

Investigating the Attitude of Teachers and Parents in the Internet era: A Case Study of Preschoolers' Use of Mobile Devices to learn English in a Class of Shanghai Kindergarten

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Abstract: With the rapid development of technology, English learning becomes more and more important. In the mobile Internet era, more and more pre-school children use tablets, smart phones and other mobile electronic devices to learn English. On the one hand, teachers and parents hope that preschoolers could master relevant mobile network technologies for learning. On the other hand, they also express concerns about the excessive or premature use of mobile devices by young children. Therefore, this paper intends to investigate the attitudes of teachers and parents about pre-school children's use of mobile electronic devices based on a case study conducted in a kindergarten in Shanghai. The paper also analyzes the causes of anxiety and other influencing factors for teachers and parents and suggests a series of effective recommendations and measures about the use of the mobile electronic devices in the pre-school English education.

Keywords: preschooler; mobile electronic devices; attitudes

1. Introduction

With the development of mobile information and communication, cloud technology, big data and other modern information technology, there are many things further enriching the pre-school education information resources, such as micro-curriculum, APPs, wearable equipment and so on. In the local government guidance and support, many kindergartens rely on the local pre-school education information platform to provide mobile electronic devices for pre-school children's learning. With the arrival of "Internet + era", the mobile terminal equipment on the early class of APP in the market get popular, which causes the boom of the majority of preschool children using mobile equipment in English learning.

At present, China's preschool education community is committed to advocating infiltration and integration of education. In particular, more emphasis is placed on the role of language. Children communicate with each other via language. They also develop their interpersonal skills, and the ability to determine the situation, the ability to organize their own minds (Saunders, B.1979). Pre-school children use mobile devices to learn English, which adapts to the current education of mobile Internet era and reduce the burden on parents. What is more, it can improve the diversity of English learning and stimulate the interest of learning English. On the other hand, children are attracted by the new media technology, but the development of children's cognitive ability is greatly influenced by intelligent mobile devices. So many teachers and parents show anxious in response to preschoolers' use of mobile devices to learn English. Therefore, it is important to investigate the attitude towards teachers and parents for pre-school children using mobile devices to learn English.

This paper mainly explores the attitudes to teachers and parents for the use of mobile devices in preschool children in kindergarten class in Shanghai. Questionnaire and focus group interviews

were conducted to investigate teachers' and parents' attitudes toward preschooler's use of mobile devices to learn English in a class of Shanghai kindergarten.

2. Literature review

2.1 The definition of mobile devices and its application in schools

Mobile devices are portable lightweight devices that are sometimes small enough to accommodate in pockets or in the palm of one's hand. For example, Tablet personal computer is one of the mobile devices which can be used to interact with other people and equipment, draw charts, take notes, process operations and watch video lectures (Fojtik, R.2015). It is very convenient for pre-school children to use mobile devices to read electronic textbooks, e-books for innovative education needs (Zaranis, N., Kalogiannakis, M., & Papadakis, S. 2013). In the "Internet +" era, some language learning abilities are very crucial to preschoolers, including phonological awareness, alphabetical spelling, verbal reading, vocabulary and comprehension (Staa, B. V., & Reis, L. 2009). The researchers provide preschoolers with e-books that meet their reading level and are embedded with electronic dictionaries, when children encounter unknowing words, interpretation would be given after clicking on the words, including the meaning of the word voice, animation and correct spelling methods. Relevant studies have shown that children are able to grasp these words more quickly by using mobile devices (Lei, H. E. 2009).

In recent years, with the rapid development of information technology, it is more convenient to disseminate information through new media, in particular, vivid images with gorgeous colors attract the attention of young people (Wan, M. W. I., Ahmad, F., Amin, M. A. M., Deris, M. S. M., Rozaimie, A., & Wan, M. R. W. I., et al. 2010). Modern brain science research also shows that the brain of "digital indigenous" is changing. Learners are good at dealing with a variety of tasks at the same time. And they are keen to receive all kinds of information quickly and favor game-based learning rather than "serious" organized work. In the information society, students are required to possess learning ability, cooperation ability and information processing ability (Zhong, J., He, J., & Liu, Z. 2015). Therefore, the key to the rejuvenation of preschool children is that parents and teachers can have a rational understanding about new media technology products, and they are able to monitor and guide children to use intelligent electronic products such as iPad (Tan, Y. C., Li, M. A., & Wang, R. N. 2016). Some of the above studies showed that in the field of modern diversified education, more and more learning methods are combined with mobile devices, especially in pre-school children's English learning. In the field of English learning of pre-school children, the rapid development of technology makes the application of mobile devices indispensable.

2.2 The impact of mobile devices on the pre-school children' learning

The emergence of digital media displayed rich visual and auditory feature that can be used to promote children's learning in recreation (Calvert, S. L. 2008). Some research showed that children can read e-book faster by using e-book readers, compared to the print version, they prefer e-books (Maynard, S. 2010). In addition, studies have found that social interaction between children increased when they used tablet computer applications rather than paper books in storytelling activities. This newer interaction increased the participation of the children because they are experiencing more pleasant activities, gaining more confidence and less anxiety (Hourcade, J. P., Williams, S. R., Miller, E. A., Huebner, K. E., & Liang, L. J. 2013). Most children use mobile devices to watch videos, play games for a long time, teachers and parents expressed varying degrees of concern about children's media utilization. At the same time, studies have shown that the intangible nature of the digital text gives the reader a shallow and less focused reading experience (Mangen, A. 2008), That is, digital reading is not the same as paper reading, the information technology involved will affect reader's attention and persistence. There were also studies pointed out the fact normal vision of children exposed to electronic products too frequently may lead to their eye discomfort (Li, S., Jin, X., Wu, S., Jiang, F., Yan, C., & Shen, X. 2007). Therefore, this study conducted a questionnaire survey and interviews on teachers 'and parents' attitudes towards pre-school children using mobile devices for English learning.

2.3 The attitude to teachers and parents for pre-school children using electronic mobile devices to learn English

Pre-school stage is the fastest development of language, many teachers and parents are particularly concerned about young children's English learning. Today, the quantity of pre-school children's English learning applications is also improved. Compared with adults, preschoolers make significant differences in habits and physical and mental development (Price, S., Jewitt, C., & Crescenzi, L. 2015). While skilled in using mobile devices for English learning, some preschoolers lack of the self-control ability and easily waste too much time playing. Teachers and parents should have the ability to cultivate pre-school children's interest in learning English and habits, and help them choose the appropriate applications. They also need to have some technical knowledge, so as to guide children to learn better. Therefore, it is important to investigate the attitude of teachers and parents for preschoolers to learn English by using mobile devices. Their attitudes would directly affect whether preschoolers could use mobile devices to learn English effectively and efficiently.

2.4 Research questions

This paper puts forward the following two research questions:

- (1) What is parents' attitude toward preschoolers' use of mobile devices to learn English?
- (2) What are the concerns of teachers toward using mobile devices to teach English and their attitude towards preschoolers' use of mobile devices in English learning?

3. Research methods and design

3.1 Participants

In this study, 39 pre-school children' parents and the corresponding eight teachers in a kindergarten class in Shanghai were studied in order to investigate their attitude towards pre-school children using e-mobile devices for English learning. For eight instructors, an interview was conducted to conduct an in-depth interview with their pre-school children's use of mobile devices for English learning. We conducted a questionnaire survey for parents, and it includes five variables: "importance", "usefulness", "validity", "support degree" and "educational investment intention" in the aspects of cognition, practice, experience and comprehensive attitude.

3.2 The design of questionnaire

A questionnaire is used based on "Parents' attitude towards young children's learning American English" compiled by Cai Zhenghua in Taiwan's Nanhua University. The questionnaire includes five independent variables such as "importance", "usefulness", "validity", "support degree" and "educational investment intention" in the aspects of cognition, practice, experience and comprehensive attitude. A total of 39 parents' questionnaires were collected, with the effective rate of 100%.

3.3 Teacher interview scale design

Considering the number of teachers ($N = 8$), this study interviewed teachers on their attitude toward preschoolers use of mobile devices for English learning. The interview protocol covers "awareness", "usage", "accreditation", "the type of mobile device used in the teaching process", "the attitude towards new technology in the education process", "The type of after-class use of education application", "whether to recommend parents to use mobile devices to learn with children" and other seven dimensions.

4. Research results

4.1 The analysis of parents' attitudes to pre-school children using mobile devices to learn English

According to the correlation analysis in SPSS, the Cronbach's alpha shows that the reliability of the questionnaire reaches 0.7 and beyond, indicating that the reliability of the questionnaire is relatively high. Through an analysis of parents' questionnaires, most parents support their children to use mobile devices in English learning. Table 1 shows the statistical results of parents' attitudes towards children use of mobile devices in English learning. As shown in Table 1, most parents admit the importance of modern technology, and show great support for children using information technology to learn English. However, some parents are not fully aware of the importance of information technology in children's English learning. On the whole, parents are very supportive of "pre-school children using mobile learning for English learning." In terms of parents' own information literacy and providing counsel for children, the use of information technology plays a positive role in promoting the development and learning of children.

Table1 : The survey on Parents' attitudes to children using mobile devices to learn English

Dimension	Strongly disagree	Disagree	Agree	Strongly agree
Importance	2.6%	13.2%	60.5%	23.7%
Usefulness	0	10.5%	78.9%	10.6%
Effectiveness	0	15.4%	71.8%	12.8%
Levels of support	0	15.4%	64.1%	20.5%
Investment Willingness	0	21.0%	65.8%	13.2%

4.1.1 Parents' attitudes to preschoolers using information technology for English learning

(1) Parents' understanding of the importance of information technology in pre-school children's English learning

About 84.2% of parents agree that the use of modern technology is important for pre-school children's English learning (23.7% of parents fully agree). This shows that the vast majority of parents are in favor of pre-school children using modern technology. In the Internet + era, modern technology provides pre-school children's learning with a wealth of resources and efficient platforms, almost everyone has own mobile devices. This shows that most parents have already realized the importance of using mobile devices for English learning. However, there are about 15% parents think that information technology is of little value for preschoolers to learn English.

(2) Parents' awareness of the usefulness of information technology in advancing skills

According to dimension 2, 89.5% of parents agree that the use of information technology is helpful for advancing skills, while 10.5% of parents disagree (no parents completely disagree). The survey shows that parents support children to use information technology, largely based on their own experiences. They think use of information technology is helpful and useful.

(3) Parents' understanding of the effectiveness of information technology in pre-school children's English learning

71.8% of parents agreed that I encourage children to use technology to learn English (12.8% of parents fully agree), and only 15.4% of parents disagree (no parents completely disagree). This is the most obvious attitude of parents, and they directly indicate that they will encourage children to take advantage of technology to learn English. The results show that preschoolers use mobile devices with parental consent because 84.6% of parents agree that children can learn English well in this way. Some parents may be worried that they, for lack of relevant knowledge, can't guide their children in studying, so they encourage children to use mobile devices for efficient and interesting learning by themselves at their own speed and pace of learning.

4.1.2 Parents' attitude towards pre-school children using mobile devices to learn English

(1) Parents' support for pre-school children using mobile devices to learn English

84.6% of parents are in favor of this view, and only 15.4% of parents do not agree with this view, and no parent does not agree with the idea that "if the school requires, I can provide the necessary learning tools for my child". It can be seen from the data that parents are positive to provide the necessary learning tools for children (this refers to mobile devices).

(2) Parents' willingness to invest in education APP

According to dimension 5, 65.8% of parents agree with the view that "if I am satisfied with the APP, I will buy it", and 13.2% of the parents fully agree. They think education APP is helpful and beneficial for children. While about 21% of parents do not agree to purchase education APP for children, which is probably because there are many free educational applications which can provide rich resources for preschools in English learning and have a positive effect on their English learning. However, from the table1, it's only a small part.

4.2 Analysis of teachers' attitude towards children 'learning by using mobile devices

4.2.1 Teachers' understanding level of the mobile devices used in preschoolers' English teaching

Teachers need to know and be familiar with some web-based learning tools or APPs before learning English. The use of these tools will make teachers 'teaching work more efficient and improve students' learning efficiency and interest greatly. Therefore, an interview was conducted in a class in a Shanghai kindergarten to gain a deeper understanding on a teacher's attitude. Table 2 lists different categories of educational applications used by teachers in English teachers for preschoolers.

Table 2 : Educational applications used by teachers in English teachers for preschoolers

Category	Example	Specific function
Teacher professional development class	English Listening and Speaking	So that teachers, children exposure to the actual interactive environment, so that through the real scene simulation system for oral dialogue.
	Kindergarten teacher	Selected high-quality early childhood education resources of educational information applications, more experts to build the original group of early childhood education content.
	TED、Ted TALKS	English speech video, you can listen, follow the practice.
Teaching design class	Kindergarten pocket	To help teachers find that the admission of kindergarten environment, individual learning activities and other materials, production methods, teaching and learning context for its

		design to provide solutions.
	Meihui tree classroom	Prepare lesson plans to enhance your professional skills and literacy.
Teaching resources	Children love dubbing	Combined with anime learning English APP, specifically for children.
	4D bookstore	Learning through the video game, but also to stimulate the child's imagination, strengthen the cognitive memory.

4.2.2 Teachers' attitudes towards mobile devices used in preschool children's English teaching

Combining with teacher interview, we find that teachers generally use mobile devices for preschoolers in English teaching, but also to encourage them to use mobile devices to learn. They can develop and organize some teaching activities about theory and practice by using some APP and mobile devices during the teaching. Teachers believe that using mobile devices for instruction in English learning could promote preschoolers to master the knowledge and make teaching and learning more efficient and personalized. Teachers must be familiar with the use of many applications or online learning systems, and they will be internalized in their own teaching process in order to knowledge can be imparted to students targeted better. Also teachers will explore a relatively scientific and efficient way from their own practice, which is more conducive to the design and development of pre-school children's classroom, and it can better develop pre-school children's interest in learning English.

According to table2, we can find that teachers' attitude to the use of mobile devices for pre-school children in English learning is also reflected in their teaching practices. In the class, teachers use the mobile phone or tablet terminal, network learning tools, or use their own iPad to download the relevant video, music, combined with the second phase of Shanghai supporting resources, so the acceptance is also very high. In the classroom technical environment, children can interact with teachers and peers by using mobile terminals, which will enhance the children's interest and enthusiasm of communication in language learning. Most teachers think that new technology applications will make the learning process more interesting, and children are more willing to integrate into learning, and enjoy learning. Besides, new technology can reduce the children's learning pressure. And a large number of teachers recommend parents to use English learning APPs or online learning tools.

5. Discussions

In the Internet age, many teachers and parents support children to use mobile devices to learn, but they fear that students are vulnerable to addition of digital media because of the premature initiate, which will have a negative impact on learning and life in the future. From the results of the study, both teachers and parents have used information technology at the cognitive level as well as the practice and teaching level. They actively encourage and support preschool children to use mobile devices. It shows parents hold supportive attitude that mobile devices can promote preschool children's English learning.

Children's interaction with any techniques is a multi-sensory action and when action and feeling are given by e-books or mobile application interventions, new learning experiences can be promoted (Mangen, A. 2010). However, based on the advantages for pre-school children in learning English with these mobile devices, we can calmly consider its negative effects. While the majority of teachers or parents rely on mobile devices to promote preschool children's English learning, there are some studies found that the use of mobile devices for pre-school children in English learning is negative. When using enhanced e-books or applications, children may recall less details because they pay more attentions to extra features such as games and hotspots (Chiong, C., Ree, J., Takeuchi, L., & Erickson, I. 2012). To sum up, we can confirm the anxiety we mentioned in the above: both teachers and parents hope that preschool children have access to digital media and learn through mobile

devices, especially in English learning. However, they worry about that their early exposure to digital media may make children indulge in other functional areas of mobile devices, and that their future learning and life are adversely affected. Based on the above anxiety, we should:

5.1 Consider it versatilely according to the actual situation

We should analyze and think of it calmly with the specific circumstances. As for whether preschool children could use mobile electronic devices for English learning, our attitude should be eclectic. Neither too much anxiety, nor over-reliance is a wise option. These two extreme attitudes are not conducive to preschool children's English learning and development of learning interest. First of all, we must know that electronic mobile devices for preschool children to learn English is largely helpful in the mobile Internet era, because mobile electronic devices with attractive pictures, vivid and rich stories, targeted voice and visual and auditory combinatively effects offer preschool children motivation and curiosity of learning English. As we all know, the use of touch-screen equipment will enhance children's ability and speed up their speed of mastering knowledge. Some children do not match the way of mobile electronic devices using to stimulate their interest in learning and curiosity. And some children do not want to take advantage of APP referring to study and they go straight to other functional areas like the game area. Once in that case, these children will be stuck in the entertainment function on the mobile electronic devices, following much anxiety of parents and teachers. If children who are not keen on mobile electronic device are forced to use it, they may lose interest in learning English and negatively impact their future learning. Therefore, teachers and parents should constantly communicate. They should make decisions according to the actual situations and children's actual conditions and try their best to give them the greatest learning "booster".

5.2 Enhance the information literacy of teachers and parents

As for children's English language learning, it is important for parents and teachers to strengthen their own information literacy and develop the information technology skills in case of a lack of the ability to develop preschool children's interest and curiosity in learning English by using mobile electronic devices as well as the correct and scientific guidance. Only parents, teachers and preschool children collaborate together, can it create an information touch-screen learning environment and make a difference in preschool children's learning ability, learning interest and their own development. By investigating parents' and teachers' attitudes towards English learning through mobile electronic devices for pre-school children, researchers can help parents and teachers to correctly guide preschool children to use mobile electronic devices and offer children the English learning APP or e-learning tools that accord with their ages.

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