

Cogent Education



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/oaed20

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To cite this article: Inka Bormann | (2021) How does research knowledge about social inequality in education matter during the pandemic? Results of an analysis of a public discourse in Germany, Cogent Education, 8:1, 1985687, DOI: 10.1080/2331186X.2021.1985687

To link to this article: https://doi.org/10.1080/2331186X.2021.1985687

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Received: 17 March 2021 Accepted: 21 September 2021

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Reviewing editor: David Foo Seong Ng, National Institure of Education, Singapore

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EDUCATIONAL LEADERSHIP & MANAGEMENT | RESEARCH ARTICLE

How does research knowledge about social inequality in education matter during the pandemic? Results of an analysis of a public discourse in Germany

Inka Bormann^{1*}

Abstract: The COVID-19 pandemic has led to significant changes around the world, including changes in education. Almost immediately after school closures were imposed in March 2020 and students in many cases had to take digital distance learning classes, educational researchers clearly pointed out that this could contribute to a worsening of existing social inequalities in education. How has this research knowledge been publicly received? This question was investigated with a discourse study framed in terms of innovation theory which analyzed a total of 88 texts from three German Internet platforms covering the period between March and September 2020. The results show that with regard to the consideration of social inequality, two barely connected worlds exist (one in research, one in the professional public). In the professional public discourse, research knowledge plays a subordinate role at best. Moreover, in the public discourse two strands of discourse are found that are also not intertwined. The results are discussed in terms of their significance for trust in educational institutions, the care and maintenance of which is a relevant topic for educational policy and management, particularly in times of disruptive changes in educational practice.

Subjects: Educational Technology;; Social Inequality; Education - Social Sciences; Politics & the Media; Design & Delivery

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PUBLIC INTEREST STATEMENT

To help contain the COVID-19 pandemic, educational institutions were closed in many countries around the world, including Germany. Shortly after the implementation of these measures, educational researchers drew attention very clearly to the possible negative side effects of this development: in particular an exacerbation of the existing social inequality in the educational system. In order to understand how this research knowledge was received by the public, excerpts from the public discourse on education have been analyzed. This analysis indicates that the warnings of a worsening of social inequality played almost no role at all. However, ignoring this critical evidence can be associated with damage to trust in educational institutions.









Keywords: COVID-19; digitalization; discourse; educational management; educational policy; pandemic measures; school closures; social inequality; trust; use of research knowledge

1. Introduction

The COVID-19 pandemic fundamentally and unprecedentedly changed many aspects of life as they had been known until then, as did the actions taken by governments to respond to the pandemic. Educational systems were (and are) also affected by the force of the pandemic and the months of struggle against it. According to Stanistreet et al. (2020, 572), the pandemic is a historic moment in which responses to the pandemic "will have profound implications for the society of the future, including the future of education." In many countries around the world, including Germany, a major response in the educational system has been the (temporary) closure of educational institutions to help contain the pandemic. However, because the "suspension of compulsory education" did not actually mean the suspension of "compulsory education" (Lindblad et al., 2021, 572), teachers, parents, and students were forced to adapt quickly to the situation. Often the remedy of choice was school closures and, associated with it, (digital) distance education. In Germany this happened at a time when digital equipment in schools was still being developed, teachers as well as students had comparatively low digital literacy skills, and student prerequisites for participating in digital distance learning at home also varied widely (European Commission, 2019). As a result, major concerns were raised by researchers with regard to the inequity-worsening consequences of these policies.

Fundamentally, people in many countries witnessed medical researchers speaking out to inform the public and policymakers about the virus, its transmission, the symptoms caused, and ways to contain its spread. Given the extraordinary scale of the pandemic and the speed with which it spread, solid knowledge was urgently needed for purposes of imposing effective measures to combat the pandemic and getting people to follow protocols via information in the media. Research from a broad range of disciplines was therefore challenged to rapidly produce and share solid knowledge to inform both the public and policymakers, and to support the initiation of effective measures against the spread of infectious disease. An overarching discourse quickly developed in which the differing positions of rapidly evolving knowledge and measures to combat the pandemic were publicly debated.

Findings communicated by educational researchers at the very outset of school closures pointed to a significant side effect of the pandemic measures in relation to education: The abrupt closure of educational institutions and the sudden shift to digitalized distance learning were justifiably suspected of accelerating and exacerbating social inequality in education (e.g., Rothstein, 2020). Meanwhile, recent studies from many countries report not only an accelerated shift to digitalization (Cone et al., 2021; Taglietti et al., 2021), but also actual social inequality in coping with distance education (Dimopoulos et al., 2021), learning gaps (Bonal & González, 2020), and learning losses (Engzell et al., 2021; Tomasik et al., 2021). Recently Saito (2021) has summarized the immense impact of the virus and the measures taken to contain its spread as "collateral damage," which represents "unexpected and unintended negative consequences that deprive the socioeconomically disadvantaged of opportunities and rights in schooling."

But how and to what extent has the concern about widened social gaps in education which have been identified by research been addressed in public discourse? According to Bromme et al. (2016, 130–131), the public discourse raises issues that responsive policymaking should address. Moreover, policy decisions should be explained and justified in the public discourse, among other things. In this study, exacerbated social inequalities are addressed as a potential side effect of the measures taken in the realm of education to contain the pandemic. Specifically, the study examines how and by which actors research knowledge on this topic is incorporated into the



development of public discourse in Germany as a side effect of the pandemic measures relating to education.

In contrast to Zhao and Watterson (2021), who posit that the innovations faced by educational systems during the pandemic are unstable in the long term, this paper assumes that the short-term changes such as school closures and increased digitalization in education may lead to an increase in social inequality in education, which in turn may lead to an erosion of trust in institutions in the long term (Bormann et al., 2021). Establishing and maintaining equal opportunities is one of the central tasks of institutions, which can lose their public trust if they are perceived to be violating these guiding principles (Lepsius, 2017). The results of the analysis are therefore discussed in terms of their relevance for trust in educational institutions.

The article proceeds as follows. After this brief introduction, the context of the study is delineated and a theoretical framework is presented to explain why and how increases in social inequality may pose a threat to trust in educational institutions. A discourse analysis is used to address the underlying questions of the paper, and an explanation of the methodological orientation is the subject of the following section. The results of the analysis of public discourse on education during the first lockdown in spring 2020 are presented. Finally, the results of the discourse analysis are discussed with reference to an innovation theory approach with regard to trust in institutions in times of massive change in education.

2. The pandemic measures: research knowledge on social inequality in education caused during the pandemic and the potential development of a massive critical conjuncture in education

Immediately after the outbreak of the pandemic governments in many countries, including Germany, assumed responsibility for combating the disease.² A major measure to contribute to containing the spread of the virus was the closure of educational facilities—also in Germany. Without parliamentary participation in the decision-making processes during the first lockdown, the federal government ordered the federal states to close their educational facilities from mid-March 2020 until May 2020 (Fickermann & Edelstein, 2020, 2021). Ultimately, primary and secondary schools were shut down for 52 days in the spring of 2020 (Lindblad et al., 2021, 569). As of May 2020 the federal states partially reasserted their sovereignty in cultural and educational affairs and laid down the conditions for on-site education within the National Pandemic Plan and the Pandemic Plans of the Länder. The first to return to schools were those students who had to take their final exams, while the institutions remained closed to others, which meant that most children had to study at home. Younger students could return to school in split groups and on specific days until the beginning of the summer holidays. To deal with the situation, many educators offered digitalized distance education, but the available equipment and expertise in this field were on average known to be insufficient. In general, for large groups of students education was expected to take place in part as digitalized distance education at home, which also meant that parental support and/or self-organized learning was needed. In June 2020, the Standing Conference of the Ministers of Education and Cultural Affairs³ stressed the task of redeeming the right to education and reaffirmed the intention to resume regular school operations after the summer break. After the development of hygiene protocols in July 2020, the same authoritative body considered schools to be sufficiently well equipped to return to normality in autumn (Fickermann & Edelstein, 2020, 2021). Indeed, after the summer break in August 2020 schools returned to on-site education with enhanced hygiene protocols—but were forced to close again as of December 2020 due to the third wave of the pandemic.

2.1. Research knowledge about social inequality in education during the pandemic and beyond

All in all, the imposed school closures and the rise of digitalized distance education profoundly interfered with the previously known form of classroom education. Of the multitude of possible



side-effects of the COVID-19 pandemic measures, right from its beginning researchers have very clearly stressed that school closures and digitalized distance education may further increase social disparities (in general: Blundell et al., 2020; in education, particularly: Beaunoyer et al., 2020; Van Ackeren et al., 2020; Hübener & Schmitz, 2020). Many scholars have emphasized that the shutdown of educational institutions causes a loss in effective learning time (Huber & Helm, 2020; Köller, 2020; Reimers & Schleicher, 2020), which will correlate with lower scores in tests of the use of knowledge (Burgess & Sievertsen, 2020). Accordingly, educational economists have also predicted losses in lifetime incomes (Hanushek & Wößmann, 2020).

What is even more, it is well-known that contextual conditions contribute directly to social inequality in educational achievement in addition to social and family background (Burger, 2019, 19). Accordingly, in more socially segregated countries the effect of socioeconomic background in education is more intense than in less segregated ones. In other words, students from well-off backgrounds have more options for effectively dealing with such situations and for preventing the related damage (Bayrakdar & Guveli, 2020; Pensiero et al., 2020). In international comparisons, Germany is shown to range among the countries where students with a lower-income family background achieve lower learning outcomes (Council of Europe Development Bank, 2017, 9).

To understand the discrepancies in learning outcomes, particularly when it comes to a shift of onsite education towards digitalized distance education, it is also crucial to look at digital competencies. In Germany digital competences turned out to need to be developed further by both students and teachers (European Commission, 2019). Moreover, in Germany many students are not familiar with using digital devices for systematic educational purposes, because only 15% of students attend schools where "bring your own device" is standard (Eickelmann et al., 2019, 14). It thus fits into the picture that as early as mid-April 2020 the results of a teacher survey (Forsa Politik- und Sozialforschung GmbH, 2020) stated that 86% of 1,031 respondents were sure that school closures would increase the effects of social inequality in education. Around a quarter of staff assumed that students lacked digital equipment; about one in five believed that creating and delivering appropriate digital educational content was a significant challenge for teachers resulting from the school closures (see also Senkbeil et al., 2019). With regard to teachers, Huber and Helm (2020) reported that 56% of the teachers disagree or strongly disagree that their school is sufficiently technically equipped for web-based teaching formats.

2.2. The threat to trust in institutions

Against the background of the innovative measures in education taken during the pandemic (such as digitalized distance education and homeschooling), Germany's National Academy of Sciences, the Leopoldina, demanded the "establishment of a culture of trust and enablement in which all levels can work together to find and implement practicable solutions that give children and young people access to attractive learning structures" (Leopoldina, 2020, 4; own translation). These demands were directed mainly at the government and federal ministers of education, urging it and them to take seriously and mitigate the side-effects of the pandemic measures applying to education. With regard to the government-ordered closure of educational facilities, Blom (2020) registered a massive loss in its public acceptance (from 90% in March to less than 25% in July 2020), whereas another recent study shows that trust in governments increased during the pandemic (Brand et al., 2020, 56).

Trust is a significant resource for governments in terms of being perceived to act legitimately (Tyler, 1998, 289; Cerna, 2014, 9). This belief is more common in crises in which people are highly dependent on institutions because, as individuals, they are not equipped with the necessary power to deal with the situation themselves (Neal et al., 2016, 181). People's reactions to the pandemic depend, among other factors, on their trust in how institutions handle the crisis. Delhey et al. (2021) stress that in the pandemic health-related insecurities strengthen and economic insecurities weaken institutional trust. Also with regard to the COVID-19 pandemic Cerda and García (2021) found that people who are fearful of an infection (those with little knowledge about the virus, a low education level, a high age), tend to assess the response of the authorities to the



pandemic negatively. In general, trust is fueled by the perceived performance and quality of institutional services: for example, by the public's assessment of how goal-oriented, effective and efficient measures are (Bouckaert & van de Walle, 2003, 303; Robbins, 2012). In this respect, one must also consider that inequality in education negatively impacts trust (Green & Preston, 2001, p. 270). Furthermore, as posited for education the discourse may raise concerns relating to the quality of institutional performance and touch upon how much they are trusted (Pizmony-Levy & Bjorklund, 2018, 253; Kramer, 1999, 590).

In this context unintended side-effects, ignoring or disregarding their guiding principles on the part of the institutions can be massive threats to trust (Lepsius, 2017). In complex societal systems, among other factors trust is developed through mediators such as the media. According to the theory of public trust the content, i.e. the range of details, the plausible and consistent presentation of information, are significant for the observable communicative behavior of institutions when it comes to being perceived as trustworthy (Bentele, 1994, 143). Moreover, transparency and perceived acceptance of responsibility are crucial (ibid., 145).

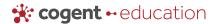
However, to what extent are the significant concerns on social inequality highlighted by researchers mirrored in the public discourse relating to education? This question addresses the communication, use and public perception of research knowledge on the effects on education of the pandemic and the respective measures taken to combat it. Early research has revealed various forms of how research knowledge is communicated and used in policy-making. Among others, Weiß (1979) pointed out that in the "political model" of knowledge usage, research supporting the position of specific actors may provide them with trust in the correctness of their actions. More specifically, through the lens of trust research, the perception of doing the right thing and acting benevolently, competently and with integrity is crucial for actors in terms of being regarded as trustworthy (Schoorman et al., 2007). Similarly, Hendriks et al. (2016, 152–154) hold that recipients whose own knowledge resources are limited need epistemic trust in the source of information in order to appreciate it (i.e., to consider it endowed with expertise and showing integrity in following the rules of the profession and of using the knowledge benevolently).

Against these backgrounds, the aim of this study is to explore the use of research knowledge on social inequality in the public discourse in education, and to anticipate its consequences for trust in educational institutions. This aim can be achieved by employing a discourse analysis exploring the pandemic-induced, unprecedently new situation in education. The study employs a framework that brings together innovation theory and discourse-analytical approaches.

3. Analyzing the discourse on pandemic measures in education from a social innovation perspective: the methodological orientation of the study

3.1. The theoretical and analytical framework

As in any other realm of society, a rapid re-orientation of actions took place in education when the pandemic broke out, despite the fact that "grammars in education" are seen as remarkably persistent (Tyack & Tobin, 1994). The measures to contain the pandemic can thus be considered to have prompted innovation processes that were accompanied by an intense public discourse. According to Hutter et al. (2016, 22), innovations "are not a 'mere' fact". Instead, they are interconnected with discourses on accounts and ideologies. To understand discourses on innovations and how they operate, they suggest analyzing the semantic, pragmatic and grammar dimension of discourses. While the semantic dimension refers to the meaning and knowledge shared in discourses, the pragmatic dimension focuses on (constellations of) actions and technologies. Finally, the dimension of grammar addresses the order and rules according to which innovations are empowered or hampered (ibid.). The intertwining of these dimensions shows how innovations are discursively moved forward.



Hutter et al.'s (2016) framework relies on theoretical accounts that put innovation at its center and considers discourses as the social media through which innovations are realized—however, without specifically elaborating any methodological approaches which point out how semantics, pragmatics and grammars can be explored. For this purpose, approaches in discourse studies need to be taken into account.

Many scholars consider discourses as symbolic entities transporting knowledge over space and time within and across different societal realms and shaping the perception of realities and reality itself. In the words of Keller (2011), discourses are structured by as well as contributing to structuring social realities in that they "are simultaneously both an expression and a constitutional prerequisite of the social" (ibid., 52, 54). They emerge as a result of dispersed utterances manifested, for example, in "texts, conferences, papers, talks, associations" (ibid., 51), which can be studied as data. While analyzing these data, discourse studies aim to reveal how, for example, meaning and values are institutionalized (ibid., 51).

To analyze how knowledge is discursively (re-)produced, it is useful to scrutinize the narrative and phenomenal structure of the discourse and positions within the individual discourse (Keller, 2011, 57). In other words, exploring the communicatively (re-)produced discursive order of knowledge in a selected part of the social world which is represented in a storyline (ibid., 53, 59) and is subject to analysis. In so doing, discourse studies adopt a critical stance towards the social contexts studied (Bosančić, 2019, 101).

The study presented in this paper brings the innovation theory and the discourse-analytical perspective together. The framework aims to reveal whether, how and by whom the danger of increased social inequality resulting from the pandemic measures in education is addressed in professional public discourse. Specifically, the narrative and phenomenal structure of the evolving discourse, the references to research knowledge, and the positions of selected actors will be explored. The results will be discussed in terms of both the dimensions used in innovation analysis and their implications for trust in institutions.

3.2. Corpus

The COVID-19 pandemic has been accompanied by an immense echo in politics, public and research. From the broad range of possible sources, the data that is subject to the discourse analysis in this study was derived from three different publicly accessible internet platforms: Germany's Schools Portal (www.deutsches-schulportal.de)⁶, the National Parents' Council (www.bundeselternrat.de)⁷ and the Standing Conference of the Ministers of Education and Cultural Affairs (www.kmk.org).

From these three sources, texts from mid-March to mid-September 2020 were selected when their titles suggested they dealt with education, digitalization or the side-effects of measures implemented in education because of the COVID-19 pandemic. In total, the corpus includes 88 texts with various types of format and content, including statements on and works of research, reports on schools, the perspectives of different stakeholders within the school sector, interviews, tips and hints, commentaries and decisions by the authorities. As Table 1 shows, the kind and number of texts of the three sources used varies across time.

For the analysis, an earlier exploratory content analysis was extended to include the discourse analytic perspective for some of the texts (Bormann et al., 2021). Texts were analyzed in accordance with the approach of the coding discourse analysis (Truschkat & Bormann, 2020). The analysis of data was conducted in both a concept-driven and a data-driven way (Schreier, 2014, 179); i.e. codes were applied that were developed both inductively (following the open and axial coding approach; Keller, 2011; Truschkat & Bormann, 2020) and deductively. The software MAXqda was used.



Table 1. Number of texts and further information on them over the period under consideration, by source	and further inforn	nation on them	over the period u	under considerati	ion, by source			
	03/2020	04/2020	05/2020	06/2020	07/2020	08/2020	09/2020	Total
Kultusministerkonfe-renz (Conference of the Ministers of Education and Cultural Affairs) format: exclusively press releases reporting recent situation assessments and resolutions; length: rarely more than 1 p.	7	4	Н	7	7	П	ſ.	17
Bundeselternrat (Federal Parents' Cauncil) format: exclusively press releases on own activities, positions including appeals and reminders addressed to political bodies; length: rarely more than 1 p.	2	m.	₩		1	1	2	∞
schulportal (German School Portal) format: mainly press releases including comments, best practice examples, information on survey results, practical and legal questions, few interviews mainly with scientists, some reprints of reports and essays from national daily and weekly newspapers; length: between 1 and 24p., on average 7 p.	9	∞	10	14	10	4	11	63
Total	10	15	12	16	12	5	18	88



4. Discourse evolution, the positions of actors, and indications of the use of research knowledge on social inequality: the results of an analysis of a public discourse

4.1. The storyline of the evolving discourse on education matters during the pandemic

The analysis of all the texts from the three sources shows a shift in the thematic focus of the discourse over time and taking place in three steps. In its first stage (March-April 2020), the focus relies on "coming to terms with the present" in that texts emphasize that there is no alternative to school closures in terms of contributing to the containment of the pandemic. Apart from this, texts deal with fundamental worries and concerns about mainly practical issues such as the lack of digital competence on the part of teachers and digital equipment offered by schools that affect students' learning opportunities.

Shortly after this, a turn towards feasibility takes place (May-July 2020). Many texts refer to examples of good practice in distance education, highlighting the resources available for digitalized distance education and how parents can best support home schooling. A few papers address social inequality as a challenge in distance education and draw attention to the fact that compensation for disadvantages is required. The emphasis on the need for a shift towards digitalized distance education is often addressed, while the need for faster cash outflow to schools enabling them to purchase digital equipment is stressed. However, there is also criticism of the belief that digital technologies can adequately overcome the social divide that still exists in education. There is also a focus on questions of law and jurisdiction (e.g., federalism issues, data protection, the legitimacy of performance evaluation in the absence of on-site education, the decision to return to normal operations). Furthermore, parents and students are given a hearing, supporting the turn towards more independent learning (parents) and the disappointment of missing school and their peers (students). This stage of the discourse can be labelled the phase of "encouraging pragmatic solutions and giving critical voices a hearing".

Finally, the third stage (August-September) of the discourse revolves around the "feasibility of continuing the measures against the background of a differentiated impact assessment". The relevant texts cover a broad range of topics. For example, they refer to justifications of the compulsory wearing of masks, how the pandemic is dealt with in other countries and findings from students and a teacher survey on their experiences in the previous months. One article reports on a study in which parents state that their children spent only half as much time studying as usual. In the final stage, although examples of good practice are still provided, more texts struck a critical note. Texts refer to, for example, the feasibility of the hygiene protocols in schools, especially in an anticipated potential second lockdown of facilities, the shortage of digital expertise on the part of teachers, confusion about the regulations in the 16 federal states, or the lack of concrete measures by the federal government to speed up the digitalization process.

4.2. The discursive positions of actors

When it comes to the positions of the three actors in the discourse, mere counting of the most frequently repeated nouns show clear differences between the participants in the discourse. Both the most frequently used terms and their order vary among actors. The five most common words in texts published on the *Schulportal* include "instruction", "Corona", "approaches", "school culture", and "learning", which can be cautiously interpreted as signaling creating innovative environments that maintain school functions despite the pandemic. The picture is different when it comes to the texts published by *Standing Conference of the Ministers of Education and Cultural Affairs*, where the five most common words are "Länder", "Corona", "students", "legal frameworks", and "resolution", which shows the functionally formal concern with the pandemic and its effects. Again, the picture changes with regard to the five most commonly used words in the texts of the *National Parents Council*, which are "upbringing", "students", "education", "trade union", and "teachers", which may indicate the council's concerns and efforts in addressing grievances together with strong partners.



This initial qualitative view of the three groups of texts seems to be solidified by a more detailed discourse-analytical examination. The texts launched by the *Schulportal* cover a vast range of topics (e.g., the changes in school life; the practices, responsibilities and duties of staff; the problems and challenges of distance learning; the role of parents as crucial facilitators of home schooling). Papers refer to digitalized distance learning benefits to enhance self-regulated learning as a crucial future skill and cover sceptical voices on furthering digitalization. Social inequality is addressed in that the reasons for its increase are briefly mentioned. In addition, teachers' concerns about the widening of learning gaps are reported, while considerations relating to the distribution of digital devices to disadvantaged students are outlined.

Texts from the Standing Conference of the Ministers of Education and Cultural Affairs indicate that this body is a prudent advocate for maintaining education as attentively and considerately for both students and staff as best as possible under pandemic conditions. The texts also underline that the return to regular operations will be accompanied by further digitalization to take advantage of the increase in COVID-19 measures. Furthermore, they provide information about the government's decisions and the results of consultations among individual countries. Social inequality issues are not addressed.

The picture is slightly different when it comes to the federal *National Parents' Council*, which takes on an admonitory role. The council's texts include demands, appeals and criticism of the measures taken by the government and the *Länder*, including references to confusing and contradictory policies as well as reminders of school board responsibilities. In particular, they remind the authorities not to rely on parents who are overburdened by homeschooling responsibilities for which they are neither prepared nor responsibilities they have chosen to assume. It is (only) in this context that social inequality is addressed.

4.3. Indications of the use of knowledge on social inequality in the context of the pandemic measures in education

It is particularly striking that in contrast to the scientific voices outlined at the beginning of this paper, social inequality in education is rarely addressed in the public discourse. Among the very few texts which explicitly and expressly refer to the social divide in education, there is one that stresses the interconnection of social disparities and the problems of enhanced digitalized distance education, while advocating targeted measures for the disadvantaged and explicitly referring to recent research knowledge (Hurrelmann & Dohmen, 2020). Another text was published as an open letter from educational researchers and practitioners to the Conference of Ministers of Education, with a strong appeal not to lose sight of educational equality during the pandemic (Kuhn, 2020). These two dedicated texts appeared as early as April 2020. Subsequently, there was only one further such clear thematization of the social divide in education. Looking through the lens of education history, in June 2020 Tenorth (2020) posits that school closures and home schooling highlight the privileges and disadvantages of the pre-modern era, because digitalized distance education cannot compensate for the loss of the teacher-pupil relationship. All of these three texts appeared on the Schulportal.

Of the few further texts that also relate to social inequality, some emphasize that pandemic measures should not exacerbate disparities, but without going into more detail about what social inequality actually means or how its increase could be avoided in the given situation. Other texts tend to suggest the implications of this issue for education: here, two rather distinct strands of discourse can then be seen. In the one strand of discourse, the family situation is discussed in conjunction with dealing with (digitalized) distance education at home. Texts in this strand address the fact that not all parents can support their children equally well because, for example, they are working from home while their children are studying or have too little time to support their child individually when they work at home. Some texts mention that more privileged parents work at home and can also use their working hours more flexibly to support their children. In this context, the fairness of grades in times of COVID-19 is also questioned. This strand of discourse also



mentions process or interaction quality when discussing the importance of personal contact and interactive work between teachers and students. The *other* strand of the discourse focuses more on the necessary digitalization of schools and the improvement of staff expertise in terms of digitalized distance learning. Texts point at the available digital learning resources, but also discuss legal issue in conjunction with email communication between teachers and their students.

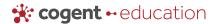
5. The two worlds of social inequality, their discursive order, and their potential implications for trust and change in educational institutions: summary and discussion of results

This paper aimed to shed light on how research knowledge on social inequality in education as one of the potential side-effects of the disruptively imposed, innovative pandemic measures is taken up in public discourses in the educational sector. For this purpose findings from the most recent research on social inequality in education in the context of the COVID-19 pandemic were first outlined. Secondly, a discourse analysis framed in terms of innovation theory was conducted on the basis of 88 texts that were published between March and September 2020 in three online sources in Germany to show how and by which actors research knowledge about the increase in social inequality is brought forward. The analysis showed a storyline (Keller, 2011, 54) with three subsequent stages ("coming to terms with the present"—"encouraging pragmatic solutions and giving critical voices a hearing"—"the feasibility of continuing the measures against the background of a differentiated impact assessment"). Furthermore, a comparison of the thematization of the potential side-effects in research with the analyzed public discourse indicates that the problem as warned about by many scholars turns out to be only a very minor topic in all the three stages of the evolving discourse and for at least two of the three sources. In addition, the analysis reveals that there seem to be two worlds of knowledge when it comes to social inequality in education.

5.1. Two worlds of social inequality

Given the minor consideration of the issue under investigation in the public discourse analyzed this study, the texts seem to tend to ignore sound research-based indications of the potential increase in social disparities in education as a result of the pandemic measures. Bluntly, we can state that two worlds of social inequality seem to exist: one in research and the other in the public professional discourse—which includes the relevant authoritative bodies in education. Whereas in the world of research the issue is a well-known, extensively recognized and covered issue based on empirical data, in the other world it seems to remain an underdeveloped topic of concern. And while in the one world this seems worth consideration in the determination of educational policies, in the other world—apart from the few conceivable perspectives of educational research (empirical, historical) on social inequality and pedagogical relations—the focus tends to be on the optimization of the technical possibilities of digitalized education.

In the evolving discourse, two rather loosely coupled strands of debate on how to deal with the pandemic measures in education become apparent. In one of these strands of discourse (the "soft strand"), pandemic-induced increased social disparities tend to be referred to as an issue that should be tackled by more intense relational work with students and parents. This complies with findings from a study examining how existing disparities are being addressed in the COVID-19 crisis, which found that "relational dynamics play a major role in compensating for education inequalities" (Frohn, 2021: 679). In the other strand of the discourse (the "technical strand"), expanded digitalization in education appears to be seen as a means to overcome social inequality in education. Following Ball's (2015) view on the interconnection of policies and discourses and Bacchi's (2000) take on discourses as marshalling political purposes, this latter strand of research is likely to be massively reinforced in the future, e.g., due to the EU's programs for creating a Digital Education Action Plan published by the European Commission (n.a.; Cone et al., 2021; Taglietti et al., 2021). Obviously, in times of school closure digitalized distance education is important to maintain education as best as possible. However, taking into account the concerns outlined by scholars on digitalization and the social divide in education,



this digitalization in itself (in spite of the intense effort needed for its implementation) is not a solution that alone can guarantee to overcome the social divide.

Similarly to the two strands of which the public discourse (soft strand on pedagogical relationships; technical strand on digitalization) consists, the two worlds of social inequality (research; public discourse) also seem to be only loosely coupled with each other. It appears as if research knowledge hardly plays a role in the public discourse on social inequality in education during the pandemic. As categorized by Weiß (1979), hardly any interaction or knowledge-driven use of research to highlight and solve this issue during the pandemic appears to occur in the two discursive strands. Instead, the discourse either tends to highlight the need for pedagogical relations, or to display an interest in the further digitalization of education, which is generally not explained by referring to research knowledge on social inequality. In the latter approach, the pandemic occurs as a useful critical juncture in turning the path towards the technisization of education.

5.2. The discursive order of the two worlds of social inequality

These interpretations are further substantiated if the innovation-theoretical heuristic (Hutter et al., 2016) mentioned above is applied. In terms of the semantics, i.e. the question of how meaning in innovative situations is discursively (re-)produced, it appears that the discourse analyzed here is, in general, about dealing with the unprecedented situation in the best possible way. However, although there are clear voices in research that warn of the severe side effects of the imposed measures, it seems that these concerns are largely ignored in favor of aspects of feasibility, legal certainty and the increase in digitalized distance education. Concerning the pragmatic dimension of the discourse, i.e. the question of which solutions are put forward, it becomes evident that the social divide in education during the pandemic is rarely addressed, despite sound and differentiated research anticipating this massive problem not only for individuals but also for society as a whole. This can be perceived as putting both health protection or digitalization as an innovative feature of schooling ahead of legitimate interests in reducing social inequality. When it comes to the grammar of the current situation represented in the discourse, i.e., the order of the discourse, it seems as if the concern about any potential (unintended) side effect is lost in competing voices putting forward different ways of dealing with the situation in education. Furthermore, although public discourse shows two strands in which different voices are given a hearing, in view of its limited scope and in particular its polyphony, the potential urgency of the side effect is not underlined—in spite of the significant body of research knowledge. According to the innovation-theoretical heuristic, the two worlds of social inequality in education underline the limited use of research knowledge in educational decision-making and accordingly call into question the otherwise established realization of evidence-based decision-making in education during the pandemic. Moreover, the two strands of the discourse draw attention to different approaches to the problem, instead of linking the opposites into a coherent fostering of educational innovation and change.

5.3. Implications for trust and educational change

How does research knowledge about social inequality in education matter in public discourse? In general, the public in Germany appreciates science and believes that it produces reliable knowledge which can positively influence society (Hendriks et al., 2016, 149). This is particularly true with regard to the perception of research knowledge during the pandemic: The representative annual German population survey of "science in dialogue" (Wissenschaftsbarometer, 2020) indicates a high level of public trust in research. About 60% of people predominantly or fully trust research and science. Although this is a lower level than at the beginning of the pandemic, trust is higher than in previous years. People who trust science report that they do so because of the rules and standards that apply in research and the expert status of the researchers (ibid.).

Following the results of the analysis of the public discourse, such high levels of trust in research do not appear to be accompanied by any discernible discursive use of research knowledge. Following Boswell (2021), this could be due to the fact that social sciences are more fragmented and contested and because policy decisions based on social sciences do not lead to the kind of clear-cut results that are known from health research. However, neglecting existing and widely discussed knowledge in the realm of



educational research on a potential increase in social inequality is particularly serious in educational policy and management, because it can lead to a credibility problem. Disregarding the potential infringement of such an essential quiding principle in education can represent a massive threat to trust in educational institutions for several reasons. Firstly, the very presence of social inequality is a challenge to trust (Green & Preston, 2001). If a worsening of the social divide occurs due to the pandemic measures in the educational system, it can be assumed that there will be more people with low trust in the performance of educational institutions, particularly in the group of those who feel that they have been "left behind". Secondly, those affected by the potential side effects of the pandemic measures are rarely addressed as knowledgeable agents who should have their say in the risks they have to bear. Moreover, the analysis indicates that they are hardly ever addressed as those whose legitimate claims should be protected by educational institutions. According to Lepsius (2017), any institution that is perceived not to fulfil its responsibilities and to violate its quiding principles may lose public trust. In the long term, however, this does not necessarily remain a matter of diminished trust on the part of individuals: social cohesion can also be challenged (Lancee, 2017). Thirdly, doubts about the integrity of an institutions and its efforts to fulfil its public duties may damage trust, too. It may seem that in the wake of the pandemic measures, the concern for the need to overcome the previously existing social inequality in education has been temporarily suspended for the sake of national health considerations, or alternatively that the crisis is being used as an opportunity to push ahead the digitalization agenda in education (Cone et al., 2021) at the cost of leaving the disadvantaged even further behind. This is a serious issue because studies show that individual experiences of fair treatment in education, particularly in the "impressionable years", can affect trust in institutions (Abdelzadeh & Lundberg, 2017). In addition, discourses are intended to affect the public perception of how institutions perform and thus also have an impact on the trust in these institutions (Kramer, 1999; Pizmony-Levy & Bjorklund, 2018). What is more, media research on trust shows that, among others, the transparent communication of (political) interests is crucial for trust in institutions (Bentele, 1994). If providing equal opportunities in education is seen to be (temporarily) sacrificed to digitalization in education, as partly suggested by the results of this discourse analysis, trust in the educational institutions which impose the respective measures may be damaged due to the side effects these measures cause in the long term.

Because changes and their side effects challenge trust and since trust fosters change—with both affecting trust in educational settings—in general (Niedlich et al., 2021) threats to trust should be taken seriously in educational management and policy. Instead of looking at them individually, both the strands revealed by the analysis of public discourse shown here should be interconnected as an educational response to the need for digitalization as revealed and accelerated by the pandemic. Fostering substantial digital educational innovations that leave no one behind and that acknowledge the task of the educational institutions to compensate for disadvantages—thus emphasizing their responsibility for differentiated instruction—would be a sustainable response to an increasingly digitalized educational future that can maintain or strengthen trust in institutions.

Research knowledge is not the only source, but an important one for describing and explaining problems, for designing interventions to solve them, and for evaluating interventions and decisions. At the same time, discourses are considered relevant arenas for explaining and legitimizing decisions (Bromme et al., 2016, 130–131). The results of the discourse analysis presented here may prompt the education-related actors considered here to draw more on existing research knowledge. Not only could this contribute to the perception that they care and wish to avoid further "collateral damage" that could have a negative impact on the society and education of the future (Saito, 2021; Stanistreet et al., 2020), it could also make sense for reasons of coherence, since a clear shift towards evidence-informed decision-making has in general been observed in education for some time now. Rather than neglecting well-founded concerns, a clear position should be taken by the educational actors on the scenarios that educational researchers draw up. This is particularly relevant in the light of the efforts which have now been continuing for many years to uncouple the performance of the educational system and the dependence of educational success from social origins.



5.4. Limitations and conclusions

Any study has its limitations. The limitations of this study that warrant attention refer to scope, methodological aspects and the issue of validity. Concerning the scope, it must be acknowledged that the discourse which was analyzed referred to Germany. In order to ascertain whether the picture shown here is also to be found in other countries, comparative studies would have to be carried out in the future. Methodologically, the short time frame of the data needs to be mentioned. The pandemic is still ongoing, and the issue of social inequality will probably only become more urgent after a more extended period of time. This means both that the concerns about an increase in the social divide in education could be substantiated, and that research knowledge may be subject to public discourse at a later stage of the pandemic. However, researchers have emphasized their concerns right from the beginning, stating that neglecting the issue could later become a fundamental societal problem in terms of trust in institutions, and a problem that would have been worth considering as early as possible. Basically this is not a new concern, of course, in that neglect of the long-term implications of abandoned responsibilities has already manifested itself in the debate on climate policy, for example. Furthermore, future studies are needed to validate the concerns relating to an increase of social inequality in education caused by the pandemic, and how this affects trust to education institutions. For this purpose, data from existing surveys such as the World Value Survey, which already measure public trust in various institutions, are useful. However, the scales used would need to be expanded to the extent that they can also be used to reliably determine trust in educational institutions. Concerning the validity of this study, two points should be emphasized. Firstly, by applying a discourse analytical view to an innovative situation in the educational system through the lens of trust, this study aimed to invite a different view on a current discourse in education (Smeyers, 2019, p. 629). However, although the theoretical and methodological approaches have been clarified and the interpretation thus made comprehensible, an interpretation can only ever remain an attempt to mediate between the object and the audience (ibid.), which implies that other readings of this very discourse are also possible (and probable). A systematic literature review of COVID-19 articles in education could explore what readings of the changed situation in educational policy and management prevail, and which narrations are used. Secondly, it should be borne in mind that any discourse study must select a manageable corpus for analysis. The texts included here cover a broad range of topics, different types of text and the voices of different actors. However, it is not likely that individuals (only) will use exactly these same three sources for orientation as they are analyzed in this study.

All in all, the results of this study provide significant insights into the implications of the two loosely coupled worlds of social inequality and trust in institutions. In view of the fact that the analyzed sources aim to represent and inform important stakeholders in education, and on the assumption that social realities are produced and reproduced by public discourses, the results of this study can be considered an indication of the need for improvements in both the communication and the perception of the research knowledge which is relevant to educational policy, and of its management in order to foster informed educational change.

Funding

No funds, grants, or other support were received.

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Citation information

Cite this article as: How does research knowledge about social inequality in education matter during the pandemic? Results of an analysis of a public discourse in Germany, Inka Bormann, *Cogent Education* (2021), 8: 1985687.

Notes

- It should not be concealed that, conversely, open schools can also contribute to exacerbating social inequalities for example, when children become infected at school and struggle with the long-term effects of COVID-19, such as fatigue and difficulty concentrating, which can also aggravate pre-existing inequalities.
- Pandemic-induced interventions on the part of the federal government in education is a unique situation in Germany because the sixteen federal states normally have the sovereignty to regulate cultural and educational matters.
- 3. The Standing Conference of the Ministers of Education and Cultural Affairs is the institution that coordinates the federal states' activities in matters of national importance and ensures the necessary degree of commonality in education because the federal states



- are responsible for education as a whole in a selfcoordinating manner.
- 4. Such inequalities underline that schools' fundamental principles and functions such as enabling participation and social integration based on qualifications as well as compensating for the disadvantages of vulnerable children are not fulfilled (Bonal & González, 2020, p. 651; Fend, 2009, p. 54).
- The National Academy of Sciences works independently on future-related societal topics and discusses its findings and opinions with the public and policymakers.
- 6. In its self-representation, the Schulportal states that its guiding principle is "better schools". The platform addresses all individuals who are interested in school and classroom development. Its aim is to help principals and teachers with their tasks and offer them inspiration by providing current information, contributions relating to schools and examples of successful practice.
- 7. The National Parents' Council is the umbrella organisation of the parents' councils of Germany's Länder. According to its self-description, it represents the interests of parents of about 8 million school children and supports the parents' councils of the Länder, coordinates their activities and maintains close contacts with federal ministries, institutions and associations to promote the council's educational mission.

Data, materials and/or code availability

On reasonable request, the list of articles analyzed in this study can be provided by the author.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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