



Digital Bildung: Norwegian Students' Understanding of Teaching and Learning with ICT

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Abstract

The aim of this paper is to elaborate on how students perceive their own learning and democratic development in relation to their digital interactions and competencies. This paper seeks an understanding of students' perspectives on digital Bildung. We investigate these issues by comparing different notions of Bildung perspectives among young students from four Norwegian schools. The study consists of interviews with 12 focus groups of 3 students in each. The results indicate that the students experienced unwanted interference by the teachers during the school day, and that they felt a lack of democratic involvement in social conflicts, digital usages and other daily forms of decision-making. Further, the interviews indicated that students perceived their teachers as biased when it came to helping students in situations of bullying or other relationship challenges. In investigating digital interactions and competencies among Norwegian students, we identified a visible gap in the notion of Bildung and identity development between the students and the teachers. This finding suggests a need to further discuss the role of students in creating a better school system based on democratic ideals.

Keywords

Digital Bildung, Bildung perspectives, democratic ideal, digital learning, identity

Introduction

The knowledge interest of this study lies between the curriculum and didactics. The curriculum is about the selection and organization of the educational content to be transmitted, while didactics focuses on how to teach the content. Didactics is guided by scientific and philosophical principles of learning and memory. Consequently, the curriculum and didactics meet in questions of when and how to of content in relation to the abilities, experiences and interests of the learner (Lundgren, 2015). This encounter is in many ways visible in the educational notion of Bildung, which deals with how education can help prepare students

for a responsible public life within the context of a democratic state (Willbergh, 2015) and provide students with basic skills for successful identity work from childhood to adolescence and into adulthood. In this article, we do not elaborate on the notion of *Bildung* as a general concept; instead, we elaborate on a more limited analytical concept called digital *Bildung*. Digital *Bildung* refers to an overall intercultural competence addressing more than just, for instance, online etiquette, and aiming towards the development of independent, critical and reflected individuals in a digital context (Gran, 2018). We use the concept of digital *Bildung* to illuminate how students make their use of information and communication technology (ICT) intelligible within schools related to their own *Bildung* processes. Our contribution joins an ongoing discussion on topics like the teachers' digital professional development (Kelentric, Helland, & Arstrop, 2017), the use of technology learning for increasing student engagement, and the matter of defining digital literacy (Bergdahl, Fors, Hernwall, & Knutsson, 2018; Buckingham, 2006; Langset, Jakobsen, & Haugsbakken, 2018). Therefore, this paper is relevant to the ongoing discussion on digital competence, digital *Bildung*, digital learning, and learning across contexts in the knowledge society (Erstad, 2015; Krumsvik, Berrum, & Jones, 2018; Krumsvik, Egelanddal, Sarastuen, Jones, & Eikeland, 2013; Lillejord, Børte, Nesje, & Ruud, 2018).

Relevance of the study

This study is related to discussions on the differences between the policy definitions of digital literacy and actual teaching practices (Ryberg & Georgsen, 2010). Ryberg and Georgsen (2010) argued for the necessity of a working definition of digital literacy in order to obtain a better understanding of what it might look like in practices. Similarly, we highlight a need to further understanding of digital *Bildung* as it exists in policy documents. Doing so will lead to an understanding of the concept also in the learning atmosphere where the teachers and the students meet and interact. As such, we focus on the questions that occur where the curriculum and didactics meet (see above). As such, this study is relevant for those interested in understanding students' ideas and perspectives about the role of ICT in their lives and learning within and outside of school (Livingstone, 2002).

A report on the digital childhood of young people identified a large difference between gender and the youth's background in terms of how much they make use of ICT. The same report also found that the more the youth used ICT tools, the better their grades were (Torgersen, 2004).

The Norwegian media authority (Medietilsynet, 2018) confirmed these results. Since 2003, the organization has gathered information on children's and youths' media habits. The latest report showed that the youth designate a lot of time to their mobile devices, as expected, but also it determined that half of the youth have experienced suicidal thoughts, bullying and unpleasant sexual visualizations through ICT media. In a study on digital competence using multimodal texts, Dons (2006) highlighted the necessity of including the youth's media-converging learning in their spare time with learning in the school context.

Digital *Bildung* is proposed as an alternative concept that provides learners with opportunities to use ICT confidently and innovatively for the development of skills, knowledge and expertise. These skills, knowledge and expertise are considered necessary in the global information society as it is experienced, the society in which the youth live (Johannesen, Øgrim, & Giæver, 2014). In a study on the concept of digital literacy in education, Buckingham (2015) used the German concept of *Bildung* to imply a broader form of education about media that is not restricted to mechanical skills or narrow forms of functional competence. Our study uses the concept of digital *Bildung* in a similar way.

Within a quickly spreading digital culture, researchers often consider students and teachers to have a need for gaining knowledge to master ICT (Dezuanni, 2014). Researchers investigating technology-enhanced communities in a “third space” have argued that looking more closely at the uses of digital literacy, rather than assuming it is an end in itself, or that it represents school engagement, has helped the field of digital literacy education to enter its maturation phase (McCarthey, Kennet, Smith, & West, 2017). The third space theory refers to a conceptualization of the merging of home, community and peers with institutional norms (e.g. the classroom) to provide a productive cultural space for learning (McCarthey et al., 2017). Digital capability is a way of seeing mobile technology, learning and engagement as moving beyond the instrumental; instead, it is a richer, more sensitive account of technology-situated learning for social objectives (McDougall, Readman, & Wilkinson, 2018). In a systematic review on the uptake of digital usage in schools, researchers have suggested that digital practices should be longitudinal and information-rich, and they have found that digital technologies have positive effects on the change and improvement of school organizations and on students’ learning (Olofsson, Lindberg, Fransson, & Hauge, 2011).

Research question

Our interest in digital Bildung is related to the influence of ICT development on youths’ communication patterns, socialization and identity development in a digital context, leading to the research question: How do students in Norwegian schools understand digital Bildung? Our study is based on an understanding of how the Norwegian curriculum formulates basic principles of identity work and democracy embedded in national attempts to use ICT for the betterment of education and society (Kunnskapsdepartementet, 2017a, 2017b). The connection between digital skills and pedagogic use of ICT is especially underlined in the digital strategy for Norwegian primary education (Kunnskapsdepartementet, 2017a). Consequently, the aim of the article is not to investigate ICT itself, but how students conceive ICT usage; hence, the article contributes to a better understanding of how digital technology can improve education and society in the twenty-first century (Erstad, 2009), as well as a better understanding of the questions that can be raised in the intersection where the curriculum and didactics meet.

The role of the curriculum

Within the context of most democratic states, the curriculum steers and controls schooling (Mølstad, 2015). Those who design the curriculum have the power to decide and prescribe the purpose, aim and content of schooling, which provides the state legitimacy in exercising power and controlling education (Lundgren, 2006). The curriculum is also used for structuring educational courses and pedagogical interests to ensure an environment of high-quality learning formulated through the aims and content of schooling (Karseth & Sivesind, 2009; Willbergh, 2008). Traditionally, the Nordic countries have constructed their educational systems so that teachers have the major responsibility for the methods of teaching (Hopmann, 2007; Vitikka, Krokfors, & Hurmerinta, 2012). This relative autonomy presupposes a possibility of choosing content based on interests and leads to a wider planning opportunity for the teachers. When the curriculum is formulated as such, steering becomes less visible (Mølstad, 2015). Gerrard and Farrell (2014) argued that when a national curriculum is renegotiated, teachers’ work is then repositioned, depending upon how professional autonomy is constrained and defined through the written curriculum.

Digital Bildung, democracy and recognition

The multicultural society and ICT make it necessary to re-think Bildung. The challenges of a digital communication society contributes to a new discussion of the school mandate and how the Bildung processes can be part of everyday schooling for students (Hoff & Løvlie, 1999). The classical concept of Bildung occurs between the individual and the culture (Humboldt, 2000), and the elaborated concept of self-Bildung relates to individuals' inner resources, interacting with other individuals within a context. From the perspective of classic Bildung ideas, students take care of their own development, focusing on how to increase their learning (Humboldt, 2000). A revision of the Bildung concept is especially needed in a postmodern state, where differences and distinctiveness in culture, taste and forms of life are evident characteristics (Hoff & Løvlie, 1999; Løvlie, Mortensen, & Nordenbo, 2003). Consequently, Biesta (2013) began a discussion on the pedagogic terms being used in our society. He underlined the importance of giving today's teachers a clear of vision on what the Bildung mandate should encompass (Biesta, 2013). This discussion about what Bildung should take into account can also involve the perspectives on learning derived from Dewey (2008), which focus on the democratic aspect of education. For example, Sæverot (2014) discussed the universalization of education and described democratic Bildung in two separate ways using Biesta's (2013) description. In the first approach, Sæverot (2014) included the students in the predefined knowledge and skills as a preparation for something that will happen later in terms of a qualification and socialization, thereby describing Bildung as aiming for the future. Second, Sæverot (2014) conceptualized Bildung as a democratic formation that opens up for individuals' own responsibility in this process for the future. Furthermore, in creating a theoretical frame around digital Bildung, we can discuss both classic Bildung and the democratic formation in relation to the theory of self-development proposed by Honneth (2008). In other words, an individual can enjoy successful identity development only by taking an active part in society.

The consequences of these theoretical prerequisites can be summarized in three important theoretical statements for our study: Firstly, in framing our study, we use the classic notion of Bildung in focusing on the development of the entire human being (Humboldt, 2000). When acknowledging Bildung as central to the development processes, the student's entire life must be considered. In our view, digital Bildung is based on Bildung, which becomes important for understanding that every human needs to acquire space outside himself or herself for expanding knowledge and activity (Gran, 2018).

Secondly, the notion of democracy is embedded in the Norwegian school regulations, which aim for students to become democratic citizens (Kunnskapsdepartementet, 2017c). This situation corresponds very well to what Dewey (2008) advocated when saying that the school must foster democratic thinking. According to Dewey (2008), thinking is learning that activates the mind. Considering the connection between the individual and the curriculum, Dewey (2001) argued that there is a paradox in the way the school encounters the individual and how students can use their own life experiences in their school learning. Democracy becomes an important notion in relation to digital Bildung because ICT is, in the Norwegian context, thought of as a tool for gaining knowledge and information that must be processed and, in turn, must activate the mind and improve democratic thinking (Løvlie et al., 2003).

Thirdly, "identity work" (Honneth, 2008) also becomes an important aspect of the arguments around ICT. Mainly because identity work stresses a connection between recognition and socialization, and by understanding human actions in this way, it leads to a certain order.

In this process, digital Bildung can be understood as a specific way of building identities, and ICT allows students to learn more and get in contact with other identities than the ones possible in the nearby society. As such, ICT enables students' identity work in new ways and gives them new opportunities on how to "create" an identity (Krumsvik et al., 2018).

In the following, we will use the analytical term digital Bildung, constructed from the three theoretical statements presented above, for investigating how students make ICT use intelligible. As such, digital Bildung contains, and is analytically constructed, by three notions; (a) We learn from a space outside of the individual in contextual and interactional settings; (b) an important part of learning is for developing democracy; and (c) learning enables identity work. We assert that all these educational processes take place when using ICT, and we analytically use the term digital Bildung to describe these processes. In trying to define how students perceive these processes of education, we will use group interviews with students, focusing on how they expressed their ICT use in their educational settings. In doing so, we will be able to develop the analytical concept of digital Bildung with data on how Norwegian students think and act within educational processes using ICT.

Methods

Methodologically, this study is based on the assumption that educational structures through curricula policies expose young people to culturally-specific knowledge and viable values, attitudes and normative behaviour patterns (Benavot, 2002). Accordingly, we investigated students' reflections by conducting qualitative interviews. The study sample was based on a particular group of students. To obtain rich information, we collected data through group interviews with students. We chose the group interview format to ensure the students would be comfortable in discussing topics like bullying, which can be very sensitive topic to discuss in, for example, one-on-one interviews. In this study, it was critical to involve students who could reflect on their own learning using digital tools (Cohen et al., 2015). To achieve this goal, we allowed the headmaster to ask the teachers to select students in groups of three from each of the class levels based on their interest in ICT and their ability to reflect and communicate. As a result, the study involved individuals the teachers deemed strong students who were highly competent and able to perform meta-reflection. We conducted the group interviews at four technology-rich schools in central Norway (Environments, 2009). The enrolment at each school ranged from 100 students up to around 550 students. Each school was represented by three groups consisting of three students each for a total of 12 groups and 36 students. Students were in grades 5 through 10, resulting in an age range from 10 to 16 years. We chose different class levels to construct a sample consisting of students from all elementary school levels in Norway. Some schools also use iPads on grades 1 through 4, but we chose to focus on grades 5–10 in order to get students that had a more mature ability to explain and describe their own learning and development in an interview. We felt these students could explain in their own words how digital tools influenced their learning and development.

In the following sections, we do not distinguish quotes by students' gender or age. Instead, we used focus groups and the creation of a collected sample to give a comprehensive visualization of the elementary school of Norway. We consciously selected schools with a focus on ICT usage to ensure that the topic of research would be present in the schools. We conducted the interviews based on a theory-informed interview guide, with a semi-structured form to be filled out by the interviewer (Kvale & Brinkmann, 2015: 47). In this study, the theory-informed questions were founded on Humboldt's (2000) theory of Bildung. One main idea of this theory is that human beings search outside themselves in the

process of becoming individuals that reflect on their inner selves and the interactions with others. The way individuals take in the diversity in the world around them and how this affects their feelings are essential for the individual Bildung processes (Humboldt, 2000). As a result of this main idea, we asked students questions revolving around learning, media artefacts, identity, recognition, and bullying, which is understood as be the opposite of recognition (Honneth, 2008).

After recording the interviews, we transcribed the empirical material before analysing and categorizing data according to the students' notions of ICT usage in schools. We identified these categories through a content analysis approach, which uses systematic procedures to examine any written text through categorization, comparison and conclusion (Cohen et al., 2015). We have employed qualitative academic content analysis, which implies the coding of text in terms of certain subjects and themes (Bryman, 2016). The categories we elaborated on were (a) ICT for learning, (b) ICT for steering and control, and (c) ICT and friends. We found these categories directly in the data through expressions provided by the students' experiences and understanding of ICT and learning. Table 1 shows the connections between the interview guide and the categories:

Table 1 Analysis categories and analytical concepts

<i>Categories</i>	ICT for learning	ICT for steering and control	ICT and friends
<i>Areas of interest in the interview guide and associated concepts</i>	<ul style="list-style-type: none"> • Learning and social media • Learning environment • Teacher recognition of the students 	<ul style="list-style-type: none"> • Societal mandate • Curriculum • Competence aims 	<ul style="list-style-type: none"> • Interaction and communication with other students • Classmates and social media

Interview analysis

This section will elaborate on and analyse the students' responses on how ICT is used in their learning. Overall, the students felt that teachers do not trust their actions online and one informant stated, "The teachers need to have more of an overview of what we are able to accomplish when using digital tools; they need to reconsider their actions and trust us more." The informant claimed that students were fully supervised in school. The informants perceived the teachers as being strict about ICT usage, and noted that the teachers addressed issues that happened during school hours or that were brought to their attention, in order to guide the students in their online behaviour. Three categories arose from the empirical data (Postholm, 2010) which will be used here in the analysis of the results; in this way, we intend to present the students' voices on digital Bildung.

ICT for learning

The students described ICT as being important in learning. When asked about the most important parts of school, they highlighted tablets as equivalent to subjects. The students viewed skills in handling ICT as being important and as something they expected to learn in school. The technological perspective of learning was surprisingly invisible in the group interviews when they referred to the school context. When specifically asked about ICT and learning, one student said that it was about learning online etiquette. Neither digital skills, digital competence, nor digital Bildung were prevalent in the students' answers on perceived central assignments from the school. The students expressed that neither programming nor inventive use of digital tools were a regular part of their classroom experiences.

However, they stated that they used tablets in training their language skills and in mathematics. On this matter, especially related to the differences between the students' digital competence and self-confidence, one stated:

We have a lot of PowerPoint presentations [...]. I get nervous when I am going to perform in front of the class [...]. I am scared that they will laugh at me, and something that happened is that I lost my presentation. There was only a tiny piece of the presentation left with two slides [...]. I told them I had more, but the other students did not believe me and thought that I had not been working on the task [...]. I like making presentations [...]. If they laugh, I try to laugh, too [...].

To sum up, students described the use of ICT in the classroom as motivating and as something that is becoming a bigger part of the school day. Even though ICT has started playing a larger role in the students' learning activities during the day, they surprisingly seldom mentioned it as an important part before we, as interviewers, asked specific questions about it. We can understand this phenomenon in two ways: Either students saw ICT as so integrated in their lives that they seldom reflected on it, or ICT has not been so well used and integrated as supposed. We believe the former to be the most accurate, which became apparent when the students demonstrated and expressed regulations and limitations set by the teachers on the use of ICT.

ICT for steering and control

Our results revealed a tension between how students understood teaching and learning and how the teachers established frames around digital learning. In other words, we identified a gap in understanding the mandate of the school and what role the digital learning should have (Karseth & Sivesind, 2010). We found tensions between the teachers' ICT usage and the students' informal digital usage based on the students' private needs and wishes to learn. This difference arose in relation to how the students used their own digital tools and how they understood the guidelines for using the digital learning tablets provided by the school. Whereas the students could use their school learning tablets during class, they were not allowed to use private smartphones. Moreover, they were not allowed to use the learning tablets during leisure time at school, but they could use them during their leisure time outside of school. This separation of home use and school use did not really make sense for the students, which became evident in the interviews. Questions arose regarding whether the school actually had control over the students' digital activities during the day, and to what degree teachers intended to control this usage. For example, a student was playing a game of Tetris just before the interview and said that the teachers do not comment on gaming when it is on their computers during breaks. Of interest in this observation is that the students acknowledged the "space" in between what teachers said and how they acted.

Related to *Bildung*, we identified ICT for steering and control in the teachers' decisions regarding which digital tools students could use and how to use them. In some schools, the students were given the opportunity to voice their opinions on the topic of mobile phones. During interviews, students referred to a strict regime in the usage of phones during school hours, although they acknowledge they were creative and found new solutions to avoid these regulations. For example, some students reported walking outside the school to make a phone call, or bringing their own computers to play games when tablets were restricted.

Some students described school days where they did not take part in decision-making and creation of their own learning. Informants at one school described it as a "no-phone zone" and explained that the student council had discussed the matter with the teachers and together

with the principal decided the usage of private phones was forbidden inside the school. The students stated their voices were not heard, and that the most students wanted to be able to use their phones, despite seeing the benefits of not using phones during school hours.

When it comes to the students' social media interaction, the students referred to social media as a positive space where they could connect. The use of social media raises the issues of restrictions and limitations. Students could bring their tablets home, where they could perform different both in and out of school tasks on them and often engage in other activities than those they could do at school. Through our interviews, it became evident students and teachers continually discussed the issue and that the teachers set the restrictions and limitations. Students primarily said that the mobile phones were not used during class and that they rarely used their mobile phones for learning. However, the students seemed to have found solutions to the restricted use of mobile phones. One student explained, "If it is something really important and we have to make a phone call, we go out in the woods and make the call."

ICT and friends

Most of the students were "friends" with their classmates on Snapchat, Facebook or Instagram, but not consistently. The school rules prohibited the use of Snapchat on school tablets, and some informants did not have the app on their own phones since it requires users to be 13 years old. Still, students found their own solutions to access this app, as demonstrated below:

Yes, I have Snapchat, on my brother's tablet. I cannot have it on my phone, and it is not allowed to have it on your school tablets.

Several of the students gave examples of quarrels related to Snapchat, often "a friend at another school". One student trailed off, unable to say more until the interviewer posed follow up questions. Then, the student explained that it did not involve photos or messages. Rather, the student specified it was more about being "silly and such things". When asked questions on what the school could do to prevent them from writing mean things to one another, one student stated, "They were mean to each other. There should be more adults in the digital contexts, preventing it from happening. Maybe they could, you know [...] talk to the kids?"

The students in our study highlighted the need to learn conflict resolution in school. This belief became apparent when they explained that they found it easier to write statements they did not mean in text. Even as the students problematized their own digital communication, they expressed concern with their parents' digital attitudes and actions. One student said his mother posted photos of him even though he had said not to.

In our study on students' digital actions, the informants described how teachers may treat them differently by taking sides with some students and not others. Additionally, they explained that teachers may change both their tone and their body language when talking to parents or students. Some students compared activities in the classroom with sports and underlined how important it was to be seen, cheered on and acknowledged by the teacher and other adults. The students stated they were more motivated to work when the teacher paid attention to their actions and performances. Maybe social media could be a way for teachers to give students these sorts of acknowledgements.

Beyond recognition and unfair treatment, students also discussed the general rules of digital tool usage, which they described as highly unfair. Students felt the teachers or the school used force in relation to their digital tools, such as by making students bring in their

parents in order to get their tablets back when they had violated the rules. Students verified that teaching has changed, and that they are more motivated to learn using the tablets; in particular, the students explained that they do not have to sit and listen to boring, pointless speeches from the teacher.

Following up the perspective of role taking and communication in the interactions between the students, we asked about positioning between students. The informants demonstrated an immediate understanding of the concept; however, they did not express any knowledge of the mechanisms. They described positioning as the “popular” students being the ones with all the newest gadgets, giving them the power to decide who could try the new gadgets and who could not.

Discussion

The results of this study show that teachers viewed ICT as useful only in the school context, whilst the students learned across contexts, using different technological tools, and with different social communication apps. The following four perspectives that will be discussed are founded on the empirical data and what the students were concerned with related to ICT usage.

Perspective 1: Lack of ICT in learning

With the students’ perspectives on how teachers use ICT as a base, our study finds that students were loyal and fond of their teachers. However, they highlighted a few interesting observations; for example, they felt like they were not heard by the teachers. Also, they argued that they were not allowed to make comments and effect change; in other words, they claimed they did not have a say in choosing the learning activities. Students participated in the “class hour”, debates that concerned classroom norms and other topic that they were concerned about, but the students stated they were never heard.

One student explained that the teachers wanted students to socialize, so they took their phones away from them; however, the student argued that the teachers did not understand that students socialize by using social media. Students acknowledged that gangs were part of the student environment, but the informants argued that gangs can be changed and that they have to recruit students to take part. This relates to ICT usage in questioning whether social media could help students avoid these recruitment attempts. In reference to these difficulties, the student group highlighted that they generally did not tell the teachers about bullying; rather, they preferred to handle these matters themselves because they felt doing so was more effective.

Education is a necessity of life, and the individual’s nature is to strive to continue growing and developing. In the development process, individuals engage in a self-renewing process where education consists primarily of transmission through communication. Social arrangement gives educative effect first when there is a purpose of association in the connection between the older and the younger. The need for formal or intentional learning increases in a society that is becoming more and more complex (Dewey, 1930).

Perspective 2: Leisure time and school hours

One perspective of the school’s democratic possibilities is the cooperation between the school and the parents. The informants did not often mention this cooperation, and only four informants discussed their parents’ restrictions or guidance in reference to their digital

activities. One student expressed that the parents talked a lot about the risks and dangers of being online, whereas others referred to their parents' rules related to digital usage. Most students had free access to tablets, computers and phones during their leisure time. The space between represents a time in which neither the parents nor the school educators can control, observe or even access what the students do. The theory of democracy holds that this free time is a positive aspect of students' development (Dewey, 2008), and helps develop students' thinking as part of their everyday experience. The students' digital experiences contradict this perspective on democracy. For example, they expressed an interest in learning and a motivation to learn, for example programming and inventive use of digital tools, but their only experiences with digital activities during school hours have been incrementalistic and involved the teacher telling them which apps to use in class while their access during school leisure time was restricted.

The students used the word *netiquette* when describing how they worked on digital competence, attitudes and actions. As used by the students, *netiquette* referred primarily to actions related to online privacy issues, for example avoiding meeting people they did not know and refraining from posting photos of others. The students, however demonstrated an intuitive or general understanding of digital *Bildung* without using the term itself. Here, the term *identity work* can be used to describe their understanding. Students can conduct *identity work* to understand their learning. Unlike their parents, who were not digital natives, these students understood concepts such as not revealing too much of their own private life online, whereas parents might post photos even without asking them. In this instance, we could argue that schools and teachers have neglected the part of their societal mandate that includes these perspectives.

Perspective 3: Digital restrictions

Earlier arguments maintained that a new curriculum was necessary to develop students' usage of ICT related to their *Bildung* development, in other words their digital *Bildung* (Gran, 2016). This curriculum would need to take into account that today's education system is producing students for the knowledge society (Søby, 2003). Our study demonstrates that changing the curriculum is not enough in the Norwegian case. Teaching, learning and the opportunities for students to participate in ICT environments must be changed as well, and schools must address the dominant separation between ICT use at schools and at home. Additionally, schools should elaborate on the use of mobile phones and acknowledge the role of mobile phones as social devices; in doing so, schools should give teachers the opportunity to work with the students to develop social media ethics.

Students raised concerns regarding the lack of recognition related to ICT and friends. They explained that students are occupied with how many "likes" they get and how many friends they have on Snapchat, for example. Most students stated they had experienced or had seen a friend being bullied both online and offline. Some apps, such as Snapchat, limit the number of members in a group or have age restrictions that cause parents to limit students' access to these social apps. These limitations give rise to exclusion in another area; for example, participants in Snapchat might decide which clothes "everybody" shall wear, but those not in the group chat would be excluded.

Perspective 4: Innovative, democratic learning outside school hours

Communication is a central part of Dewey's (2008) social thoughts, where he viewed empathy and foresight as essential factors in developing human society. When discussing their

perspectives on digital Bildung, the students described their communication pattern as being part of their social context more than their learning context at school. How the students use the school tablets as communicative tools depends on how the teachers instruct them in this. In this way, the learning can be understood as transferable from the teacher to the student. If students were included in their own learning in a more direct way, they might experience more purposeful lifelong learning (Humboldt, 2000). Similarly, Honneth (2008), stated that human identity is based on experiences and mutual recognition.

Focusing on the “real world” and the informal notion of education could help the students benefit more from their learning (Dewey, 2008). The development of the students’ attitudes and knowledge takes place through the intermediary of their environment (Dewey, 2008), meaning inside different contexts and different parts of the students’ lives. When students are not allowed to use their phones or the apps they use daily at home while they are at school, school work is not transmissible to their lifelong learning in their natural context.

Several of the students expressed that they thought everybody had someone to be with or play with during school hours. Others referred to episodes where they had been unfriended online by someone in the class before but had become friends again. When asked about friends in the digital arena, the students provided heterogenous answers. The informants stated that students were more selective about who they were friends with on these social media platforms. The school learning tablets could not be used for communication even at home because the tablets had inbuilt restrictions governing social media. Instead, the informants explained that students used their own private tablets or mobile phones for communicating on these apps. During school hours, their digital activities were strongly controlled, whereas there was little or no control during their leisure time.

Conclusion

This study resulted in a conceptual understanding of digital Bildung based on notions that (a) we learn from a space outside of the individual in contextual and interactional settings; (b) an important part of learning is for developing democracy; and (c) learning enables identity work. We hold that all these educational processes take place when using ICT, and we analytically use the term digital Bildung to embed these processes within a concept. In other words, we argue that schools need a theoretical framework to systematize their work with ICT in learning and to discuss the phenomenon of digital Bildung and their practical work with students. We based this theoretical framework on the results of student interviews concerning their digital Bildung perspectives. We divided the findings into four aspects: (a) students’ perceptions of how the teachers work with ICT; (b) experienced differences between teaching and learning in ICT; (c) digital boundaries and how these are perceived at home and at school; and (d) ICT as a digital tool and how it is used, shared and developed in the different contexts. The students in this study experienced a rigid system concerning which apps or programs to use. In this system, teachers framed the digital possibilities by setting the rules and establishing strict areas of activities for the students. Initially, teachers used ICT to assess students’ competence and engage students to vary their learning. However, students found few areas of expansion for them to govern their own learning.

We have elaborated on the contextual frames of ICT in schools and how students described them. Digital Bildung is a unique concept that can be used for discussing the role of ICT in schools in a more elaborative way. In our study, we found that digital Bildung can be understood as something limited, framed and controlled by the teachers primarily for

teaching and not for learning. As such, our study on the use of ICT from a student perspective highlights several improvements that can be discussed for the betterment of ICT usage in Norwegian schools to further the emphasis on democracy and identity work, through recognition of the students' experienced needs and "life-worlds".

Acknowledgements: We would like to thank our research group Studies in Professional Development, Learning and Policy for motivation and unity in the academic work.

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