Practices and Utilization of Digital Technology of Preschool Teachers in China: Basis of Technology Enhancement Program

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Abstract: Most recent reforms to the Chinese education system as it relates to young children have focused on both increasing the number of children participating in preschool education in China and also in developing new curricula. Chinese preschools have been shaped by a combination of traditional Chinese culture, communist ideology, and western ideology and views on education. The study was conducted in the preschools in Anhui Province. The range of people who participated in this study includes the preschool teachers. The study is focus only on identifying the teachers practices and utilization of digital technologies. Most of the preschool teacher respondents in China are very young and are almost starting only in their preschool teaching career. The results of the study showed that the teachers respondents are practicing using technological tools and improving technical skills. However, preschool teachers skills in using digital tools can still be enhanced and their technical skills can still be improved. Trainings specific on preschool education must be organized and teachers must actively participate on it. As the preschool teachers continuously improve their academic background, the more they become more expose in using technology and the more they can improve their technical skills. The same is true if they have more years of teaching experience compare to the young and new preschool teachers. While the teachers utilized digital technologies in classroom activities, they still need to exert extra effort to make sure that e-learning resources are fully maximized as it will assist their way of delivering instruction to the young learners. As more experienced teachers are not very much expose in using technology, their dedication to learn and equipped themselves in digital technologies are obvious. However, preschool teachers whatever their age, teaching experience and educational attainment must aim to improve their knowledge and skills in using technology as a means to deliver instruction. As the practices towards technology in terms of improving technical skills is related to utilization of digital technologies in class activities, it only means that the preschool confidence must be boost so they can maximized utilizing technology in their instruction.
Keywords: Practices, utilization; Digital technology

1. Introduction

Like many countries around the world, all preschools in China were forced to switch to online education in the spring semester of 2020 as a response to COVID – 19 pandemic. As such, all preschool teachers were required to quickly and skillfully accept and use educational techniques they were not familiar with before (Hodges et al. , 2020; Rapanta et al. , 2020). Hence, it is a growing necessity to explore and examine the preschool teachers' practices and their utilization of digital technology.

The study is descriptive – comparative - correlational in nature. This study determined the relationship of level of teachers' practices toward technology use and the utilization of digital technologies in the classroom activities. Specifically, the study sought to answer the following questions.

2. Summary of Findings

2.1 Profile of Teacher Respondents

Most of the teacher respondents are between twenty - one to thirty years old but not over fifty years old, with bachelor's

degree and with 0 – 10 years of teaching experience.

2.2 Level of Practice towards technology in terms of using technology tools and improving technical skills

The results indicates that the teacher respondents practice technology use in terms of using technological tools and improving technical skills. This means that teachers must be given enough training on how they can integrate the technology in their delivery of instruction. Their knowledge and skills on creating strategies and activities that utilizes technology must be enhanced. Generally, the result reveals that teachers practiced using technology as reflected in the over-all mean value of 3. 14.

2.3 Differences in the level of practice towards technology when teacher respondents are grouped according to profile

The result reveals that teacher respondents have the same assessment of the level of practices of teachers towards technology when they are grouped according to age. When teacher respondents are grouped according to educational attainment, results have different assessment of level of practice towards using technology in favor of the respondents with doctoral degree. The results showed that those teachers with more than 20 years of teaching experience has higher level of practice towards technology in terms of using technological tools compare to those with 0 – 20 years of teaching experience.

2.4 Utilization of digital tools in classroom activities

The results of the study shows that according to teacher respondents, they agree that the teachers utilized digital technologies in classroom activities. Children utilized the website designed for them and take photographs using digital cameras with highest mean of 2. 97 (Rank 1). On the other hand, teacher disagree that children play games on a tablet computer, use computers individually, and play games on a computer. With the mean values of 2. 29, 2. 28, and 2. 19, the children slightly utilized digital technologies in classroom activities. Generally, the composite mean of 2. 75 shows that the teachers respondents assess that digital technologies in classroom activities are being utilized.

2.5 Difference in the level of preschool teachers' utilization of digital technologies when they are grouped according to profile

The teachers aged between 41 and 50 years old have the highest mean which explained that this group of teachers utilized digital technologies in their class activities compare to other age groups. The result indicates that teacher respondents have similar assessment on the level of utilization of digital technologies in classroom activities. However, the results showed that those teachers with master's degree has highest level of utilization of digital technologies compare to teachers with bachelor or doctoral degree as the highest educational attainment.

2.6 Relationship in the teachers' utilization of digital technologies in the class activities and their level of practices toward technology in terms of using technological tools.

The results of the study showed no significant relationship in the teachers' utilization of digital technologies in the class activities and their level of practices toward technology in terms of using technological tools. On the other hand, there is a significant relationship on the teachers' utilization of digital technologies and the level of practices towards technology in terms of improving technical skills, as reflected on the obtained computed r- value of 0. 19 with a significance value of 0. 01. Teachers' level of utilization of Digital Technologies is positively correlated to a small degree with their level of Practices Towards Technology in terms of using technological tools, and improving technical skills. Generally, it can be said that the level of utilization of teachers of digital technologies can somehow affect their level of practices towards technology.

3. Conclusions

According to the findings above, this research came up with the following conclusions.

(1) Most of the preschool teacher respondents in China are very young and are almost starting only in their preschool teaching career.

(2) The results of the study showed that the teachers respondents are practicing using technological tools and improving technical skills. However, preschool teachers skills in using digital tools can still be enhanced and their technical skills can still be improved. Training specific on preschool education must be organized and teachers must actively participate on it.

(3) As the preschool teachers continuously improve their academic background, the more they become more expose in using technology and the more they can improve their technical skills. The same is true if they have more years of teaching experience compare to the young and new preschool teachers.

(4) While the teachers utilized digital technologies in classroom activities, they still need to exert extra effort to make sure that e- learning resources are fully maximized as it will assist their way of delivering instruction to the young learners.

(5) As more experienced teachers are not very much expose in using technology, their dedication to learn and equipped themselves in digital technologies are obvious. However, preschool teachers whatever their age, teaching experience and educational attainment must aim to improve their knowledge and skills in using technology as a means to deliver instruction.

(6) As the practices towards technology in terms of improving technical skills is related to utilization of digital technologies in class activities, it only means that the preschool confidence must be boost so they can maximized utilizing technology in their instruction.

4. Recommendations

Based on the conclusions derived in this study, this research came up with the following recommendations:

(1) Training on using technological tools and improving technical skills must be organized. Preschool teachers must be required to attend such training. Other than the training, the school must have a multimedia department that can give assistance in terms of technology to the teachers who are in need of help.

(2) The school must create a professional development programs that will expose the preschool teachers to new knowledge and skills in technology that will help them improve and learn new strategies that will fit the needs of the young learners.

(3) The preschool department must create a "buddy system" for the preschool teachers. This will guide the preschool teachers who are not yet very much familiar and confidence in using technology in teaching and learning process of preschool education.

(4) All preschool teachers must make sure to equipped themselves with knowledge and skills in using appropriate digital technologies that will address the type of learning styles of young learners. They must attend not only training related to technology but on the teaching strategies for preschool education.

The school must support also the preschool teachers by ensuring that they have not only the knowledge and skills but also digital tools that will help them deliver quality instruction. They can create programs that will support the teaching and learning process so that teachers will gain confidence in using technology in teaching.

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