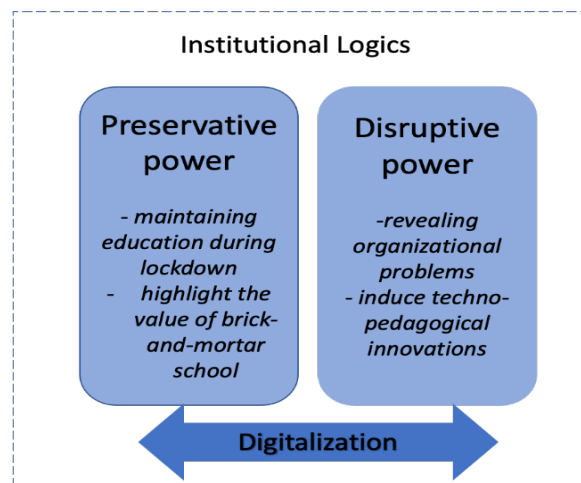


Figure 1. Illustration of the two faces of digitalization in education during a global pandemic.

Limitations and Future Research

The study has limitations that should be noted and that also can serve as areas for future research. *First*, the data is bound to school leaders in Swedish high schools. *Second*, the empirical data consists of self-reporting which involves risks of socially desirable responses, which has been described as the tendency of people to answer in a way that is more socially acceptable (Nederhof, 1985). *Third*, the study represents a snapshot of school leaders' experiences and insights three months after the transition to a virtual school and can therefore not trace how the experiences develop over time or what will be the result of the experiences and insights gained. A future area of research will be to explore school leaders' experiences in other contexts, including different countries as well as different school levels, teaching practices, and cultures, and explore the results in light of the demographic descriptive. Further, it would be of interest to

peruse longitudinal studies that trace (possible) impacts on school leadership and digitalization of school over time.

Conclusion

The results of the present study illustrate challenges for schools as institutions during rapid and enforced digitalization and how institutional logics is challenged and re-negotiated. Overall, the school leaders had a relatively positive picture of the radical transition is revealed, as most of the school leaders perceived that the shift to virtual classrooms went well and can lead to lasting value creation for the school. From our case, we contribute to the information systems research by extending the lens of digitalization as disruptive and transformative and highlighting a preservative dimension. We define the two faces of digitalization as a socio-technical view on digitalization that is both a preservative and disruptive force. We have illustrated these two faces of digitalization of an institution practice, exemplified from our case, and we offer an understanding of the kind of situations in which digitalization operates.

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