‘We have to be professional’
– Swedish preschool teachers’ conceptualisation of digital media

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ABSTRACT
This paper describes how a group of preschool teachers participating in a design workshop sketched ideas for how ICT (information and communication technology) can be developed in relation to preschool practice. The design process, which was modelled on creative research methods and future workshops, is presented in detail. The main findings, based on a data-driven analysis of verbal and written statements and design sketches, show that ICT is mainly conceptualised as either a possibility in the support of specific competences (such as language development) or a threat to, for example, the notion of real communication and also to well-established conceptualisations of preschool practice.

Keywords
Preschool Teachers, Future Workshop, Design

THEME AND OBJECTIVE
In times when digital media are ubiquitous, and more and more children use an increasing variety of digital media at an earlier age than ever before, such media are still new phenomena within many formal educational settings in general, and in preschool practice in particular. Even though there are testimonials of benefits from using digital media in preschool, from research as well as practice, the actual use of information and communication technology (ICT) in preschool is limited. This article addresses this complexity, by investigating Swedish preschool teachers’ conceptualisation of digital media, in order to better understand what possibilities, and obstacles, preschool teachers experience in using digital media in their everyday pedagogical profession. The assumption is that it is of uttermost importance that pedagogical staff within formal educational settings develop a critical understanding and an adequate use of such media, in order to better meet the needs and expectations of young children.

In this vein, a workshop with twelve preschool teachers was conducted in January 2014, focusing on how ICT in general, and tablets in particular, can be used and developed to support the development of young children. The introductory literature review will therefore focus on what qualities ICT brings to preschool (and early childhood education) practice, rather than elaborating on studies concerning the challenges of implementation (Howard, Miles, & Rees-
The workshop was modelled on the concept of future workshop method (Kensing & Madsen, 1992; Knutsson, Nissilä, Räsänen, & Carlsson, 2011). Based on the data-driven analysis of verbal and written statements, together with sketches for ideas of how to use ICT and tablets in the preschool, all collected at the workshop, the analysis was done in two steps. The first step was already taken at the workshop as integral to the idea of mutual iterative critical development of ideas and concepts. The second part of the analysis was the search for patterns in the empirical data.

**SETTING THE SCENE**

As an introductory setting of the stage, it needs to be stated that cornerstones in the Swedish preschool profession have by tradition been children’s (free) play and creative activities, concepts that are inextricably intertwined with an apprehension of the child as inherently good but at the same time vulnerable (Pramling Samuelsson & Johansson, 2006; Tullgren, 2004; Vallberg Roth, 2006). This means that popular culture in general, and digital media in particular, tend to be framed as threats, implying that the preschool has an obligation to safeguard the children, by providing them with alternatives from a rather high-brow cultural tradition (Almqvist, 1994; Lindahl & Folkesson, 2012; Ljung-Djärf, 2004). This means that resistance in using computers and digital media has been persistent and even strenuous in preschool practice. In the context of this conflict between what can be understood as traditions and attitudes on the one hand, and societal changes and demands on the other, this study will provide insights into how a group of preschool teachers conceptualise digital media: What are the possibilities, and obstacles, in using tablets in particular and ICT in general, as experienced by the preschool teachers themselves? This article will furthermore serve as a reflective introduction to the method used and the qualities of such creative research methods (Gauntlett, 2007).

According to Findahl (2013), in Sweden, sixty per cent of all three-year olds and seventy-nine per cent of all five-year olds have used the internet at some time, and slightly over twenty per cent in both age groups use it daily. The numbers for tablet use are almost identical in these age groups, suggesting that the tablet is the primary tool for internet use. This means that with access to different kinds of digital hardware (laptops, smartphones, tablets, etc.) children are already from early ages consumers as well as producers of digital media (Findahl, 2013; Kjällander & Moinian, 2014; Sandvik, 2012). The more passive consumer of traditional media (television, radio, books) can thus become the more active (co-)producer of digital media, facilitating new ways of communication (Bolter & Grusin, 1999; Bruns, 2006; Manovich, 2001; Prout, 2005). This means, according to Lafton, that...
It is reasonable to assume that professional practitioners in preschool have to consider and discuss how children’s digital experiences and growing use of digital tools will affect professional content in preschool. (Lafton, 2012, p. 173.)

The core argument of Lafton (2012) in the citation above is that the changed conditions for children in their life-world calls for a change in the “professional content” of the preschool, if the preschool is to be a contemporary professional practice of relevance. This argument is based on the assumption that a fast developing information and communication technology, including the implementation of a scheme for one-laptop-per-child and tablets, as well as the notion of lifelong learning (in general) and digital literacy (in particular), have created great challenges for educational practices, for teachers as well as pupils (Buckingham, 2013; Castells, 1996; Cazden et al., 1996).

DIGITAL MEDIA AND THE PRESCHOOL

In this presentation on research concerning digital media, young children and preschool teachers, the focus will be on the benefits of ICT in relation to young children and the need for critical media literacy among the preschool teachers.

A professional use of ICT in preschool is seen to support learning (Carlsen, 2013), cooperation (Sandvik, Smørdal, & Østerud, 2012; Wang, Kinzie, McGuire, & Pan, 2010) and communication (Sandvik et al., 2012), and it can also stimulate new forms of play (Bølgan, 2012). These are but a few of the areas where there is research on what qualities, and challenges, ICT brings to the field of early childhood education. What is stressed time and again is the importance of critical media literacy in order to uncover these qualities and handle such challenges (Hardersen & Guðmundsdóttir, 2012; Sando, 2012).

When such critical media literacy is lacking, preschool teachers do not have the confidence to support children’s learning, Sandvik et al. (2012) argue. This happens when preschool teachers have difficulties in relating the technology and its content to everyday situations. In their study, Sandvik et al. (2012) found that digital media allows for the development of reading and writing abilities among young children. These are results that are in line with the research of Levy (2009), Ciampa (2012) and Korat (2010). The main argument for the importance of using digital media to support the development of reading and writing skills appears to be that digital media are instances of new literacy skills supporting the development of multimodal literacy and multimodal expressions, and that such literacy skills are necessary in the contemporary and emergent media society (Kress, 2003, 2009; Selander & Kress, 2010; Wolfe & Flewitt, 2010).

The preschool teacher needs a reasonably high level of digital competence, meaning the ability to use digital media in a wise and solid way (Hardersen &
Guðmundsdóttir, 2012; Sando, 2012). This gives them the necessary confidence to use ICT in supportive, creative and perhaps even innovative ways. This illustrates two important things. First, if professional staff lack knowledge and/or confidence in the use of digital media, children do not get support in their use of these media – and therefore the use of digital media becomes reduced to a less important activity than it would otherwise be. Second, the learning process is ubiquitous, and even small children support and guide each other in the use of digital media and in the interpretation of its content. In a formal educational practice such as preschool, it is important that professionals have adequate knowledge and relevant strategies for how to support development of children’s digital skills. An illustration of this is presented by Bølgan (2012), who discusses the importance of how digital media is not just used, but also how it is presented and made accessible:

Innovative forms of play and learning are more likely to emerge where digital tools are available where children are present and where they can be used throughout the days as multi-functional tools that are integrated with other practices. (Bølgan, 2012, p. 164.)

This, furthermore, draws attention to the importance of choosing suitable software and hardware, as these obviously influence the character of children’s activities and interactions (Sandvik et al., 2012). For instance, the use of tablets support interaction between children, as tablets are easy to handle and invite screen sharing (Wang et al., 2010). It seems that when communicative practices become all the more multimodal, ICT-supported communication enables active and cooperative participation among young children (Sandvik et al., 2012). This means that the participatory dimension of technology such as tablets and interactive whiteboards encourages dynamic active involvement in terms of production and co-production by children themselves. In this vein, Wang et al. (2010) argues that media-supported cooperation can make visible differences between a child’s own thinking and that of others, and deepen understanding for the group as well as for the individual.

One possible reason for the relative absence of professionals in the digital activities of children, as suggested by Sandvik et al. (2012), is that the preschool teachers do not have confidence in supporting the children’s learning as they themselves have difficulties in relating the technology and its content to everyday situations. Such a lack of necessary critical media literacy can be seen when preschool staff tend to give children sitting together with a tablet less attention than children participating in other kinds of cooperative activities. Children together at a screen are thus more often left to support and guide each other (Jernes & Engelsen, 2013).

Attitudes towards technology use and its potential qualities in pedagogical practice are intertwined with norms of perception of children as either competent subjects or objects in need of protection (Lindahl & Folkesson, 2012; Ljung-Djärf, 2004). There is, in other words, a close relationship between
experiences of and attitudes to digital media, such as how such media are conceptualised and eventually used in the preschool setting (Ihmeideh, 2009; Izumi-Taylor, Ito, & Gibbons, 2010). Such experiences and attitudes tend to be, as seen from the above, burdened by the notion of preschool as a place away from the threats of the contemporary, that is, as a safe haven for the young.

One of the challenges for the preschool (teacher) in general, and a key interest for this study in particular, is therefore to examine the conceptualisations of digital media among preschool teachers. This empirical study was conducted via a workshop with twelve preschool teachers.

A WORKSHOP AS A DESIGN-ORIENTED APPROACH

A workshop allows for interesting data collection methods compared to the perhaps more frequently used verbal interviews or ethnographic on-site observations. A workshop, furthermore, allows for meetings between professionals within a less familiar framing than usual, making it an occasion for capacity-building of relevance for the profession. The presence of such practice-relevant knowledge, elaborating on qualities, was a key component when planning the workshop together with officials at the local government office, in order to develop mutually beneficial experiences and knowledge. From that perspective, the setup borrows from design-based research in that it has an emphasis on improving educational practices through a close collaboration between practitioners and researchers (Wang & Hannafin, 2005).

The setup for the workshop was inspired by the ideas of future workshops (Jungk & Müllert, 1987; Kensing & Madsen, 1992; Read et al., 2002; Vidal, 2005). One core starting point for a future workshop (Kensing & Madsen, 1992; Knutsson et al., 2011) is that the problem for, or theme of, the workshop is firmly based in the actual situation of the participants’ practice. To secure that, the setup was discussed with the officials of the municipality to make it relevant for the municipality as a whole as well as for the participating preschool teachers.

A future workshop should, according to Jungk and Müllert (1987), go through four phases: the preparation phase, the critique phase, the visionary phase, and the implementation phase. These four correspond to the workshop, in that the method of the workshop and its administrative frames were introduced as a preparation for making the setup familiar to all participants. The actual workshop then started with a critique of the current situation by way of a thorough investigation into the current situation and the problems associated with how ICT is used at present (this is named “phase 2” in the presentation of the workshop below). In the next phase, the visionary phase, the participants worked with a visionary idea of how ICT can be used in preschool. The first part of this phase in the conducted workshop was to discuss visions about future use of
ICT in preschools, whereas the second part of phase 3 was to sketch design ideas of how ICT can be used in preschools. This latter part of the third phase was the main part of the workshop. In the fourth and final phase, in the original setup for a future workshop, the ideas developed are to be implemented in the actual setting. The intention with the fourth phase is that people affected by political decisions should be part of the decision-making process. This was accomplished here by way of a follow-up discussion with the local officials who also helped to set up the workshop. Following the original design of a future workshop, this phase should have attracted more attention in order to really be that critical phase where the visions of practitioners are being tested in their everyday work practice. Still, the motif of the collaboration with the municipality was never to actually develop innovative design solutions for ICT use in preschool, but to (a) better understand the conceptualisations of ICT among preschool teachers and (b) support the conceptual development of the preschool teachers in relation to what qualities with using ICT in preschool can be found.

This article presents the method used to support this practice development process, and some of the main findings from the actual workshop. The quality of the workshop to support the knowledge-building of the practitioners is not elaborated upon or studied further; it is merely an argument supported by on-location feedback (and the obvious implications following the line of reasoning presented) (cf. Eliasson, 2013).

The design work at the workshop (in phase 3) consisted of conceptual designs or sketches, not functional solutions. The design ideas of the participants were primarily sketched with pen and paper (even though one group used explicit bodily illustrations in their sketch). The future workshop, as conducted here, can be understood as a creative research method as it “can generate insights which would most likely not have emerged through directed conversation” (Gauntlett, 2007, p. 4). Just as with a participatory method such as future workshops, Gauntlett emphasizes the quality of creative methods comes from requiring participants “to spend time applying their playful or creative attention to the act of making something symbolic or metaphorical, and then reflecting on it” (2007, p. 3).

**SETUP OF THE WORKSHOP**

Twelve preschool teachers (of fourteen who were invited) from ten different preschools in one municipality participated in a three-hour workshop in mid-January 2014. The preschool teachers were invited by an official from the municipality, based on their either actively working with the implementation or use of ICT in a preschool, or showing great interest in ICT as a pedagogical tool. This official was also present at the workshop, giving feedback (although maintaining a relatively low profile) on the discussions.
The twelve preschool teachers participating in the workshop were divided into four groups of three people each. Each group had their own table to sit around. At each table were papers of different sizes, post-it notes, crayons, pens, text liners and marker pens. The centre of the table surface was covered with big paper sheets (approximately 65 x 100 cm), and it was these big paper sheets that were the teachers’ primary shared sketching surface. All materials produced were collected, consisting of both the big paper sheets with notes and sketches, as well as smaller papers with notes. Besides the notes and sketches from the four groups, the data collected also consisted of field notes and photographs of the scene and the participants.

Image 1. The setting.

There were, as stated above, three phases of the workshop: phase 1, preparation and introduction (this phase is not further elaborated upon); phase 2, critique and the current situation; and phase 3, vision. In each of these phases, the groups were to reflect on (i) pedagogical models, (ii) hardware (available or wanted) and, (iii) software (used or designed). The set-up is presented in Figure 1 (below). The first step of the actual workshop (see below, phase 2) aimed to give every participating preschool teacher the possibility of expressing her (all participants were female) experiences.

My role at the workshop was that of facilitator (planning, organising, structuring), workshop leader (leading discussions and giving feedback; preferably asking questions like “Can you explain that further?”, “Why is it so, do you think?”, etc.), and obviously that of researcher. My previous experience of organising workshops, together with my preschool teacher exam and work experience, helped me differentiate between and, to some extent, balance those roles, a recurrent challenge in participatory design approaches (Knutsson et al., 2011; Read et al., 2002).
The workshop lasted for about three hours, of which the second phase took about forty-five minutes and the third phase took over two hours. The third phase had two iterations (work in groups, joint presentation and reflection; continued work in groups, final joint presentation and reflection), both including a presentation of a sketch for a design idea. In the iterative process, interactions such as the group discussions not only served the purpose of securing feedback and challenging initial ideas, but there was also a consciously chosen strategy for securing the intentions of the participants (Gauntlett, 2007; Siibak, Forsman, & Hernwall, 2013).

**Analysis**

The analysis of the material produced at the workshop was done in two steps. The first step was to develop an understanding of the meanings of the sketches as intended by the groups. Here the two instances of presentation and reflection were of crucial importance, as they provided the opportunity for the groups to present their ideas behind the sketches as well as answer questions from other participants. It also gave the researcher the possibility to hear, ask questions and give feedback. The meaning of the sketches are in this sense processed and produced both in the creative work by the group, as well as in the presentation’s dialogue.
The second step in the analysis was conducted after the workshop and was aimed at finding patterns in the design sketches given for the overall theme of this study: how preschool teachers conceptualise digital media. When such patterns developed, both in terms of similarities and dissimilarities, they were given thematic concepts, and each such theme will be discussed in more detail. The method of analysis is then in line with the comparative method used in grounded theory (Abiala & Hernwall, 2013; Creswell, 2012; Taylor & Bogdan, 1984).

Before that discussion, the two phases “today” and “future/vision” will be summarised followed by a more detailed presentation of their “design ideas” (phase 3 (ii)). Following the tradition of future workshops, being detailed in the presentation of the process is an explicit strategy for establishing critical evidence for the outcomes or interpretations (The Design-Based Research Collective, 2003).

PRESCHOOL TEACHERS’ CONCEPTUALISATIONS OF DIGITAL MEDIA

Starting off with documenting the present-day situation, the groups were invited to discuss how they use ICT for support of language development today and what pedagogical models they use in this context. What became visible was that the preschool teachers in this part of the workshop tended to focus on their relationship to and use of ICT in a broad context, preferably a professional one, but still with many personal considerations. Citations are from the notes of the participants themselves.

Phase 2: Today

Experiences of using ICT in preschool, as expressed by the preschool teachers, can be summed up as being in a state of uncertainty. Even though the workshop participants gave examples of many different kinds of use in the context of preschool, the most pressing issue seemed to be the absence of relevance in using the technology and the lack of support from, primarily, the municipality, in finding this relevance for use.

Today was a theme that drew attention to the kinds of use the preschool teachers were familiar with, and also how ICT can be used as inspiration and support in different contexts: “The children are inspired by the games and transfer it to their play” [group 3]. Given what was said during phase 2, film and music are used intentionally by some of the preschool teachers to inspire the children.

Simultaneously, the theme “today” also supported critical comments about what kinds of technology the teachers have access to, and primarily why they have the particular technology they have. It had been handed to them without introductory information or the necessary support for how to use it: “We were
not prepared in any way before we got [the technology], we just got it …” [group 2].

**Phase 3 (i): Future/vision**

What will become clear is that for some of the preschool teachers participating in the workshop, their visions about future use of ICT in preschool was heavily burdened by their rather limited experiences of the perceived usefulness of current ICT.

The initial part of phase 3 (i) that focused primarily on their wants and needs seems to give voice to two different approaches concerning ICT in preschool. The first approach is the more critical one, focusing on potential threats (for the children) and/or the need of support to be able to use the technology in the expected (appropriate) ways. “CONCERN: the iPad can never replace the real contact/the real interaction à this is our fear” [group 2] and “We need more training” [group 3].

The other approach is more progressive, embracing the challenge of using ICT in general, and smart boards and tablets in particular, in a way that is believed to develop the practice of the preschool: “Everyone becomes a creator” [group 1] and “Children with special needs can have a specially adapted iPad to meet their needs” [group 4].

The design ideas presented were reflections on these approaches, and to some extent showed a somewhat unelaborated upon, or perhaps initial, understanding of the qualities of ICT in relation to the practice of the preschool.

**Phase 3 (ii): Design idea**

After the introductory discussions on the current state and their visions on the future, the main task of the workshop started. Here the groups were asked to develop, present and discuss a design idea in two iterations. The participants did not just have limited experience using ICT in preschool, as illustrated above, they also had limited experience of this kind of sketching and design work. Still, sitting together in groups and being able to work on something more concrete than verbal dialogue and verbal reflections most likely encouraged their creativity (cf. Gauntlett, 2007), resulting in the design ideas presented below.

**Digital Evaluation Group 1**

In their design idea, group 1 focused on parental contact and parental dialogue. The primary meeting area for children, preschool teachers and parents or guardians is the cloakroom. This is often a rather hectic environment, with many children coming or going, parents more or less stressed and a few preschool teachers to support and comfort children, answer questions from par-
ents or guardians, and handle vital information. To further emphasize the importance of dialogue with and feedback from parents or guardians, group 1 presented the idea of a Digital Evaluation Board.

The idea in Figure 2 concerns straightforward day-to-day interaction with and feedback from parents or guardians. As expressed, this aimed at emphasising the importance of this day-to-day interaction, even though it is not always possible to handle during the more hectic situations, for example situations in the cloakroom like parents or guardians leaving or picking up their children. It is possible to see the idea of a Digital Evaluation Board as an illustration of preschool teachers’ uncertainty about how parents or guardians experience the quality of the preschool in general terms.

The idea of a Digital Evaluation Board (Figure 2) is, furthermore, easy to adapt to the different languages spoken by the parents or guardians.

The experienced need for this kind of easily quantified feedback raises important questions about the relationship between the professional preschool teacher and the parent/guardian, or the child, as a customer. Still, the primary concern of group 1 was the fact that many parents or guardians did not interact with them at all. Nevertheless, the Digital Evaluation Board could be a (first) small step in that direction and the technology thus becomes an *intermediator* between roles as well as expectations.

**Safeguarding the communication Group 2**

An already functioning design idea presented by group 2 was the use of plastic bags to protect the tablet when on excursions. In other words, their idea coincided with the experience that the technology was not suited for everyday preschool work.

Simultaneously, neither the preschool nor, especially, the young children in the preschool, were considered suitable for continuous use of ICT. Communication needed to be safeguarded as an interaction between humans, the group
argued. Here the wrapping of the technology can be understood as a metaphor for protecting the humans from the supposed negative effects of technology. In a cartoonish illustration (Image 3) the group illustrated how the human-computer, or rather the human-iPad, interaction was considered a threat. The core argument for this group, which they returned to frequently during the workshop, was that interaction with the technology never could replace “real contact /real interaction”. This can be seen in Image 3 where interaction with a computer screen or tablet is shown to make the child unhappy, whereas the human-to-human interaction is considered more natural and more supportive.

![Image 3. In the future (“framtid”) children will be less happy if communicating with computers or tablets, and not humans. (Group 2.)](image-url)

The difference between those two kinds of interactions is furthermore underscored by the double-ended arrow in human-human interaction, whereas the unhappy face can be read as a result of the lack of feedback from the screen. Still, this group was keen on having information (or instructions) on how to use and make use of ICT or tablets, that is by way of Facebook groups. Here they express a paradox: On the one hand, the way to find information and to distribute and share knowledge and experiences has changed dramatically. On the other hand, they argue that their role as preschool teachers is to safeguard the children against these tools.

**Bodily communication Group 3**

Early on in the workshop, group 3 had their attention on the challenges connected to supporting the development of reading and writing skills among young children. An initial design idea was to have a writing interface consisting of only capital letters and numbers, as this would “help the children to write”.

This initial idea attracted criticism as limited and already available. In their striving to support the language development of the children, group 3 used the feedback of their initial idea to develop it further. In the second iteration, group 3 broadened the scope of the technology to include interactive sensory mats and children cooperating to solve the tasks. Here the users see or hear a letter on a smart board, and the task is then to form this letter together on the sensory mat.
In combining bodily action and motor activity with the development of intellectual skills, further emphasised by co-operation and communication, group 3 connected to the tradition of preschool in order to link intellectual development with physical activity (cf. Skolverket, 2006). The design idea of group 3 furthers this tradition by including digital media in the equation.

Group 3 was the only group that actually focused on supporting the development of the children by using the technology. The technology here enables new ways of appropriating basic skills (in this case reading and writing) in a playful and cooperative way. Seen that way, group 3 was the only group that used their pedagogical competence as a starting point and asked how technology can support the development of the children.

Access and integration Group 4

The design of group 4 included two different parts. One was the possibility to choose language in an application based on what languages are spoken by the children at the actual preschool. Each language should then have a “button” on a start page, that is, “Swedish – Wolof – Urdu – Arabic”, and so on. This is again an illustration of how important language development is in this multi-ethnic municipality, and how well integrated these challenges are within the practice of the preschool(s).

The other design idea was more physical and focused on the actual placement of the hardware and the accompanying furniture (stools, tables, etc.) (cf. Image 5 below). Just as there are designated areas in the preschool for doll-play, Lego or construction play, fantasy play (clothes, jewellery, etc.), and so on, the design idea of Group 4 follows that tradition. ICT here becomes a demarked thing to use for special occasions in a special place rather than something inte-
grated within everyday practice. Through this design, the preschool teachers are able to monitor and support the children’s use of ICT, contrasting with the findings in Sandvik et al. (2012).

Again, even if the technology does offer new possibilities (language support in this case), it is still something that needs to be “tamed” and placed – here in a literal sense – in the already established practice of the preschool.

The design ideas presented here are four different ideas mirroring the flexibility as well as complexity of ICT. Herein lies a great challenge, but also the potential qualities, of using ICT in preschool. The four ideas presented in some respects sum up these challenges: how to physically place and provide access to the technology (group 4); how to use the technology as an intermediary between staff and parents or guardians, to support everyday routines (group 1); what the influences on the children are (group 2); and how to use the technology in innovative ways as a support to further the (language) development of the children (group 3).

CONCLUSIONS

The objective for the workshop was to investigate how preschool teachers conceptualise digital media by focusing on what possibilities and obstacles they
experience in using tablets, and ICT in general, in their everyday pedagogical profession. Even if the participating preschool teachers had different opinions concerning what these qualities are, they agreed that they needed a more structured support from the municipality representatives, as they themselves did not have either the experience or the knowledge regarding how to use the hardware or software available. Furthermore, the thematic analysis justifies two sets of conclusions: how reasons and arguments can be understood in relation to the notion of digital competence, and the relationship between pedagogical practice and the appropriation of ICT.

The design ideas need to be understood in this context, where preschool practice and preschool teachers struggle to develop a new relationship between technology and digital media, and pedagogical practice and the pedagogical framework. The tension between pedagogical practice and technology gave rise to two different kinds of design ideas. The first kind had everyday practical examples, such as protecting the tablet with a plastic bag or being able to choose the language on an application. In this conceptualisation, digital media do not contribute to pedagogical practice in any decisive way. The second kind of design idea took as a starting point an appreciation of ICT potential, expressed as either a threat to an idea of true human communication or as a support tool for language development. Consequently, pedagogical practice would be affected one way or another.

Even though the workshop participants argued that an evermore ubiquitous access to ICT has changed society at large, and that children can develop an active role in communicative practices by using digital media, their main attention was on what obstacles they experienced in relation to the development of necessary personal critical security in the use of digital media. Analysing the statements, the expressions of insecurity regarding not just how to use ICT in preschool but also why it should be used can be traced back to three intersecting experiences or arguments. In short, this insecurity can be described as follows: the preschool teacher identity is closely linked to the idea of the preschool as a safe haven and the role is therefore to safeguard the child from the threats of, in particular, (new) media. This means that they themselves have few or no personal experiences of perceived usefulness of digital media, further emphasised by how they are not involved in the choice or implementation of hardware or software. Therefore, in order to use ICT as a form of support “in the development and application of creative processes”, as phrased in the national curriculum for preschool (Skolverket, 2006, p. 7), confidence in the conceptualisation and eventual use of digital media needs to be developed. Preschool teachers thus need to develop a fair level of digital competence so that they can, in the end, use digital media wisely in the support of a child’s critical and democratic development (Hardersen & Guðmundsdóttir, 2012).
DISCUSSION

The objective of this article has been to investigate the possibilities, and obstacles, that preschool teachers experience when using tablets in their everyday pedagogical profession. Research suggests (Ødegaard & Knudsen, 2012) that digital media in preschool allow for new ways of creative development and also possibilities for increased social participation. In this way, digital media has a democratic potential closely associated with the relational educational ideal of the preschool (Ødegaard & Knudsen, 2012). Still, finding, using and developing the qualities of digital media in this vein will demand a participating role by adults/preschool teachers. Instead of exploring the qualities of the technology, as found by many scholars (i.e. Bolgan, 2012; Carlsen, 2013; Kjällander & Moinian, 2014; Lafton, 2012; Sandvik, 2012; Sandvik et al., 2012; Wang et al., 2010; Wolfe & Flewitt, 2010; Ødegaard & Knudsen, 2012), the technology seems to be framed by some of the participating preschool teachers as something to fight against, something that can be resisted, and something that needs to made less threatening.

At the workshop it was evident that there are different conceptualisations of digital media among the participating preschool teachers. The analysis showed not just the breadth of these conceptualisations, but also that they existed in parallel within preschool practice. Notably, none of the preschool teachers participating in the workshop explicitly referred to research or established knowledge, but rather used their own experiences, and not the least their personal values, when examining the potential of digital media in preschool practice. Two main trends can be seen, one more progressive, the other more apprehensive.

The latter can be seen as disappointing. This, as pedagogical competence, together with a great deal of experience in meeting children in different situations, could be seen as the perfect growing ground for a critical examination of any new tool or gadget. One reason this critical exploration of digital media seems to be hard to appropriate might be found in the tradition of the preschool as being a safe haven for children, outside of the demands of modern society (Tullgren, 2004; Vallberg Roth, 2006). The apprehensive approach may very well disclose a perception of digital media as not commensurable with how preschool practice in general is conceptualised, and also a perception of children as vulnerable and in need of protection (Lindahl & Folkesson, 2012; Ljung-Djärf, 2004).

On the other hand, there are examples of how access to digital media allows for critical reflection on how to develop pedagogical practice with support of such media. This reflects the findings of Bolgan (2012), where the qualities of digital media are accessible when used, and that the full potential of digital media needs to elaborated by using the technology in different ways and in different situations.
The representativeness of a study such as this is limited. Still, by being creative together, the participants and the official of the municipality, as well as the researcher, were given an opportunity to see the complexity and multiple ways of how digital media is used, made relevant and eventually conceptualised. A critical method such as a future workshop is an opportunity to reflect on and share personal experiences. The future workshop is, in this perspective, a support in the development of competences of relevance for the professionals. I would therefore suggest that a primary quality of participatory research methods lie in their supporting critical awareness, regardless of it being a matter of sharing experiences with colleagues or merely expressing (giving name to) personal experiences.

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