Towards digital disconnection in Danish educational policy

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Abstract

When talking about the introduction of digital media into childhood and education, it has been common to talk about technology's positive potential for personalized learning, for increased access to knowledge, for the acquisition of important future competences, media literacy etc. These arguments are situated in a broader societal discourse about the potential of digital technologies as such. There is however a significant amount of evaluation reports that problematize the evidential basis of those claims. The emergence of the field of digital disconnection studies could offer novel approaches to understanding the relationship between education and technology. Our hypothesis is that digital disconnection literature could reveal reasons to argue for disconnecting from digital media in childhood and education. This could e.g., be mandated by findings in domains where warning flags have been raised based on perceptions of heightened health risks, cyberbullying, loneliness, exposure to online porn, distraction, manipulative features in online services etc. The aim of the article is to bring discussions from disconnection studies to the field of information- and communications technology (ICT) in education. It is a novel contribution that aims to relate the literature from digital disconnection studies to dominant literature on the purpose and value of ICT in education.

Keywords: *digital disconnection, education, policy, non-use*

The analysis is conducted through a qualitative document analysis of Danish strategic policy papers published since 1994. The documents are selected from the highest levels of political power, i.e., from governmental and ministerial agencies. The analysis focuses on arguments for the use of ICT in education, perceived problems as they have emerged from academic debates and, if possible, on how digital non-use has been conceptualized by policy makers (e.g., as resistance, as the product of anxiety, as caused by lack of funds etc.). Denmark is used as case because it ranks 1st out of the 27 EU Member States in the European Commission's 2021 edition of the Digital Economy and Society Index (DESI) and thereby offers insights into how the use of ICT in schools is portrayed as the prerequisite for the efficiency of learning, and again, to the extent that it is possible, how representations of non-use are used strategically in pro-digitization agendas. The primary aim of the article is to present an overview of the binary opposite of ICT in education i.e., scholarship on digital non-use, its' development of different typologies of digital non-use, represented by scholars like Moe & Madsen (2021), Hartmann (2021), Hesselberth (2018) among others. These provide explanations and schemata for different actors' varying motives for digital non-use of different technologies, and they introduce nuances to the understanding of digital non-use as a phenomenon. In the article we will introduce, and argue for, a synthesis of the different typologies that they present, which will then guide our discussion of institutional discourses on ICT in education. That approach could address current gaps in the scholarship in original and constructive ways. The analysis is carried out in two dimensions: an empirical and a methodological dimension. The empirical mapping of how digital use and non-use in other domains than education is portrayed, analyzed, and discussed in the light of how digital non-use is described by scholars like Hartmann, Hesselberth, Moe and Madsen

and others. On a methodological level we discuss the usefulness of existing digital non-use typologies on political discourse and how their application might introduce valuable insights into the institutional perception of digital non-use actors in education.

1. Introduction: a historical mission to increase digital use in Danish education

For decades the increased use of ICT in public schools in Denmark has played an important role in the Danish government's objective to strengthen academic standards in Danish public schools. The assumption that IT promotes increased learning and productivity has driven the digitization of not only Danish schools but the entire Danish public sector – with Denmark being ranked at the top of surveys on international efforts to digitize the public sector.

In Denmark the percentage of students who use the internet at public schools for learning purposes is particularly high. Data from PISA 2018 show that in Denmark, Norway, or Sweden, almost all computers available in schools are portable. Around 90% of students in Denmark, Lithuania or Slovenia go to schools where principals report that the school's Internet bandwidth or speed is sufficient, in contrast to less than 30% in Colombia e.g. While almost all teachers in Denmark use ICT as part of their teaching practices and 90% of them do so with high frequency, fewer than 20% of teachers in Japan, for comparison, report using ICT for class work frequently or always (Organisation for Economic Co-operation and Development, 2020). According to a 2019 presentation from the Danish National Agency for IT and Learning (Togo, 2019) 9 out of 10 schools rate their schools' WIFI and IT-equipment "highly", and 98% of children from lower socio-economic groups have access to at least one computer at home. Moreover, there are more than 1 million registered users to the schools' digital platforms. It is safe to conclude that in Denmark, as one of the most digitized nations in the EU, digital use is pervasive. For a long time, a key part of the government's objective has been to integrate the use of ICT into all subjects

and all daily lessons in Danish schools. In addition to infusing digital technologies into all curriculum, many municipalities have made efforts to provide all students with their own laptop, the so-called 1:1 plan (1 laptop for 1 student). Permanent connectivity, access to tablets, mobile devices and laptops, and subscription to cloud-based services have been the components in a national vision for an "always-on" education, as early as from 2003 (Regeringen, 2003).

Whether the interventions, and the ensuing rise in digital use in schools have had the desired effect of increased learning and fulfilling productivity goals is the subject of continuous evaluation and debate. Two of the most recent and largest evaluation reports commissioned by the "Steering group for IT in the public school"[1] (our translation), in 2014 and 2018, respectively, and both produced by the Rambøll thinktank, (Rambøll, 2014), (Rambøll, 2018) are inconclusive in their findings: In 2014 the conclusion was that the ICT use was "fairly frequent", in average of 40% of all classes during the school year. The three biggest pedagogical effects, according to the teachers who were asked, were in the domains of "teaching-differentiation", "motivation" and "authenticity" with a slight minority of teachers reporting "some positive effect". However, it must be noted that the number of caveats in the analysis undermine the validity of the results (the report doesn't measure on effects, but on *perceived* effects, respondents were not controlled for positive or negative (selection) bias, the survey was only a snapshot of the reality, and didn't track opinions over a longer period. Regarding productivity, the authors conclude that digital materials facilitate teacher's work. In 2018 a follow-up report was commissioned. It showed that ICT use had increased (49% of teachers now use ICT as a "natural" part of their teaching, and 70% of the teachers have used a learning platform. But teacher-confidence in the pedagogical value of ICT, had declined:

> "The results in the figure below indicate a negative development in the perceived pedagogical effects of the didactic digital teaching aids compared with 2014. This is seen by

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1 "Styregruppe for folkeskole-IT"

the fact that the perceived effects in 2018 are on average lower than they were in 2014".

Outside a Danish context, there are numerous findings that problematize the evidential basis of the investments in ICT. In 2016, Bulman and Fairlie (Bulman & Fairlie, 2016) note that the implications from these findings suggest that we should not expect large positive (or negative) impacts from ICT investments in schools or computers at home:

"Schools should not expect major improvements in grades, test scores and other measures of academic outcomes from investments in ICT or adopting Computer Assisted Instructions (CAI) in classrooms, though there might be exceptions such as some CAI interventions in developing countries."

In October 2017, the director of education for the Organisation for Economic Cooperation and Development (OECD), Mr. Schleicher, was quoted for saying: "In a nutshell today technology does some more damage than it actually does good" (Balslev, 2020).

Not only do political actors like Mr. Schleicher, economists like Bulman and Fairlie cast doubt on the value of using ICT in education, a varying range of academic positions outside the domain of media-research and educational ICT discuss risks connected to ICT in education. Digitization of education has raised concern about the risks associated to diminished learning outcomes (e.g. Schleicher above); for the ability to concentrate (Beland & Murphy, 2015); for mental health (Spitzer, 2018); how ICT use is related to the negative consequences of an increasingly sedentary lifestyle (Wacks & Weinstein, 2021); the decline in ability to perform deep reading and thinking (Wolf, 2019) and other factors that seem counterproductive to the goal of strengthening academic standards via ICT. Other studies have observed a lack of adoption or underutilization of technology (Cuban, 2003) or the less-than-successful adoption of behavioral technologies (Watters, 2021).

At a systemic level, critique has focused on the consequences of the privatization of education through the outsourcing of pedagogical functions to private companies, the large-scale commercialization of (public) education and conflicts between private and commercial agendas with the values and legislation behind public educational systems (Cone & Moos, 2022).

The debates, evaluations, and evidence provided by systematic reviews, warrant arguments for *not* using digital technologies, at least in some situations, for some actors, to achieve some purposes. In this paper we will examine to which extent digital non-use is recognized by Danish institutions that have influence on the use of ICT in education. To the extent that we can document that non-use is acknowledged, we document how it is described, conceptualized and/or rationalized – and how approaches to non-use should be operationalized, as described by policy actors. Our thesis is that institutions are biased towards digital use. Furthermore, it is our impression that non-use is interpreted from a *digital-first* normative position. Here we elaborate on Maren Hartmann's statement that: "the debates in the last decades in relation to non-use have developed into a different direction: a normative framework of connectivity" (Hartmann, 2021). Finally, we test our assumption that non-use, as described in policy papers, is perceived as a negative situation that needs to be fixed or repaired, or, to the extent that problems are acknowledged, whether more ICT is the answer. Symptomatic of this position is Mr. Schleicher's (Director for the Directorate of Education and Skills, OECD) statement that the problems mentioned, should not lead us to despair,

"We need to get this right in order to provide educators with learning environments that support 21st-century pedagogies and provide children with the 21st-century skills they need to succeed in tomorrow's world. Technology is the only way to dramatically expand access to knowledge." (OECD, 2015)

The OECD is not blind to problems related to the introduction of ICT in education, but this does not affect the basic premise that the use of ICT is necessary "to succeed in tomorrow's world".

But is this the most rational stance? As suggested, the occurrence of analyses that problematize the beneficial effects of ICT in education is high. Or should the rationale rather be that using ICT in education *less* could have benefits. (as opposed to doubling down on ICT use, based on assumptions and speculations about "a digital future"). On a theoretical level, it is our ambition to inject or augment the political analysis of educational ICT with the insights and knowledge from academic studies on digital disconnection. In the discussion section we investigate how (and where) insights from non-use literature could be added to educational policy discourse.

Methodological considerations

There are, of course, numerous ways to investigate influential actors' perception of the advantages of ICT in education. Recently, influential studies, have come from investigating the social imaginaries that ICT is energized by. In this regard, the anthropological work of Christo Sims (Sims, 2017) and Morgan G. Ames (Ames, 2019) provide important insights into motivations behind digital interventions in education, and how imaginaries succeed in aligning and coordinating actors with disparate interests. Other notable works in the field, comprise Neil Selwyn's analyses (Selwyn, 2010), (Selwyn & Facer, 2013), (Selwyn, 2011), the mapping of the policy networks behind "Global Education Inc" (Ball, 2012), and how the idea of Big Data is used to influence "learning, policy and practice" (Williamson, 2017).

The method used in this paper, is inspired by a pragmatic analysis. This is a position that emphasizes the intellectual activity of political actors that frame and fund education, at the same time downplaying the influence of scientific or scholarly knowledge in the field. It is the position that there are competing actors in manufacturing the "truth" about education, and that policy practitioners often have a larger say than academic experts – as is the argument put forward by Benoit Godin in "The Idea of Technological Innovation" (Godin, 2020), an analysis of how consultants in global institutions should be studied as dominant theoreticians of innovation.

This points to a deliberate and explicit omission. We do not engage with the corpus

of scholarship on the eventual pedagogical potentials and effects of ICT in education. This is not to minimize the importance of work done on digital literacy, digital learning platforms, the popularity of tech-labs, the use of robots, videogames, quizzes and the constructivist, social-constructivist, behaviorist, cognitivist or connectivist pedagogical schools of thought they derive their theories from (Selwyn, 2011)

Our method echoes work in "Evidence of a Potential" (Balslev, 2020), using document analysis: "'building a corpus of texts', and to analyze them 'in order to elicit meaning, gain understanding, and develop empirical knowledge' and to 'identify overarching themes', and finally to 'generate new research questions'"(Bowen, 2009). In this paper we have built two (small) corpuses: The first consists of five documents (policy papers), spanning five decades, to track change and development in the discourse about the *use* of digital technologies in education. They are documents published by policy institutions. We use Michael Nelson's definition of a policy paper (Nelson, 2017) as different from the standard research paper in numerous respects: they are addressed at a non-academic audience, such as a particular official, agency, or organization and they often focus on prescriptive questions. They are defined as beginning with a diagnosis of a particular issue or situation, and then they: "typically argue for a solution that will address that issue or situation. Often, policy papers are focused on being persuasive. The intention is to convince the target audience that your position is the correct one."

The second corpus consists of seven academic articles about *non-use* as a phenomenon, with a focus on deliberate, willful non-use. The aim is to investigate whether the relatively new field of digital non-use studies could inform the domain of educational policy. The first corpus being prescriptive, and the second analytical, our method is also a normative attempt to confront prescriptive attitudes with analytic knowledge in an area where the non-significance, and the risky side of digital interventions could benefit from being addressed. No connections have been made between these two bodies of thought before, and the experiment is to develop novel ways

of thinking about technology in education.

We have chosen to structure the paper in the following way:

- A documentation of the perception of the use (and non-use) of ICT in education from a policy point of view (section 2).

- A documentation of major themes in academic literature on digital disconnection (section 3)

- Analysis of the salience of digital disconnection theory to educational policy (section 4)

- Discussion and analysis (section 5)

2. The political perception of the benefits of ICT in education and their interpretation of digital disconnection

The amount of policy papers published in the domain of ICT and education in Denmark exceeds what is possible to count. For the sake of this article, we will restrict ourselves to five political reports on the digitization of education, one from each decade, going back to 1983 (Qvortrup, 1983), (Forskningsministeriet, 1994), (Regeringen, 2003), (Regeringen, 2011), (Snabe, 2021). Together they represent the higest rungs of institutional power in Denmark. They are published by the ministry of education, the ministry of research, by the government (twice), and by a government-formed "partnership" respectively. Many more reports have been published by other institutions of course, but for the sake of brevity we will stick to the five reports, to portray typical characteristics of how the value of IT in education is described. Despite the many years that separate them, they share some remarkably stable characteristics:

- Great optimism about the potential of digital technologies to motivate children and students.

- Optimism about the potentials of educational technology to enhance learning (mainly through IT's capability to differentiate learning).

- Tautologies such as: The future is digital therefore we should create digital classrooms.

- Ontological arguments about the increasingly digital aspects of reality and a belief that this trend will inevitably intensify in the future.

- A sense of urgency: it is important to digitize (more) to avoid losing terrain in the global competition

They stress the importance of equal and broad access to technology, in the form of access to the internet, to tablets or to laptop computers.
The potential benefits of digitization extend across all aspects of education: teaching, management, communication between the school and parents etc.

The one report that sticks out in this selection, is published in 1983 and the author Lars Qvortrup raises doubts about whether ICT ever will be useful in a small country like Denmark – for him the primary value of ICT is to overcome large distances. Otherwise, comments, advice, or speculation on potential benefits associated with digital non-use is not a concept that is visible in this corpus. It is not possible to detect instances of advice related to the benefits of using ICT to a *lesser* degree, *not* using ICT in some situations, *forbidding* the use, or *regulating* the use. It seems safe to say that strategic, future-oriented, and speculative institutional reports on the potentials of ICT in education are heavily skewed towards a positive perception of ICT in education. *The more the better.*
In the collection of governmental strategies, references to digital literacy or media literacy are mentioned only in the latest report (Regeringen, 2021). It is described that it is important to equip our children with competences to deal "constructively and critically with IT". What this means is unclear, but could allude to public discussions about fake news, hackers, phishing e.g. But these risks are not mentioned directly (as is done in Digcomp 2.0. to name one example

(Vuorikari et al., 2022)), and non-use is not present as a distinct competence to deal constructively and critically with IT. This again warrants the question: could digital disconnection studies inform or develop the concept of "critical competences"?

Digital non-use

When rare instances of digital non-use (or synonyms thereof) are mentioned, it is mostly in the context of a "digital divide"-analytical lens where digital non-use is understood as the result of structural problems caused by less-than-optimal infrastructure, and lack of funding thereof. This manifests itself in lack of access to hardware, software and/ or internet. Digital non-use is essentially described as a negative problem to be amended. Moreover, teachers' unwillingness to adopt ICT (caused by their insecurity about putting new technological teaching methods to use) is occasionally mentioned as a factor that is problematic, as it can cut children and youngsters off from an increasingly global world and a future, where ICT plays a crucial role. Other examples of why digital non-use is perceived as problematic, is asymmetry of IT-use. For example, when older students use ICT more than their younger counterparts e.g. Other perceived problems are teachers' lack of knowledge and their insecurity which is said to result in the less-than-optimal "harvesting" of the potentials of ICT. Indicative of this problem according to the government, Regeringen (2011), is that only 20% of the teachers claim they understand how different programs can supplement each other. A lack of teaching in digital literacy and "understanding technology" (teknologiforståelse) is another perceived problem (Snabe, 2021). In one case, teachers' resistance against ICT is described:

> "There is a great deal of resistance among some teachers to getting started, and it is a practical problem that there is such a marked difference in the teachers' competence in the field, a difference that many times exceeds the students' different competences."

Sometimes 'cultural barriers' are mentioned as a reason for problematic non-use. This is the case when e.g., teachers and leaders assess that there are significant cultural barriers to an increased systematic use of digital tools in teaching. And it is claimed that:

> "the cultural barriers are linked to the teachers' insecurity towards new digital tools, shyness in relation to publishing and sharing teaching materials and – courses and not least habits – (sic) the teachers prepare and carry out the teaching as they usually do." (Deloitte, 2014)

This is a rare example as reasons for teacher resistance are seldomly given. In the 2018-Rambøll mentioned before, a possible explanation is a "perceived lack of pedagogical effects" among teachers, i.e., they don't think technology contributes to pedagogic goals. The perceived pedagogical effects in 2018 are on average lower than they were in 2014. And as Rambøll concludes: the negative development is significant for three of the four effects experienced (not for student-to-student learning). In the same document, a possible (slightly patronizing) explanation offered is that teachers have been negatively influenced by a national debate in the media: "at the time of the study, there was a general debate about whether digital resources have positive effects."

Since 1983 concerns have been relatively constant, but at the same time ICT adoption has become quasi-total, as mentioned in the introduction. Or in other words: there seems to be no adequate relationship between distribution of ICT in education, and a political unease about the lack of distribution, tempo of adoption, and preparedness for the future. Concerns are focused on risks associated with some actors' digital non-use, instead of the project itself, and emphasis is continuously on introducing ICT to the segments of the population that are digitally underserved. One example of this effort (outside our corpus) is a report from 2017, where the association of municipalities (Kommunernes Landsforening (KL)), argue for the potential benefits of introducing ICT earlier in life to preschoolers. Some positive effects quoted are the social skills acquired when children must wait for their turn to use the device, and that children learn from seeing the other children's' competences. (KL/ Implement, 2017)

To sum up, Danish policy in this domain seems to be characterized by a unidirectional drive towards more use. And non-use is a problem to be overcome – through investments and through persuading teachers to learn or to appreciate the potentials of IT in education.

3. Positive disconnection in academic non-use literature

Recent scholarship on what we have called "digital non-use", uses a variety of article-keywords that help us find literature and understanding the phenomenon better. As Christina Ghita expresses it, there is a "diversity of concepts regarding the volitional non-use of digital devices, services and media" (Ghita, 2022). Not using digital technology can be part of a "digital detox" in reference to the term "detoxification" used in the treatment of drug addicts, part of a "digital diet" in reference to concerns related to health and eating habits, or as part of "digital minimalism" in reference to architecture or interior design – for the sake of decluttered spaces that create peace of mind in the dwelling space. Other keywords often used are "disconnectivity", "media refusal", "right to disconnect", "communicative freedom", or "digital disconnection", "unplugging" – among others.

We mention this, to point to the diversity of approaches to and the domains of non-use, with differing foci on rights; on critique of technology; on organizational practices in corporations etc. The diversity is also reflected by the diversity of different academic positions that deal with non-use: communication studies, media studies, sociology, culture studies, physical and mental health-studies etc. As it was the case in our sampling of policy papers, we don't offer a complete overview of the literature. What we do, however, is to identify overarching themes from the literature, and convey central concerns from a sample. The aim is to use frameworks, terminology, and thematic concerns to fill the gap in digital policy in education, as discussed in the previous chapter. Based on extensive reading, we have sampled articles that share an intention to advance digital disconnection studies as such, focusing on digital disconnection at a general level – as opposed to empirical studies of specific non-use cases.

From our review of non-use literature, we have selected 6 articles as the basis for mapping the major themes in non-use (Hartmann, 2021), (Hesselberth, 2018), (Kaun, 2021), (Miyake, 2019), (Moe & Madsen, 2021), (Treré et al., 2020). We will adopt Moe and Madsen's "Five positions on digital disconnection" (Moe & Madsen, 2021, 7) to structure our presentation. The five positions are: Physical and mental health followed by productivity, existential perspectives, freedom perspectives and finally with a focus on sustainability. The framework put forth by Moe and Madsen covers the most ground and captures the diversity of digital disconnection studies most succinctly in our view.

Physical and mental health
In recent years there has been a surge in academic interest in the perceived health benefits related to digital disconnection. One expression of this renewed health focused interest in the analogue, is the phenomenon of "digital detoxing". Digital detox has been picked up by the tourism and wellness industry, offering "unplugged" products, silent retreats, WIFI-free zones in resorts and hotels etc. Urs Stäheli and Louise Stoltenberg point out that (Stäheli & Stoltenberg, 2022), "this touristic interest in digital disconnection is embedded within a wider discourse that problematizes the effects of permanent connectivity." Permanent connectivity is reported as a contributing factor to stress, burnout, and the opposite – digital detoxing – recharges the batteries, connects the individual with itself, shepherding the body back to a healthier, more natural state. Miyake & Kuntsman (Miyake, 2019), also observe a discourse on the impact of our hyperconnected society "on emotional, psychological, physical, mental and spiritual health" (on a continuum of motivations for disengagement that comprise concerns about surveillance, environmental concerns etc.). In "Disconnect to Reconnect", Theodora Sutton (2017) analyses how technology usage is described in terms of food metaphors. She describes how Danah Boyd equates psychological cravings in the attention economy as the "equivalent of obesity", and quotes Daniel Sieberg who advises us

to design our media habits along the lines of healthy food habits using "good foods and mealtimes". Within the same metaphor, Maren Hartmann (2021) describes how she participated in a workshop for a "digital diet" at her employers' workplace. The workshop was part of a health awareness program offered to all employees. The anecdote serves as an illustration of Hartmann's exploration of how corporations introduce digital non-use measures for the sake of their employees' health and a healthy workplace in general. All these examples, according to Hartmann, align with Karppi (et al.) thesis that the needs and desires to disconnect, detox, and log out have been "turned into commodities and found their expressions in detox camps, self-help books, and "offline" branded apparel". In line with this, Moe and Madsen's article "Understanding digital disconnection beyond media studies" (2021) casts light on different actors in this field including health entrepreneurs like Tanya Gooding, who advocate for "Digital Detox", for the sake of mental health.

Productivity

Moe and Madsen identify self-help literature as a primary locus for reflection on the benefits of non-use for the sake of productivity. Outside academia, self-control has emerged as an important theme in this genre of literature, and in best-selling books like "Deep Work" and "Digital Minimalism" e.g. (both written by Cal Newport) (as quoted in Moe & Madsen) advice is given on how to use time-management and productivity tools to achieve ideals of "deep work". In this digital nonacademic literature *deep work* is defined as "Professional activities performed in a state of distraction-free concentration that push your cognitive capabilities to their limit. These efforts create new value, improve your skill, and are hard to replicate". An enemy of deep work are all the distracting elements online and social media a key distraction machine. Countertactics can be the decluttering or the disconnection of digital media. Kuntsman's and Miyake's academic work on "life-coaching" services in self-help literature and off-line (Kuntsman & Miyake, 2019), observes the technological offerings to enhance productivity: "there is now a plenitude of apps for everyday management

of technology. Specific settings and timers enable users to control, regulate, manage and monitor their screen time and information overload". In her article, Hartmann also investigates productivity benefits of digital non-use and identifies several corporate manifestations of the productivity endeavor. She describes how private sector companies ask their employees not to use email at certain times as a common example of corporate non-use. Examples include CitiGroup or HSBC, both of which have introduced trials of "Zoom-free Fridays" in the spring of 2021, to alleviate "burnout during the pandemic." Another example of corporate non-use that Hartmann refers to is the "workfulness" concept from Norwegian Telenor. It consists of a series of tips to avoid stress:

> "*Disable pop-up windows and push notifications on the mobile phone and computer; Have technology-free meetings; Introduce muted phones as a standard at the office; […] Define clear time frames and expectations at the workplace for communication via email, text messages, and phone calls; Introduce focus time, adapted to the personal energy curve […]*".

Workfulness is about making employees aware of their technology use and reducing it in favor of creativity and productivity.

Systematic guidelines in this respect are not new: they were discussed more widely at the turn of the 21st century and became more common from around 2013. For example, bans on emailing at certain times have had the function of reducing stress caused by too much work outside official working hours. In 2014, Daimler implemented the "Work on Holiday" initiative, which aimed to solve the problem that employees were dreading emails that were waiting for them in the inbox once the holiday was over, i.e., not being able to fully relax on holiday. It introduced the technological solution of deleting emails sent to people on holiday. In Hartman's conversation with Volkswagen, similar initiatives were pointed out, as part of a larger strategy to be an "excellent employer", by creating good conditions for maternity leave, well-being, and thus raising awareness of methods to reduce stress – including local agreements on non-use conditions with

one's immediate boss and employees. In the same vein, Carina Guyard and Anne Kaun (Guyard & Kaun, 2018) argue that digital disconnection – although it is an essentially negative act, has positive effects that can help us "make sense of choices that contribute to both the sustenance and the dissolution of social relationships while being based on ideas of self-optimization and maximization of productivity and efficiency." Kuntsman and Miyake point out, that the technological means to reduce digitality are in fact "tools of disciplining a productively laboring subject, one that manages their time effectively, works without distraction and rests well in order to return to an even higher productivity – all with the help of the latest digital solution." So, in the non-use literature and in private sector companies a productivity loss has been identified in relation to media distractions and the benefit of disconnection is said to strengthen the ability to concentrate and access to "deep work"-aptitudes.

Digital disconnection as existential value
Where digital non-use for the sake of productivity aligns well with the demands of the modern workplace and its capitalistic logics, the existential position emphasizes individual freedom that transcends instrumental values. The existential position wants to carve out *rights*: "Opting and missing out here becomes a necessary life-principle for resisting the attention economy that put it's tempting spells on us through the lure of the small screen and Facebook's iconic red push notifications" (Moe & Madsen, 2021). Moe and Madsen describe how existential counter-movements enroll the Greek stoics and forge acronyms like "JOMO" (Joy of Missing Out).
Hartmann points to professor of sociology, Urs Stäheli, as a representative of this position. He argues for the right to de-network, disconnect, and to unfollow (Stäheli, n.d.). Urs Stäheli wants to help us gain a nuanced understanding of when "too much" networking activity is taking place, and where demands to be online are potentially unjustified. Urs Stäheli suggests that individuals should exercise their right to "misbehave", to "miss" the right moment, not to be in the right place at the right time. We must learn to respond, "not fast enough", or respond "too early". The intention is not to step completely

out of the digital media environment, but to fall out of rhythm at certain times or in relation to certain tasks. For Stäheli, the point of these exercises is to gain understanding of how fierce the demands to always be online have become; to make us aware of how we as individuals might be losing existential rights to refrain from digital communication.
Maren Hartmann points out that the choice not to communicate – or rather, not to use media, at least temporarily – is a choice that in the past has been granted to subjects in any liberal democracy. Hartmann writes that

> *"Connectivity is framed as a necessity, a precondition for participation in society. It therefore is in the process of becoming a right—but it is also turning into an obligation. At the same time, this question of choice is in the process of increasingly turning into a question of power(lessness)".*

Wanting to protest this situation is described by Natalé and Trére as kind of "disconnective escapism connected to the obsession for rediscovering and experiencing authenticity" (Treré et al., 2020)

Digital disconnection as freedom
This position is aligned with the above-mentioned category and is the most political of the five categories. It has to do with the individual being free to control its attention. Moe and Madsen quote James Williams: "The liberation of human attention may be the defining moral and political struggle of our time (2018)." The success or failure of freeing our attention from digital distractions is a prerequisite for all other struggles in contemporary society is Williams' sweeping postulate. From this position non-use is described in more activist terms: media resistance or media refusal. Media refusal is defined as

> *"a performative mode of resistance, which must be understood within the context of a neoliberal consumer culture, in which subjects are empowered to act through consumption choices—or in this case non-consumption choices—and through the public display of those choices." (Portwood-Stacer, 2012)*

as referenced in Pepita Hesselberth's article. For Natale and Tréré this means that the term "digital disconnection" should be understood as a critique of digital capitalism. Referencing Karppi (Karppi, 2018), they equate "active non-participation, and especially deliberate departure" to "resistance and refusal – akin to Facebook suicide as a form of protest.

Digital disconnection as sustainability

From this fifth and last position, digital disconnection is connected to positive action for climate and the environment. Moe and Madsen shed light on the emerging literature concerned with the environmental problems caused by our use of digital technology e.g., the environmental problems with smartphone production, use and disposal (see the "Discussion"-part for more on this topic). Hesselberth also briefly touches upon the prototypical hipster's desire for more sustainable forms (simple) of living, through disconnection. Maren Hartmann mentions sustainability in a corporate sense but doesn't include environmental sustainability in her analysis.

4. Relating digital disconnection studies to educational policy

Are digital disconnection studies relevant to education? In the following we will gauge whether it is relevant to include the insights from non-use studies to expand, nuance and enrich mainstream theory about digital technology in education – as expressed in policy papers. To repeat central points from the former sections: policy perceptions of the value of ICT in education (in Denmark) are remarkably constant in their drive to increase levels of digitization. To the extent that non-use is acknowledged, it is interpreted from predominantly a "digital divide" position, i.e., cast as a negative phenomenon.

In the preceding section we described how volitional non-use is motivated by goals to ameliorate mental and physical health, to increase productivity, to support notions of existential freedom and freedom, and to mitigate problems associated with the climate impact of digital technology. At a first glance, those concerns do not clash with educational interests. Healthy, productive

children, who are free to exert existential values, concerned with their ecological future are not in contradiction with the purpose of education. There is no immediate hindrance to develop a framework for local and temporary disconnectivity and non-use in Danish schools. One could argue that disconnectivity and non-use ought to be regarded as a valid strategic parameter in the effort to design and develop future classrooms in accordance with the purpose of the Danish public school system, as explicitly stated in the Danish law.

The purpose clause of the Danish public school is formulated as follows (our translation):

§ 1. The primary school, in collaboration with the parents, must provide the students with knowledge and skills that: prepare them for further education and make them want to learn more, make them familiar with Danish culture and history, give them an understanding of other countries and cultures, contribute to their understanding for human interaction with nature and promotes the individual student›s versatile development.

§ 2. The primary school must develop working methods and create a framework for experience, immersion, and desire for action, so that the students develop cognition and imagination and gain confidence in their own opportunities and background for taking a stand and acting.

§ 3. The primary school must prepare the students for participation, co-responsibility, rights, and duties in a society with freedom and democracy. The work of the school must therefore be characterized by intellectual freedom, equality, and democracy.

The purpose clause does not mention ICT, but ICT can of course be instrumental in making children want to learn more, to make them familiar with Danish culture and history, give them an understanding of other countries and cultures, contribute to their understanding for human interaction with nature – on the other hand, digital disconnection could support

the same goals, and in some instances maybe even strengthen them.

With the purpose-clause in mind, digital disconnectivity-discussions could inspire reflection on the following points, emphasized words relate to the purpose clause:

- Mental health: Restricting the use of ICT to the extent it does not deteriorate mental and physical health. Disconnecting from ICT if it affects sleep, social well-being, peer pressure etc. especially if these impact on *desires to learn more*.

- Productivity: Considering the productive aspects of analogue reading, writing, group work – a *versatile* education should support online and offline methods of learning.

- Existential values: Considering supporting the right to opt out as an expression of intellectual freedom or as an expression of "taking *a stand and acting*".

- Freedom: Supporting parents' or childrens' rights to disconnect for political purposes, especially if these support *intellectual freedom, equality, and democracy*.

- Sustainability: Considering the environmental impacts of always on, 1:1 models.

5. Discussion & Analysis

In the former section we concluded that disconnective approaches to education are indeed relevant to education. But how would non-use fit into a) the legal framework for Danish public schools or more pertinently into the Danish association of municipalities (Kommunernes Landsforening) and their strategies? They are two of the central documents in Danish policy; they define and direct educational actors nationally – the first setting up the framework for education, the second proposing concrete actions.

Are there obstacles to integrating digital non-use into current political practice? Are there any reasons why non-use concerns shouldn't be included in current policy?

There is no immediate hindrance to develop a framework for local and temporary disconnectivity and digital non-use in Danish schools. One could argue that they could be seen as an important strategic parameter in the effort to design and develop future classrooms in accordance with the purpose as explicitly stated in the Danish law.

Paradoxically, as documented in section 3, some scholars point to the immersive digitization of society and immersive IT as posing a risk to important faculties such as cognition; imagination; intellectual freedom; equality; democracy – some of the exact phenomena and faculties that are the actual purpose of the Danish school. The question is then, shouldn't this be addressed by the actors that determine the strategic path forward for Danish schools pointing to ever more digital use? This is not the case in recent strategies where Danish schools have been guided by 'the joint municipal digitization strategy' published by KL (*Lokal Og Digital – Et Sammenhængende Danmark – Fælleskommunal Digitaliseringsstrategi 2016-2020*, 2016) – according to which the municipalities in the day-care and school sectors should:

- Work to ensure that children's digital education and learning begins early by expanding the use of digital tools in day care

- Ensure that pupils, teachers, educators, and parents experience easy and coherent communication and access to digitally supported learning by implementing the BPI for primary schools

- Provide greater coherence for citizens across the 0-18 age range by extending the BPI to the day-care sector and other relevant areas of the child and youth field

- Ensure that technical hassle does not become a barrier to the digital everyday life of primary schools by continuously adapting schools' IT infrastructure (e.g., wireless networks and internet connectivity) to growing needs

- Maximize pupils' learning and facilitate teachers' and educators' preparation and follow-up by developing and sharing knowledge and experience (best practice) on digital learning

- Enable more flexible use of digital learning materials at attractive prices by developing new business and procurement models for digital learning materials in dialogue with the market

- Ensure cross-use of digital solutions and competences by focusing on cooperation between public libraries and primary schools

It is not clear to us which interests have motivated this strategy. In background documents to the strategy, we find claims such as: "Digital developments mean that schools have more opportunities than before to use digital learning tools, which helps to improve the quality of teaching". And: "One of the most important prerequisites for the success of the digital transformation of primary schools is that wireless networks, internet capacity and other digital infrastructure work well in all schools." Where is the evidence behind such claims and how is the strategy aligned with the purpose as described in the law, one might ask?

In relation to this it can be relevant to point to the coincidence between the economic size of the educational tech sector and its aim to bridge the digital divide. Lucas Cone et al observe that the rise of markets for teaching and learning has turned education into one of the fastest growing markets worldwide: "with recent prophecies suggesting a staggering $10 Trillion education industry in 2030 [...] Investments in European education start-ups grew from 140 million USD in 2014 to 2.5 billion USD in 2021".This tendency has also impacted the Nordic countries and it has been enhanced by Covid19, "Boosted by the Covid-19 pandemic, institutions, municipalities, and governments across the Nordic region have invested heavily in commercially driven infrastructures and services promising to create more diverse, modern, coherent, and data-based educational systems"(Cone & Moos, 2022).

The Edtech sector has a clear for-profit motive that potentially collides with the Danish schools' purposes as described in the law and risk eclipsing potential benefits associated with digital disconnection. This is not mentioned in the political papers either.

Domain specific characteristics

Another question that has emerged, is whether education – as a domain – is particularly immune to digital non-use findings or is less concerned with potential values of digital non-use - in the form of rejecting new technologies, reviving old technologies, disconnecting some aspects of digitization – than other domains, e.g. medicine, engineering, law etc. It could be interesting to carry out a cross-domain comparative analysis of the status of non-use. This might shed light on whether education as a domain is uniquely constituted, especially controlled by digital actors, or described in policy papers by certain professions in a manner that excludes potential benefits of digital non-use.

Corroboration with other health concerns

From the characterization in section 3, it is tempting to draw the conclusion that digital non-use is invented by populist authors, wellness professionals and consultants – but the health concerns related to use of digital devices is backed by health organizations like the World Health Organization (WHO), among others. They recommend limiting the use of screens for children under the age of five. The American Academy of Child and Adolescent Psychiatry (Hale et al., 2018) recommends turning off all screens during family meals and outings; turning off screens and removing them from bedrooms 30-60 minutes before bedtime; recommends avoiding screens as pacifiers, babysitters, or to stop tantrums. In March 2022 Jama Psychiatry (Eirich et al., 2022) published a meta-study about the effects of children's screen time and the conclusion across studies is a link between increased screen time in children under 12 and a range of mental health problems, including aggression, attention deficit disorder, depressive symptoms, and anxiety. There is also growing evidence that excessive screen time is contributing to rising rates of myopia in children (Wong et al., 2021).

Digital Disconnection vs surveillance capitalism

In the article "Big other - Surveillance Capitalism and the Prospects of an Information Civilization" (Zuboff, 2015) and "The Age of Surveillance Capitalism" (Zuboff, 2019)

Shoshana Zuboff identifies at least one defining factor in the difference between 'old' media formats formerly used in schools and the 'new' media formats. It is the defining business model – and she calls it surveillance capitalism. This is what bids digital technology into action. Surveillance capitalism is according to Zuboff a power so strong that it interferes with the self-other balance in profound psychological ways. Because of this, Zuboff claims, we need sanctuaries of disconnected time and space: "the crucial developmental challenges of the self-other balance cannot be negotiated adequately without the sanctity of 'disconnected' time and space for the ripening of inward awareness and the possibility of reflexity: reflexion on and by oneself" (Zuboff, 2019, 479). Zuboff writes that even in ancient societies where tyranny prevailed there was a right to sanctuary as an exit from the totalizing power. And the premise of surveillance capitalism is thus understood as an encompassing totalizing power ('instrumentarian power' in her words) threatening to destroy humanity. Digital disconnection as existential value is thus not just about a mere feeling of loss of meaning that digital non-use can mend by connecting to a more authentic self. Seen through the lens of Zuboff it is also about resistance against a power that fundamentally wants to strip us from our humanity.

Digital Disconnection vs sustainability
The impact of digital technology use on sustainability and climate issues seems to be gaining momentum: Streaming, online gaming and social media and other internet services account for about 9% of the world's electricity consumption, equivalent to about 2% of man-made CO2 emissions. This is as much as the fuel consumed by all the world's air traffic. Watching two hours of Netflix every day of the year would emit the equivalent of flying 384 kilometers in an airplane, eating 6 kilograms of beef, or driving just under 1,000 kilometers in a new car – all according to Torsten Hasforth, Senior Economist, in the Danish organization, Danish Energy (Hasforth, 2018). In this sense, non-use could contribute to positive climate action. So, if the use of digital technology contributes to the climate crisis, then the benefit of digital non-use is contribution to positive climate actions. This aligns with Neil Selwyn's claim that:

"The next 30 years will be a period when we will be forced to confront the imperative to establish sustainability and ecological responsibility as central elements of educational provision and practice. One key aspect of this will be facing up fully to the ways in which digital technologies have been excessively consumed and discarded over the past 30 years in the name of educational 'innovation'."

(Selwyn, 2021)

6. Conclusion

In this paper we have attempted to apply findings in recent digital non-use research to the field of digital education. We made the argument that the political project to increase digital use has been remarkably stable for over 50 years. We also made the argument that discussions about the problems that screens, ICT, social media etc. have created for children and students are still relatively absent from Danish policy documents. Despite a lack of evidence of positive outcomes of ICT, the political project is still to increase use, and to bridge the digital divide, i.e., supplying the" not-haves" or the "not-want-to" with technology so that they can be included in the "digital society". This means that digital non-use in policy papers is either described as something that should be fixed/bridged – or that it is simply not described at all. In our chapter on digital disconnection studies, it became clear that different actors pursue (voluntary) disconnection, motivated by positive values: productivity, environmental concerns etc. We then reflected on the potential value of digital non-use for education and made the point that the themes raised by non-use researchers are salient to education.

In the discussion, we asked whether there were any systemic impediments to applying digital non-use principles in education, increased our scope, and it seemed that in many instances non-use could in fact support the intentions of Danish legislation. Finally, we made perspectives to current debates about surveillance capitalism, sustainability and we wondered whether policy papers about education as a domain are especially resistant to reflection on the potential value of digital disconnection, non-use, digital minimalism, digital detoxing, unplugging etc.

Methodological conclusions

First, our adoption of Moe and Madsen's framework has been helpful in raising important points. Ideally it would need to be refined and expanded to address the realities of education. It is obvious that digital disconnection for the sake of increased productivity and a better mental health deserve to be analyzed in educational settings. The fuzzy area that Moe and Madsen spotlight, is how the freedom to be analogue, and political resistance to Silicon Valley monopolies should be formalized in educational frameworks.

Secondly, as described in the section about choice of methodology, we hopefully made it clear that document analysis as a method of hermeneutic inquiry can say something about recurrent themes, points of view, attitudes in *documents*. It is a method that leaves the object of study unaffected by the research process. Documents are unobtrusive and non-reactive, and they are stable – the investigator's presence does not alter what is being studied. (Bowen, 2009). But as a method it says very little about messy practices in local contexts. Our method describes political institutions and their intentions as uniform, unidirectional, nearly activistic. This might give the impression that digital non-use in practice is non-existent. But the fact that political institutions advocate for a situation, does not cause reality to be so, and studies like ours should be corroborated by ethnographic observation: just because political institutions provide the means to use digital technology, doesn't mean that technology is being used – it might just as well gather dust in cupboards. Just like people at digital detox camps might be using devices secretly, hidden in a cupboard at the ashram… One methodological weakness is the size of our corpus 1. We found less digital non-use interpretation than expected. Experience tells us that the historical account could be strengthened by enlarging the corpus. It would provide a wider array of policy-interpretations to explain why some actors deselect technology – and some of them would probably acknowledge the positive aspects of non-use and would perhaps nuance the picture of authors who blame the lack of progress and the lack of evidence on teachers who resist technology or similar reductionist or pejorative discussions.

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