Preschool Teacher’s Conceptions of Computers and Play

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There are many dimensions of play and play’s significance for children’s development and learning is often emphasized, but how do preschool teachers see children’s use of computers in preschool? A qualitative study was done with 13 Swedish preschool teachers that had experience working with computers in preschool. The overall aim of this study was to examine and describe preschool teacher’s conceptions of the use of computers and play. The theoretical framework is influenced by Kurt Lewin’s (1951) concept of life-space.

The results show that the preschool teachers in the study believed the advantage of the computer in preschool was that the computer has great potential as a tool to enhance children’s development, gives ability for more equality, and the computer is viewed as an instrument for learning. The complex problems of time and resources are barriers to working with the computer for learning. All interviewees claimed that play is of the greatest importance in learning.

This article relates to how preschool teachers’ view computers in light of play. Play is central in preschool and is often seen as the most important thing to do in preschool. The study summarized here is based in Sweden. The overall aim of this study is to examine and describe preschool teacher’s conceptions of the use of computers and play. The aim in this interview study illustrates the following main questions:
What do preschool teachers think about computers in preschool settings?

Which forces exist in working with the computer and play in preschool according to preschool teachers?

How do preschool teachers think the computer influences activity in preschool?

What is the atmosphere when children are sitting in front of the computer and in play?

When computers are being used in preschool settings, critical questions must be addressed including: What can computers imply for the work in preschool? Do preschool teachers feel it is necessary for children of preschool age to use a computer? If so, why? These questions can be discussed through Lewin’s concept of life-space. This concept states that the individual’s needs, psychological environment, and behavior are a function of life space. Lewin emphasizes that the act of the individual is based on cooperation between the individual and his/her environment.

Play

Play has many dimensions and degrees of importance as it relates to the development and learning of children, which is referenced frequently in child development research (e.g., Piaget, 1962; Vygotsky, 1933/1966; Johnson, Christie, & Yawkey, 1999; Pramling-Samuelsson & Sheridan, 1999). Preschool teachers use it frequently as a means of stimulation for development and also the pedagogic method of learning. Through play, children receive experiences and experiences give knowledge. Pramling-Samuelsson pointed out the metacognition dimension in play as well as the importance of all opportunities for learning that present themselves through play (Pramling, 1986, 1992, 1993; Doverborg, Pramling, & Qvarsell, 1987; Pramling & Mårdsjö, 1994; Doverborg & Pramling, 1995; Pramling-Samuelsson, 1997; Pramling-Samuelsson & Mauritzon, 1997; Pramling-Samuelsson & Sheridan, 1999). They also think that it’s of great importance that the children are allowed to work with ideas and concepts in their play. The Swedish curriculum for preschools (Swedish Ministry of Education and Science, 1998) stated that play in children’s learning and development is highlighted.

Play is a natural phenomenon that is the code to children’s development according to most teachers. But we have very little knowledge of the preschool teachers’ conceptions about the use of computers and their influence on children’s play. What is the preschool teachers’ view of play in relation to
computers in today’s classrooms? We found computers both fascinate and terrify preschool teachers. Children below the age of seven in Sweden encounter a new technology and seek to grasp its role and function. Teachers struggle to determine it’s impact and role in the classroom as well ponder questions including whether the computer decreases the time children play and the affect it has on other activities.

But do children learn something of value when they use the computer? According to Healy (1998) children with little experience are almost immediately at the same level as peers with lots of computer experience. Is Information Technology (IT) useful for learning? Healy (1998) is of the opinion from her research that spontaneous play has higher knowledge value in comparison with computer-controlled learning. Spontaneous play and physical activities outside are important for child development, she explained the reasons as, stress reduction, health improvement, and increased self-confidence.

**Preschool Children and Computers**

A study was performed earlier by Juhlin-Svensson, Sandberg, and Eriksson (1997) where the focus was preschool teachers, schoolteachers and pupils, and their interpretation of the use of information technology. In this report the computer was conceived to be introduced in preschool as a technical tool. The motive was that the children should acquaint themselves with the computer because it exists in today’s society and can be used in school preparation. Preapplication, preschool teachers were apprehensive that the work with computers would take time away from the children’s non-IT activities. They expressed that the value of computers in preschool was that the children’s language development improved, cooperation between the children improved, and the element of fun compensated for the negative aspects originally anticipated.

**Life-Space**

Kurt Lewin, a German philosopher and psychologist, was the first psychologist that used an ecological approach in his theories and research. Lewin is famous for the development and conception of life-space. Lewin (1951) saw human behavior as a product of cooperation between the individual and the environment. This has been formulated in a classic formula
$B = f (P \times E)$, where $B$ represents behavior, $P$ person, and $E$ environment. Behavior is a function ($f$) of interplay between a person and the environment. Fundamental in Lewin’s formula is the mutual perspective of the environment affecting the individual, but the individual can also affect his/her environment. Lewin was interested in the theory’s practical application and how people experienced their environment. The environment, for Lewin, exists in the individual’s life-space (Lewin, 1951; Andersson, 1993; Bonnes & Secchiaroli, 1995). The individual’s life-space includes active *forces, value, instincts, boundaries, and barriers*. Value, as described by Lewin (1951) is a key issue and can be negative or positive depending on if things, situations, or individuals are unpleasant or attractive for the person. Lewin emphasized that the broader ratio in life-space depends partly on acts from the individual personally. Björklid (1980, 1982) asserted that the barriers can be both physical and social. The final action is decided by the combination of value, instinct, boundaries, and barriers collectively, which results in a powerful force-affecting behavior. The basis for Lewin is the experiences. How an environment is experienced depends on the individual developmental level and the situation the individual is in during the occasion. But Lewin also pointed out that the individual’s earlier experiences through life-space are the result of earlier experiences that create the processes that are active in life-space.

![Life-space Diagram](Figure 1. Concept in life-space)

**METHOD**

The study was designed as a qualitative study with interviews. To get a description of the preschool teachers’ conceptions of the use of computers in preschool and play, inspiration was derived from Lewin’s concept life-space.
Subjects and Procedure

Study participants consisted of 13 preschool teachers from 13 different preschools in an average Swedish municipality. All the participants were women. Preschool teachers were selected for participation if they had experience working with computers in preschool settings. The preschool teachers had between seven and 23 years of experience in the field of childcare. This sample is of course not representative of all preschool teachers in Sweden, but it shows a tendency to preschool teachers conceptions of computers and play. Miles and Huberman (1994) considered when one works with qualitative research one uses small samples of people and the samples are purposive and often theory-driven. In this study it was preschool teachers and Lewin’s concept of life-space.

The preschools in this study are intended for children from one-five years old. In Sweden, children from one-five years of age are in preschools. When children are six years old they leave the preschool class and start the school system. The preschool setting was representative of different socioeconomic areas in Sweden that many children grow up in today, that is, preschools situated in the Swedish countryside and also in urbanized areas.

Interview questions focused on the use of computers, the force of play, the value of play with a computer, instincts, boundaries, and barriers that exist working with computers as a tool for play in a preschool setting. Also questions on the purpose and effect of computers on the play outcomes were asked. The interviews were performed at the office of subjects, lasting an average of 60 minutes. All interviews were performed with a tape recorder and transcribed verbatim. All interviewees provided descriptions of their conceptions of children, computers, and play.

Thereafter, a qualitative analysis of interviews was made. The preschool teachers views of computer and play in preschool were studied according to conception of life-space inspired by Lewin.

Glaser and Strauss (1967), Patton (1990), Miles and Huberman (1994), and Mertens (1998) argued that in qualitative analysis basic features are to compare different answers, look for similarities/differences, and discover new dimensions that relate to each other in a meaningful way.

The goal has been to create an understanding and put in context, the content of the interviews. The analysis of the interviews was made in four steps. The first step occurred with the data printout of the interviews. Step two consisted of reading through every interview from the actual interview period several times to obtain knowledge about the material. The purpose of the overview was to obtain a comprehension of the whole content and enable the researcher to identify patterns in the material that were distinct.
Step three was comprised of a review of every interview based upon the different area and dividing the interviews into special areas. The final step consisted of a comparison of the answers with the initial point of similarities and dissimilarities to get variations in the conceptions of the phenomena. The reasoning involved the separation of different ways in which preschool teachers comprehended computers and play in preschools, and also a selection of certain preschool teacher’s descriptions, which clearly enlightened the meaning of a category. The analysis of the comparison between the answers, revealing variations and detecting similarities and differences between conceptions is central to the study.

RESULTS

The purpose is not to generalize the results from the research—it only concerns the research group—it can give an identification of preschool teacher’s conceptions of computers and play. Therefore the sample did not have to be done through different criteria, for example age. It was not the frequencies of responses that had significance; instead the focus was on the conceptions.

The preschool teachers were interviewed regarding their perceptions of children’s play and the use of computers in preschool. This related to Lewin’s concept life-space, that is, what can the work with computers and play imply from Lewin’s concept forces, value, instincts, boundaries, and barriers. Categories are from a child-perspective and an adult-perspective.

The conceptions regarding play and the use of computers can be described in dimensions of contents, illustrating different aspects of computers and their role in preschool:

- equality,
- resources,
- lack of time,
- the computer as a tool for learning,
- atmosphere, and
- play with computer.

Equality

A value aspect conveyed by the preschool teachers in the study was that all children shall have same chance in the future and that dealt with
equality between sexes. Through the use of the computer as early as pre-
school, this would hopefully result in more equality later in the school and
working life. They pointed out that all people do not have access to a com-
puter at home, so it was good to have access to a computer in preschool so
that all children have an opportunity to try the computer. A preschool teach-
er also pointed out that children who have not had high status in the group
can become popular as an informed peer with a special skill desired by oth-
er children.

Resources

The preschool teacher’s statements from the child’s perspective of a
boundary in the work with computers in preschool settings in Sweden are
the lack of resources, that is, adequate number of software programs and
computers. This meant that many children did not have access to a comput-
er, which caused queuing. Children often must wait to use a computer and
cannot access one when they realize that there is an activity they would like
to do immediately.

Barriers from the adult perspective that the participants pointed out
were that they require more support and knowledge when problems arise
with the computer. Two of the preschool teachers in the study meant that
this was a negative aspect of having a computer in preschool. Preschool
teachers would need more education about using a computer and how to
handle problems that arise.

Lack of Time for the Teacher

Time is a boundary in the work with a computer in a preschool setting
since so much time deals with practical issues, for example, meals, helping
the children dress, and bathroom routines. Other explanations provided
were the difficulty of getting enough time to sit and actually work with the
computer. This is due to the fact that preschool teachers can not sit for long
periods of time at the computer since they work in a team, with different
schedules and large groups of children and have very little computer training.

A barrier that one of the preschool teachers pointed out was that the re-
sult is negative if your time using a computer in preschool is limited. Pre-
school teachers stated that if the children did not have time limitations then
you could create tension between children who use the computer and those
who don’t. But another preschool teacher in the study had a different opinion that they would not allow children to sit for long periods of time at the computer.

The Computer as a Tool for Learning

The preschool teachers expressed their perceptions of the computer as an instrument from both a child’s view and an adult view.

*Child’s perspective.* The conceptions presented gives value to the use of a computer in preschool and showed that the computer provides enormous possibilities for child development. Several of the participants in the study stated that they used the computer with the goal of learning. The preschool teachers told of “automatic learning” through the use of language programs, Lexia, TRP, and “preschool program.” Two of the participants in the study reported that the children received certain knowledge through the pedagogic applications such as prepositions, colors, shapes, and counting skills. A conception one of the participants gave was that the children teach themselves an increased number of words and pointed out that it’s important to use cultural specific software so children recognize the words themselves.

The participants in the study had the conception that the computer constituted a force that one should use in preschool for the children to learn for themselves how to use the technology of today. The computer will be a common technical tool for tomorrow’s children who will be impacted by many different experiences, one of which will be a computer.

The preschool teachers pointed out that it’s a force that all children try to use a computer and learn different functions such as how to begin a program, use the mouse, turn off the machine, and use the printer. By accomplishing simple tasks they can further develop other skills, for example, to create books, which can be translated into a form of pedagogic equipment. In preschool the computer influenced the children’s activities in that the children’s words and thoughts have become more visual, illustrated in many forms, for example, in drawings and creating their own books.

Using a computer was described as being good for children to have learned when they begin school to enhance their ability to seek knowledge in a different manner and as an opportunity to force the children’s self-confidence. Preschool teachers also said that the purpose of the computer in preschool was the *instinct* to use the computer like teaching educational
aids for children with language difficulties for example, let the children create with their fingers what they have difficulty expressing. One of the preschool teachers thought it was especially good for helping children that had difficulties drawing, writing, and reading. She gave examples of children with visual impairments, telling how the computer can help them to pronounce words. Also, a major area of use was for children with hearing impairments and physical handicaps. Some of the participants pointed out that the preschool teachers could impress the children with words, sitting quietly, concentrating, and trying to cooperate with each other and their community.

An additional pedagogic force of the computer was its use with children with concentration difficulties as the preschool teacher could get the children “interested” in the task. The computer was used here as both a learning tool and a toy. The motivation for this was that there exists a moment into which comes play and it’s games. One of the participants in the study did a comparison and described the computer as a tool, just like a pencil and eraser that requires people to learn for themselves.

**Adult’s perspective.** The computer is also an instrument that, according to preschool teachers, has a place in pedagogic activity as a source of documentation. The computer could allow documentation to follow the child from the preschool to the school setting more easily and result in a longitudinal documentation of a child’s work. At a preschool in the study, one of preschool teachers noted that the documentation task is more fun to accomplish and that the documentation process has been simplified. Computer documentation also made the work of the preschool visual to both the parents and the children. A force with the computers was also that the information was more effective through the use of a CD-ROM.

The participants pointed out the value that parents, in a simpler manner, could take part in documentation of what happens in preschool. This is a big advantage, especially for parents who pick up and leave their child at different departments. These parents do not see the child’s teacher often and are unaware of what the child has done during the day. Through computerized documentation they have a chance to learn and supplement opportunities of engaging with the child. In Sweden it is common that preschools only have one department open for all children in the morning between 6:30 – 7:30 a.m. When the ordinary preschool teacher begins work at 7:30 a.m. the child goes to his/her ordinary department. The same occurs in the afternoon that is, one department is opened for all children that are picked up by their parents after 5 p.m.

From the preschool teacher’s perspective there were possibilities regarding the use of a computer to aid in the administration of the preschool:
You can take today when we have no personnel, as sitting the personnel and writes salary reports each month. You are sitting and writing schedules, how much time is not put on schedules, reports about overtime, vacation. All these can be put into the computer. You ought to be able to get more personnel to preschool if you install good computer systems that can take across such bits, the children schedules and children’s absence and presence. There exists a lot of, purchases, inventories of materials, store there really are no limitations.

In one of the preschools, teachers reported that personnel from the beginning had been negative about the computer in preschool. After some time the personnel altered their opinions and thought that it was good that children could see adults using the computer in a valuable manner. For example, creating learning or communication materials, using self-authored programs, and documenting, among other things, play.

Another perception concerned the instinct that the preschool teachers continue to develop their skills and receive new knowledge. There was a preschool teacher who had learned how to use the computer without the feeling of fear of destroying something on the computer, that is, disappearing text or pushing the wrong button. Some of the participants thought there was a need to be challenged more and that it’s difficult for the teachers who choose to learn the computer themselves. However, all interviewees claimed that play is of the greatest importance in learning.

Atmosphere at the Computer and in Play

In this category the preschool teachers expressed that there was a positive atmosphere when the children worked at the computer. The children helped each other and there was good collaboration. The children can work on activities that they avoided at other opportunities, for example, boys and girls working together, which would not occur otherwise. Another reason to use a computer in this setting was that the children have a positive connection with each other when they solve problems together. One of the participants explained that before they had begun working with the computer in preschool, she had preconceived ideas of what it would be like. She thought that the children who worked on the computer were the children who were best at using a computer and that the other children would only sit beside them and watch. Instead children cooperated more than what she thought they would. According to some of the preschool teachers the children thought that it was exciting and fun to sit at the computer.
One participant had mixed feelings about the computer as she felt a certain resistance towards the use of the computer in preschool. She reflected about whether or not the computer had a purpose for children in preschool, if they needed computers in preschool when so many children needed physical contact. In the interview she described how the team had critically reviewed the computer programs. The team had discussed how they would use the computer and, which one would get to use the computer.

Some of the participants expressed that the children should have experiences, which stimulate all their senses and not just be sitting in front of a computer. They stated reasons for their positions as the experience of a cold, hard screen when children need to experience taste, touch, smell, and sight which a computer cannot provide. Other arguments were that you have a greater emotional exchange with other people than with a computer, the computer is a machine incapable of feeling. A comparison was made between a computer’s and child’s ability to relate to another’s feelings, meaning one must take into consideration if the child becomes sad or furious, which cannot happen with a computer. One can become furious, but you receive no response regarding feelings and no reaction from a computer. According the participants, the atmosphere when the children played was joyful but also loud, troublesome, and fraught with conflict.

**Play and Computers**

There wasn’t a separation of play and computers, due to the fact that the preschool teachers saw a boundary ensuring that there was enough time to play. Also, the fact that all children could not be at the computer simultaneously, caused the children to become tired of waiting and they would go to other areas and play. The computer supplied new satisfaction with some children in their day-to-day world. The computer however is not equally desirable to all children.

The participants in the study believed that play has the most important value in childcare. The participants thought that the force in play is that in play children receive experiences, solve problems, and through play you can correct social problems such as bullying. Furthermore participants pointed out the force that play is the greatest tool, since through play you can see the children’s development and the children learn through play.

Other conceptions of play and computers are that one of the preschool teachers believed that children identify themselves with adults in play and to sit at the computer was a way to identify themselves with a grown up. Life-space is summarized in Table 1.
### Table 1
An Overview of Life-Space

<table>
<thead>
<tr>
<th>Life-space</th>
<th>Child perspective</th>
<th>Adult perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value – use of computer</td>
<td>Same chance in future. Possibilities for child development.</td>
<td>Parents can get information and documentation of what happen in preschool. Aid in the administration of the preschool.</td>
</tr>
<tr>
<td>Value - play</td>
<td>Play has the greatest value in childcare.</td>
<td></td>
</tr>
<tr>
<td>Instinct - use of computer</td>
<td>Good for helping children with different difficulties.</td>
<td>Preschool teachers are developing continue to their skills and receive new knowledge.</td>
</tr>
<tr>
<td>Boundary - use of computer</td>
<td>Lack of resources. Time limitation.</td>
<td>Time limitation.</td>
</tr>
<tr>
<td>Boundary – play</td>
<td>Time limitation.</td>
<td></td>
</tr>
<tr>
<td>Barriers - use of computer</td>
<td></td>
<td>Require more support and knowledge.</td>
</tr>
<tr>
<td>Force - play</td>
<td>Child development and learning.</td>
<td></td>
</tr>
</tbody>
</table>

An interesting aspect is that the preschool teachers mostly talk about the use of computers in preschool, but they give a higher value to play because play is the most important element in childcare. They only talk about play from a child’s perspective. Use of computers in preschool and play shares some similarities, that is, time limitation, child development, learning with computers, and play.

**CONCLUSION**

What do preschool teachers think about computers in preschool settings? Which force exists in work with the computer and play in preschool according to preschool teachers? From Lewin’s (1951) concepts of life-space,
the preschool teachers in the study believed that an advantage of the computer in preschool was that the computer has great potential as a tool to enhance children’s development, creates the ability for a greater equality, and they view the computer as a tool for learning. The computer is an aid for helping children with different handicaps. One can obtain information and the computer is good for documentation. The complex problems of time and resources are boundaries to the work with the computer for learning. The force in play is child development and learning.

Lewin (1951) is of the opinion that values can be both negative and positive. The preschool teachers in this study have positive values for the use of computers in preschool because it gives enormous possibilities. But the preschool teachers are of the same opinion as Healy (1998) that play has a higher knowledge value in comparison with computer-controlled learning.

According to Björklid (1980, 1982) barriers can be both physical and social. In this study the barriers are social, the preschool teachers indicated that they needed more support and knowledge when they had problems with the computer.

How do preschool teachers think that the computer has influenced activity in preschool? Gustafsson, Mellgren, Klerfelt, and Pramling-Samuelsson (1998) pointed out that when new technology is introduced it is confronted with both enthusiasm and criticism. Haugland and Wright (1997) pointed out that the opponent thinks that computers shall not be placed in preschools, since computers “...replaces other activities.” But Henninger (cited in Johnson, Christie, & Yawkey, 1999) thought that software can stimulate children’s fantasies and create play when it is simple in design but complex in use. Play is children’s reality. Why not integrate play and computers in preschool? This study showed that there is nothing contradictory between computers and play. Of course some preschool teacher’s pointed out that a great interest exists for the computers from all the children that wanted to use them, but that it was due to the novelty.

Another criticism is that they “will rob children of their childhood,” “reduce the feeling awareness,” and also “creativity.” Based on these assertions one should be careful with the use of drill-programs that can result in these assertions being fulfilled. Instead one should reflect over Papert’s (1996) thoughts, where he pointed out that parents acquire thoughts about learning and that parents could better share children’s learning if they critically reviewed their own learning and development, and changed their views on learning. The computer affects learning and the learning culture affects what you do with the computer. This can also be valid for the preschool teachers in this study that explore the computer through self-studies.
and learn by experimenting with it. This is also valid if they can sit together with the children and teach each other, which is also good for the children’s self-esteem.

An additional opinion Haugland and Wright (1997) had is that it “provides children with an unrealistic image of the world.” This assertion can be made when the preschool teachers and the children create their own computer games as Papert (1996) suggested. Papert (1996) was critical of the pedagogical computer programs that exist on the market, which use old traditional teaching methods and view the children as answering machines. Papert stressed that you could not use old teaching methods and that you should not arrange computer games with number cards for the children to learn the multiplication tables. The best learning occurs if the children participate in the process. Several interviewees in this study commented that they used the computer for teaching purposes and used different software programs. There were preschool teachers that meant that they wanted to develop their work with the computer by letting the children create their own books. Papert (1996) meant that instead of using existing computer games you should know how to design computer games. Papert described that a constructionistic strategy means that you are the designer. They learn to program computers and develop psychological, social, and moral thoughts and increase the children’s self-esteem. This is a challenge for preschools to develop, as the personnel frequently expressed that they had poor computer skills.

Haugland and Wright (1997) asserted that the computer should not be used by itself, but integrated with other activities in preschool. The personnel in this investigation pointed out that they viewed the computer as a pedagogic facility and an instrument.

Another critical idea was that it “leads to social isolation.” Haugland and Wright (1997) defended this assertion with research that has proven otherwise. Also, the preschool teachers in this study reported a positive collaboration between the children. Swedish investigations (Svensson, 1996; Appelberg & Eriksson, 1999) have also shown that collaboration is improved when children are sitting at the computer together.

What is the atmosphere when children are sitting in front of the computer or in play? From the results of the study it is obvious that the preschool teachers think that children’s self-confidence can be increased through use of computers. This is in line with studies (Gustafsson et al., 1998; Gustafsson, Mellgren, Klerfelt, & Pramling-Samuelsson, 1999) where the teachers’ experiences were that the children experienced success and happiness when they worked with the computer and this confirmed what the children saw as the result.
In play you have an enormously warm atmosphere. The participants perceived that through play you can correct social problems, such as bullying.

The preschool teachers in the study speak of equality of the sexes. Juhlin-Svensson, Sandberg, and Eriksson’s (1997) study revealed that there was no obvious appreciable difference between boys and girls in the use of information technology (IT) in years three - six. From the children’s interviews it may be concluded that half of the girls think that boys and girls use the computer equally and frequently. Svensson (1996) emphasized that there were no sex differences regarding interest when it comes to working with the computer, according to pedagogues in her study. Svensson answered the question if boys and girls used the computer in different manners and referred to some pedagogues in her study who demonstrated that girls had more creative activities at the computer and boys played games.

This study showed that the computer was useful for different types of documentation. Haugland and Wright (1997) also pointed this out. They determined that it’s important to highlight the different steps in child development and that teacher observations must focus on the children’s thoughts and feelings, understandings, mistakes, and solutions.

One must agree with Papert’s (1996) assertion that “across the world there is a passionate love affair between children and computers” (p. 11) and it is important that adults are careful and keen in this love affair. Finally, one must conclude that a knowing pedagogic standpoint from the personnel is required, to use the computer and play in preschool. They also must reflect what society the children will meet in the future. Personnel in preschool cannot “protect” children from the computer, but can acquire capabilities to enhance the use and limit preschool teachers control of it’s role to meet the challenge of IT—the society. According to Sturmark (1997), in 2010 more than 50% of all people practicing a profession will work with informative work. This will of course have an effect on people’s vital necessities, development, and culture. This means that a number of professions that earlier did not require computer competence will do so in the future. Preschool teachers cannot wait for this! Instead they must be open to this development, see the possibilities, and not concentrate on the obstacles. It is about the attitude towards the computer in preschool, not about how many computers are available. In the future, preschool teachers and children can hopefully create different collaboration projects using the computer.
References


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