



The Private Preschool Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO

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Abstract

In the 21st century, one of the modern pedagogical approaches is integrating information and Communication Technology (ICT) in the early childhood curriculum. The purpose of this study is to investigate the private preschool teachers' perception of integrating ICT and internet usage in teaching and learning during MCO in private preschools. This study employed a quantitative approach, and data collection was gathered through a survey method. A total of 44 private preschool teachers from private preschools located in the Klang Valley were selected through snowball sampling. The survey was done through questionnaires using a 5-point Likert Scale. Quantitative data were analysed through a descriptive method using the Statistical Package for The Social Science (SPSS) software. The study results indicated that young teachers have high perception of ICT integration usefulness, whereas senior teachers need to be given courses that will help them be more confident to handle children learning activities using ICT tools during MCO.

Keywords: *Preschool, Teachers, ICT, Perception, Integration, Internet*

Introduction

The world was shocked by the novel Covid-19 pandemic that has caused all sectors to become paralysed. The pandemic remains the biggest threat to human health, besides affecting the economy. The field of education is not spared, impacting almost every country in the world (Lekhraj & Liew, 2020). Many universities, schools, and preschools had to close due to the increasing number of Covid-19 cases. The outbreak of the Covid-19 was suddenly thrown to the deep end in deciding to use e-Learning in teaching and learning. The pandemic has forced teachers to use Information and Communication Technology (ICT) as a teaching and learning platform and become the only option left for preschool teachers. Preschool teachers have resorted to e-learning and integrated ICT to deliver



their lessons. With the latest advancement in new communication technologies and the ever-increasing usage in daily life, online learning is seen more and more as the way forward in education that can provide rich, authentic learning that can facilitate children's collaboration (Aldhafeeri & Khan, 2016).

In Malaysia, the Ministry of Education (MoE) is concerned about the quality of the preschool curriculum and has developed a set of guidelines for preschools to incorporate ICT elements in the National Preschool Standard-based Curriculum (NPSC) 2017 as part of the teaching and learning process (MoE, 2017). To facilitate teaching and learning during the MCO period, MOE created guidelines for public teachers to implement teaching and learning processes during the outbreak (Kelvin & Tan, 2020). Some preschool operators took the opportunity to add a new element to early childhood education to stimulate interest and make teaching and learning more enjoyable. Children learn much more through active involvement and construct their knowledge and apply them through physical and mental learning activities (Morrison, 2015). Hence, using ICT to deliver learning materials to children should be an active process, with good interactive instructions, collaborative and cooperative learning, control of the learning process, time availability, and a chance to reflect on the learning materials (Ananga, 2020).

Literature Review

ICT use continues to rise dramatically due to digital technologies' advancement and internet usage in the preschools' environment (Filzah, 2013). Research showed that many young children are exposed to digital technology as young as three years old (Parette & Blum, 2013). The need for ICT integration in education is crucial, because, with the help of technology, teaching and learning can take place in the school environment and also, even if teachers and students are physically apart (Ghavifekr et al., 2015). The number of young internet users is increasing dramatically (Filzah, 2013). As new technologies become more ubiquitous, it helps people improve the quality of their personal and professional lives. In the 21st century, one of the modern pedagogical approaches is ICT in the early childhood curriculum. Integration is essential and a new trend in early childhood education, particularly when the internet becomes widely available in most developed countries. Therefore, online learning via digital technologies is part of young children's 'multimodal lifeworld'; thus, should be contextualised and capitalised to support teachers, parents, and children about how best to utilise digital and online technologies to develop agentic multimodal practices (Dong & Cao, 2020).

There have been many types of research done by educators, psychologists, and philosophers on how human teach and learn. Charanjit et al., (2020) reported that teachers opt for online platforms such as *Google Classes* to post learning materials such as Google Docs, Sheets, Slides, quizzes, and Portable Document Format (PDF) to Google Drive to collaborate with their students. Even though various techniques and approaches are highlighted to ensure that the teaching and learning process becomes more interesting and efficient (Amiruddin et al., 2014), the concern right now should be the quality of online learning and the difficulties in creating an online learning community with a high degree of social presence and engagement (Khurana, 2016). Most of the children are engaged in online learning to minimise the spread of the virus, so face-to-face learning cannot be conducted (Gayatri, 2020). However, school children were affected by Movement Control Order (MCO) including those without easy access to the internet. Dong and Cao (2020) reported that the implementation of online learning during the Covid 19 pandemic has been problematic and posed challenges for the family. As a student participating in a home-learning programme, online learning was confusing and difficult to adjust to as we had not been prepared through simulations or practices beforehand. Students reported that the home-learning programs



more stressful than regular classrooms. Gayatri (2020) in her study reported that the implementation of home learning has challenged families with young children concerning self-regulation.

Various factors prevent teachers from integrating ICT in their teaching and learning, such as the lack of knowledge on handling new technology, lack of technical funds and support from the school, and lack of professional training (Lateh & Muniandy, 2010). Ertmer and Ottenbreit-Leftwich, 2010, reported that teachers are feeling the pressure with this new pedagogical approach as it increases their workloads and expectations. Another factor that prevents teachers from integrating ICT is a poor internet connection. Tamin and Mohamad (2020) reported that the main issues in implementing online learning were weak internet connection, insufficient technology devices, difficulty in using the system and low motivation to join virtual learning due to lack of interaction between teachers and students. However, the lockdown is not an incentive for teachers to revise their professional experience in the sense of realising the necessity of acquiring the competencies necessary for organising effective distance learning for pre-schoolers (Pavlenko & Pavlenko, 2020). Therefore, it is important to have good communication between parents and teachers to support early childhood online learning during the pandemic (Gayatri, 2020).

Research Objectives

Specifically, the objective of this study is to determine the preschool teachers' perception of ICT Integration usefulness in teaching and learning during MCO.

Methodology

This study used a quantitative approach, and data collection was gathered through a survey method. A total of 44 preschool teachers from private preschools located in the Klang Valley were selected through snowball sampling. The survey was done through questionnaires using a 5-point Likert Scale. Quantitative data were analysed through a descriptive method using the Statistical Package for The Social Science (SPSS) software. The data were analysed according to their age group, working experience, and academic qualification.

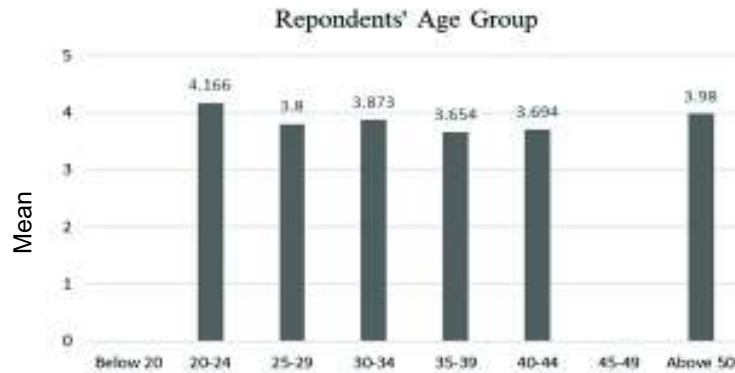
Findings

The Preschool Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Age

Figure 1 below showed the teachers' perception of ICT integration usefulness in teaching and learning during MCO according to age. The bar chart illustrated the result based on the mean comparison. The chart showed that teachers aged below 20 and those between 45 and 49 are not being analysed as there is no respondent from these groups. The data showed that the highest mean of 4.166 is from the age group of 20 to 24. This indicates that the teacher from the age group of 20 to 24 has the highest perception of integration usefulness in teaching and learning during MCO. Results show the lowest mean of 3.654 was from the age group of 35 to 39. It showed that the respondents from this age group have the highest lowest perception of usefulness in teaching and learning during MCO.

**Figure 1**

Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Age

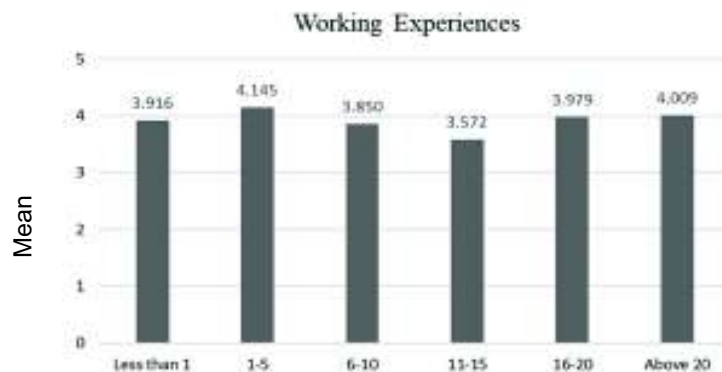


Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Working Experience

Figure 2 below showed the teachers' perception of ICT integration usefulness in teaching and learning during MCO according to working experience. The bar chart illustrated the result based on the mean comparison. The highest mean of 4.145 fell on teachers with working experience between 1 and 5 years. The lowest perception is those who have working experience of between 11 and 15 years. This indicates that teachers who have working experiences of less than 5 years have the highest perception of ICT integration usefulness in teaching and learning during MCO compared to those who have 11 to 15 years of experience in teaching pre-schoolers.

Figure 2

Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Working Experience



Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Academic Qualification

Figure 3 below showed the teachers' perception of ICT integration usefulness in teaching and learning during MCO according to an academic qualification. The bar chart illustrated the results based on the mean comparison. The highest mean of 4.01 represents teachers with diploma qualification followed by teachers with bachelor and master qualifications. Meanwhile, the lowest mean of 3.541 falls under teachers who hold certificate qualifications. The results indicate that the diploma holders have the highest perception of ICT integration usefulness in teaching and learning during MCO compared to the certificate holders.

Figure 3

Teachers' Perception of ICT Integration Usefulness in Teaching and Learning During MCO According to Academic Qualification



Discussion

The Covid-19 pandemic has resulted in the closure of physical classes. Teachers and students learned through online educational technologies (Kelvin & Tan, 2020). Hence, teachers and students were connected through the internet. Online learning becomes an alternative platform for teachers during MCO. Since then, preschool teachers have started to conduct online classes through Zoom, Microsoft Office, and Google Meet. Online learning through devices such as laptops, computers, tablets, and smartphones with internet access becomes alternative learning (Selvanathan et al., 2020). The results of this study show that young teachers aged between 20 and 24 have the highest perception of ICT integration usefulness in teaching and learning during MCO compared to the teachers who are older. These teachers are considered active ICT users and capable of implementing e-learning during MCO. The respondents were known as generation X or digital natives and ICT is part of their daily lives. Irfan and Mohamad (2015) reported in their study that junior teachers use ICT significantly more frequently than their senior colleagues for teaching and learning, searching educational resources, and creating presentation/delivery materials. Meanwhile, teachers with working experiences of less than 5 years and diploma holders have the highest perception of ICT integration usefulness in teaching and learning during MCO compared to those who have between 11- and 15-years' experience in teaching preschoolers and those who hold other certificates. Although most of the preschool teachers participated in this study praised the usefulness in teaching and learning during MCO, teachers with less than 5 years of work experience and those with diploma qualification are considered young teachers and some children require attention from young and energetic



teachers to keep them busy during online learning. According to Davoud (2015), ICT is experienced as an object for entertaining young children and keeping them busy. In fact, Filzah (2013) reported that the number of young internet users is increasing dramatically.

Now it is time for preschool institutions to consider integrating the online learning approach to allow for distance and remote learning. Some serious social distancing during Covid 19 pandemic becomes the children's priority. The preschool teachers need to enhance their capabilities in using current teaching pedagogy by integrating ICT in teaching and learning. They need to understand the Developmentally Appropriate Practices (DAP) when integrating ICT in the curriculum. Most importantly, senior teachers must learn to use the Internet as a learning platform and have confidence in using ICT as a teaching tool. According to Irfan and Mohamad (2015), senior teachers should be encouraged to use ICT in their teaching and learning activities more frequently so that they will not be left behind in terms of ICT skills. The lack of training in ICT has led to teachers not knowing how to implement ICT into their practices (Dong & Cao, 2020). Taking part in the ICT training tailored for teachers will help teachers gain concrete ways to use ICT in online distance learning.

Conclusion

In conclusion, this study has provided important information on teachers' perception of ICT integration during MCO. The study results indicated that teachers have a high perception of ICT integration usefulness in teaching and learning during MCO. The study results would help teachers, principals, and preschool operators understand the importance of teachers' perception of implementing ICT and weaknesses that need to be addressed before embarking on any ICT integration in the future. Learning can be more effective in several ways and online learning is the best option for teaching and learning during MCO. Preschool teachers, regardless of their age, work experience and academic qualification must start to learn innovative online teaching strategies to engage children in learning. Interactive online learning will be able to facilitate children's active participation and engagement even though they are at home. If the views of the respondents are representative of the wider samples, then the finding suggests that senior teachers need to be given courses that will enhance their confidence in handling children's learning activities using ICT tools. Hence, it is important to train senior and experienced teachers in ICT integration and the online mode of learning. Enforced change in pedagogy after Covid19 pandemic and at the same time, taking into consideration the children's needs, initiatives and abilities are needed to cater to current needs in learning. Change is all about moving the whole system and take daily actions that build capacity and ownership (Fullan, 2007). Willingness to learn and change attitudes towards a new method of learning will help improve teachers' professionalism. According to Pavlenko and Pavlenko (2020), it is also important to examine teachers' attitude to the distance format for assessing the prospects of distance learning for pre-schoolers if the lockdown recurs in future.



References

- Amiruddin, A. Z., Hassan, A., Abdul Rahman, A., Rahman, N., & Abu Bakar, S. (2014). Penggunaan aplikasi atas talian dalam proses pengajaran dan pembelajaran bahasa ketiga: Pengenalan kepada quizlet.com.
- Aldhafeeri F. M., & Khan B. H. (2016). Teachers' and students' views on E-Learning readiness in Kuwait's secondary public schools. *Journal of Educational Technology Systems*, 45(2), 202–235. doi: 10.1177/0047239516646747
- Ananga, P. (2020). Pedagogical considerations of e-learning in education for development in face of Covid-19. *International Journal of Technology in Education and Science*, 4(4), 310–321.
- Charanjit, K. S. S., Nadiyah, Y. A., & Sasigaran, M. (2020). Rethinking English language teaching through Telegram, WhatsApp, Google Clsssroom and Zoom Meeting. *Systematic Reviews in Pharmacy*, 45–54.
- Davoud, M. (2015). Preschool teachers' use of ICTs: Towards a typology of practice. *Centre for Teaching, Development and Digital Media, Aarhus University, Denmark*, 6(1), 5–17.
- Dong, C., & Cao, S. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Science Direct Children and Youth Services Review*, 18, 105440.
- Ertmer, P. A., & Ottenbreit-Leftwich, T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture interact. *Journal of Research on Technology in Education*, 42(3), 255–284. doi:<https://doi.org/10.1080/15391523.2010.10782551>
- Filzah, Z. M. Z.. (2013). *ICT and internet usage in early childhood education: A comparative study of Australian and Malaysian teachers' beliefs and current practises*. Masters thesis, Queensland University of Technology, Queensland.
- Fullan, M. (2007). *Change theory: A force for school improvement*. Australia: Centre of Strategic Education.
- Gayatri, M. (2020). The implementation of early childhood education in the Covid-19 pandemic: A systematic review. *Humanities & Social Sciences Reviews*, 8(6), 46–54.
- Ghavifekr, S., Wan, A., & Wan, R. (2015). Teaching and learning with technology: Effectiveness of ICT integration in Schools. *ERIC*, 1(2), 175–191.
- Irfan, N. U., & Mohamad, T. M. Y. (2013). A study on Malaysian teachers' level of ICT skills and practices, and its impact on teaching and learning. *Social and Behavioral Sciences*, 116, 979–984.
- Kelvin, Y. K., & Tan, K. H. (2020). ESL teachers' intention in adopting online educational technologies during Covid-19 pandemic. *Journal of Education and e-learning Research*, 7(4), 387–394. doi:10.20448/journal.509.2020.74.387394



- Khurana, C. (2016). Exploring the role of multimedia in enhancing social presence in an asynchronous online course. (Doctoral Dissertation). The State University of New Jersey, Rutgers, U.S, Retrieved from <https://search-proquest.com.simsrad.net.ocs.mq.edu.au/docview/1844392065?pq-origsite=primo>
- Lateh, H., & Muniandy, V. (2010). ICT implementation among Malaysian schools: GIS, obstacles and opportunities. *Procedia Social and Behavioral Sciences*, 2846–2850.
- Lekhranj, R., & Liew, B. S. (2020). Coronavirus disease (COVID-19) pandemic. *The Medical Journal of Malaysia*, 75(2), 95.
- Ministry of Education (MoE). (2017). *National Preschool-standard Based Curriculum*. Putrajaya: Curriculum Division Department.
- Morrison, G. (2015). *Early childhood education today*. Boston: Pearson Allyn Bacon Prentice Hall.
- Parette, H. P., & Blum, C. (2013). Instructional technology in early childhood. Retrieved from <http://archive.brookespublishing.com/documents/instructional-technology.pdf>
- Pavlenko, G. V., & Pavlenko, A. I. (2020). Impact of COVID-19 Lockdown on the Readiness of Preschool Educators for Distance Learning. *Advances in Economics, Business and Management Research*, 156.
- Selvanathan, M., Hussin, N. A., & Azazi, N. A. (2020). Students learning experiences during COVID-19: Work from home period in Malaysian Higher Learning Institutions. Retrieved from <https://journals.sagepub.com/doi/full/10.1177/0144739420977900>
- Tamin, N. H., & Mohamad, M. (2020). Google Classroom for Teaching and Learning in Malaysia Primary School during Movement Control Order (MCO) due to Covid-19 Pandemic: A Literature Review. *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, 3(5), 34–37.