New culture with ICT in pre-school education. What do children know about mobile telephones as a tool of communication?

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Introduction

Children live in and are members of society, and they learn from all of the society that they see around them. ICT (Information and Communication Technology) is a modern form of communication, and wireless communication is one part of this new media: it contributes to an open learning environment. ICT is a common part of young children's lives.

This research is based on theories of contextualism (Bronfenbrenner 1997, Hujala etc. 1998) and the concept that the living environment affects child development, experience and learning. Communication and interpersonal contact theory suggests that communication between children and their culture is very important. In contemporary society, children very easily use many different forms of ICT; they use computers, telephones and emails in their daily lives. These media allow them to take more control of their own learning and to communicate efficiently with other people, sometimes on world-wide scale. However, young children who are not yet able to read and write need some help and support in using such equipment.

Our pre-school group's research focussed on children's learning to use a mobile telephone to communicate with others. Children learn these sorts of activities in their everyday life and these new media are naturally contextualised into children's lives. Our ways of life are changing: parents, other adults and teachers need to notice that children are discovering new ways to communicate, and they need to understand that these 'new' methods are very natural for young children – who find them rather easier to handle than do many adults. Teachers have to develop their teaching and learning methods to take account of this.

Children's learning and living environment

A child will live in a number of different environments in their day, each of which will have an influence on them. These environments include home, day-care and pre-school, and the individuals in these environments may include parents, siblings and relatives. Children gain experiences from these contexts of many kinds and learn from these. Learning occurs when individuals come into contact with others directly, in face-to face interactions, or indirectly through books or other visual forms of communication (Cook and Finlayson 1999, Mallet 1999). Thus a social context in which the nursery children play with laptops naturally supports their learning. The electronic context of home and school means that children have different toys and gadgets around them, for example button operated talking toys, remote or button controlled robots, palmtop computers etc.(Cook and Finlayson 1999).

From a pedagogical perspective, learning is both the process of the child and the approach of the teacher, made concrete through interactions and processes related to overall goals (Pramling Samuelsson and Sheridan 2000). Cognitive psychology, constructivism and contextual learning models provide the main theoretical underpinning, guaranteeing that

in learning the child receives care and support so that his or her self-confidence and emotional life develops. This kind of learning environment gives a child the potential to know his or her own culture and to identifying with it (Katz 1999, Poikela 1999, Tynjälä 1999). Everything that surrounds children is important for learning and developing. Within their own culture, children learn social rules and communication skills together, and create their own play and social culture together. The responsibility of teachers and parents is to arrange activities and learning environments for children (Hujala etc. 1999). While child-centred education is effective, teachers must also recognise that there needs to be a good balance between child-centered and teacher-directed education. How, for instance, should parents and teachers teach children to use ICT in homes and classrooms?

When children learn to communicate with phones this is not simply a cognitive process but also an emotional and social process. Children learn both the culture and behaviour from what they see in their environment and from their families. Communication is a very important learning area and during the pre-school year children learn the basis of behaviour in good communication. It is important that children recognise that communication is always between human beings and that technology is only an aid towards this.

The research

This research examines what pre-school children know about mobile telephones, how they learned to use them, and at what age they had started to use this kind of telephone. In this part of research the subjects (N=16) were six-year old children in a pre-school group.[1] The children were first asked to draw a telephone and were then interviewed. The interviews lasted about twenty minutes: children were asked what they knew about mobile telephone, if they have used one independently, who taught them to use it, what they knew about text messages, and have they received or sent text messages. The children were very interested in these questions and they talked freely about their experiences. After the interviews had been completed the children had intensive teaching on this topic for two weeks in their pre-school group: this included discussions, direct teaching and playing. The main method in this intervention was child-centered investigation, dialogue between children and teachers, and dramatic plays based on fairytales.

Preliminary results

Drawings of telephones

Most children (13) drew a mobile telephone and the other three drew a conventional 'table telephone'. They included many details, such as numbers, letters, marks and different decorations in their drawings. The models of telephones were the same as those they had in their homes.

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[1] The research also included the 1st and 2nd grades of primary school and the total number of subjects was 111, but the focus is on pre-school children in this document.

The use of mobile telephone

In the interviews the children explained many technical details of using a mobile telephone. Most of them knew what a battery is, how it works and how it must be filled. They were able to distinguish between when a telephone is as a toy and when it is real. All of the children had used a mobile telephone at some time and they had various experiences with them. Initially they had all used it with somebody to help, but half of these children (8) could now use it by themselves.

When asked how they had learned to use a mobile telephone and who had taught them, they answered that they had learned at home, when they had seen older siblings or parents using telephones. Most had got advice from their mother or grandmother. The children were asked what people do with mobile telephones: mostly they suggested that people ask for help, give information to somebody, or play games.

Knowledge of text messages

Most of the pre-school children (12) knew what is a text message was, even though they were not yet able to read or write themselves. Many had sent a text message to somebody, helped by an older person. The children had very clear ideas about what text messages are for. They knew about the use of this kind of communication, though they could not use it independently.

Conclusion

These preliminary results suggest that six-year old pre-school children know many of the different technological features of mobile telephones. They also know what this communication is for, how people use it, and how to behave when they are calling. All these things they have learned at an early age. They have seen the telephones in their families and living environments. It seems that mobile telephones are a natural part of pre-school children's lives and are a part of communication in their daily life. This research is still in progress, and these results are not yet generalisable.

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