



# **PRESCHOOL TEACHER'S ATTITUDE TOWARDS THE INTEGRATION OF INFORMATION TECHNOLOGY INTO ENGLISH TEACHING FOR YOUNG CHILDREN IN VIETNAM**

**Truong Thi Hong Thuy** 

School of Education Science, Minnan Normal University, Zhangzhou, P.R. China  
truongthihongthuy23@gmail.com

**Sikandar Ali Qalati**

School of Management, Department of Marketing,  
301 Xuefu Road, Jingkou District, Zhenjiang, Jiangsu, P.R. China

## **Abstract**

*Globally information and communication technology (ICT) is considered the most significant factor in the development of the education sector. This study examined the attitude of preschool teachers toward integration of ICT, the use of ICT in classrooms, and the selection criterion used ICT in English teaching for young children in Vietnam. This study also explores the issues and challenges concerns with the integration of ICT into English teaching. The self-administered questionnaire used to collect the quantitative and qualitative data from the 1050 respondents of 200 schools operating in-country. SPSS 23.0 used for the analysis of descriptive, explanatory, correlation analysis. The common method bias proved by using Harmon's test and Kaiser-Meyer-Olkin (KMO) Test. The findings of the study include that most of the respondents ensured the importance of ICT integration and the use of ICT. Moreover, the lack of collaboration, technical knowledge, and qualified teachers found critical issues and challenges. This study helps practitioners and the government of the country to increase focus on the education of teachers.*

*Keywords: Information and communication technology, Attitude of preschool teachers (APST), Vietnam, use of ICT (UOICT), selection criteria of ICT (SCICT)*



## INTRODUCTION

Over the few decades, tremendous advancement is seen in the information and communication technology (ICT) tools and applications and are in practice in developed, developing, and less developed countries, industries, and sectors (Bayter and Bustelo 2019). The ICT application and tools also affected the education sector, precisely the attitude of preschool teachers towards the integration (Kamaruddin et al., 2018). Education is one of the critical factors to raise the status, economic, and health wellbeing of teachers (Hwang et al., 2017). Governments, scholars, academicians, and economists well aware that to meet societal challenges, education needs to be transformed. ICT is the most essential and employing force in the transformation of quality education and its solution provider (Dong 2018). Though, ICT revolutionized the educational sectors and provided flexibility in teaching and learning. Still, some of the challenges associated with ICT integration in education (Zaranis et al., 2017). Nowadays, all institutional education fields are projected to integrate (ICT) in their curriculum, pedagogical, and training practices. This is also the case in early childhood education, and ICT has gradually found its way into first years' or preschool English teaching curricula in several countries (Mertala 2018)

To date, growing importance is given to quality education among 193 member countries of the UN for sustainable development goals (SDG4). The Vietnam voluntary national review report showed that education is a topmost priority for the country, yet 20.0% of the government budget dedicated to it (Noi 2018). No doubt, preschool education (early childhood) plays a vital role in preparing children; the rate of children enrolled in preschool has increased rapidly from 49.0% to 80.5% from 2000 to 2013, while from 2016 to 2017, this rate reaches 92.0%. One of the biggest challenges faced by the Association of Southeast Asian Nations (ASEAN) is to achieve sustainable development by “bridging the digital divide” throughout the region. The 6<sup>th</sup> strategy of the plan involves vanish ICT development goal and to increase ICT in education in member countries. The results of the reports reveal that Vietnam is investing in ICT infrastructure and its integration in the preschool education system (Prajaknate, 2017). Interestingly, Nguyen (2019) concludes that Vietnam is an emerging country where ICT and English are highly valued as both are critical factors of modernization and industrialization. Furthermore, the researcher stated that ICT supports country integration with the global world.

The current developments in education necessitates a paradigm shift from the supply and use of ICT in education into a comprehensive integration of ICT in education (Quamar et al., 2019). Conversely, an attitude teachers hold to the integration of ICT in teaching English and learning are the key influential factors towards the success or failure of ICT in education (Tabira and Otieno 2017). Another motivation involves increasing the focus of the country

towards modernization of education system, as under “socio-economic development strategy for 2011-2020” state seeks to improve human capital development, modernize education and boost enrollment in education (Trines 2017). On January 20 and 23, Mr. Phung Xuan Nha (Minister of Education and Training) disclosed to the world education forum held in London. In 2018, Vietnam had over \$4 billion FDI (Foreign direct investment) for 455 education projects, and government-approved 530 joint training programs between local and foreign universities (VietNamNet 2019). Currently, in Vietnam, ICT implementation into English teaching and learning has limitations such as the size of classes are significant, a considerable number of students per class, these conditions make ICT implementation unsuccessful (VTJ 2019).

Therefore, this study conducted to investigate the preschool teacher’s attitude towards the integration of ICT into English teaching and to learn within the Vietnam context. Furthermore, this study investigates the issue and challenges of ICT integration and the use of ICT in classrooms and the criterion which preschool teachers use in selecting ICT applications. According to Merriam and Grenier (2019), there is no single research method that suits all research questions. Hence, this study involves a mix-approach of qualitative and quantitative techniques of research for data collection. Furthermore, an online link will be generated to collect data from respondents as it is one of the less costly and easy ways to reach respondents. Some pre-scanning questions involved to select the right respondents of the study.

The contribution of this paper should assist preschool teachers, and help them to administer ICT in young children’s English learning. Also, the results of the study used by public and private institutions of the country for future strategies, training, and providing more comprehensive experience of learning.

## **LITERATURE REVIEW**

### **Information and communication technology**

Nowadays, the employment and utilization of ICT applications and their integration is critical all over the world. There are several definitions of the term. According to Kamilah and Anugerahwati (2017), ICT refers to “products of communication technology, like hardware (i.e., computers, mobile phones, projector, radio, TV), the software application (i.e., multimedia sources, communication application), and the information system (i.e., the Internet, Intranet, cloud computing).” Also, the author believes that it is an integral part of the twenty-first century for English teaching and learning. To Maduabuchi and Emechebe (2016), it refers to “all technological tools and resources used for communication, creation, dissemination, storage, management, and retrieval of information.” Such technologies include radio, Tv, computers,

mobile phones, and more. Hashemi (2016), defined it as “it refers to the combination of computing technology and information processing,” and it comprises all kinds of computer software and hardware, mobile phones and telecommunications, the web and internet, wireless and wired network, videos, and digital cameras’, robotics and so on. Besides, Dang (2011) defined as “computer-, and the internet-based technologies” (Nikolopoulou et al., 2019), conducted study on early childhood students, concludes that nowadays’ young children interact with a wide range of technology in everyday lives, and become competent users of devices, (i.e., mobile phones, tablets, computers, video games, communication devices and digital videos and more).

Pelgrum and Law (2003), broadly defined ICT in education from three viewpoints. First, learning perspective ICT defined as “a subject of learning in the school such as ICT literacy or computer, information literacy and or computer science” Second, researcher perspective “it refers to as the use of ICT such as multimedia, websites or the internet as a standard to enhance learning instructions or as a replacement for other media without changing the views about the tactics and methods of teaching and learning.” Third, integrations perspective” an essential tool for teaching and learning to the extent that learning is almost impossible without them.”

### **Preschool teachers’ attitude towards the use of ICT application**

Yuan et al., (2019), defined attitude as “the degree to which a person has a positive or negative assessment of the conduct of attention.” Moreover, Vitoulis (2017), conducted experiential-based scholarship and investigated the formation of pre-service early childhood educators’ perception of the use of ICT in early childhood education. Researcher, interchangeably use perception with attitude and found the positive attitudes of preschool teachers’ towards the use of ICT in preschool children's education. Furthermore, Boulton (1997), defined the term perceptions “as attitudes, behaviors, self-beliefs, and views that a person has developed towards anything.” The author proposed that teachers’ attitudes can be referred to as perceptions, self-belief, perceptions, and view that teachers hold towards the use of ICT in education. According to Hutchison and Reinking (2011), study teachers' attitude defines the beliefs that they have about the relevance of integrating ICT into teaching and learning, and the certain obstacles that are belongs to use of ICT in Education.

Interestingly, Kamaruddin et al., (2018), conducted a study in the context of Malaysia to investigate the teachers’ level of ICT integration in teaching and learning in preschool education. This study conducted on a sample of 61 teachers form 10 private schools; findings were

interesting authors found a low level of teachers' attitude towards the integration of ICT in preschool education in the country. In contrast, most of the recent studies conducted with objective to examine the teachers attitude towards the integration of ICT into English teaching and learning conducted by (Birkollu et al., 2017; Dong 2018; Pira et al., 2019; Preradović et al., 2017; Silin and Kwok, 2017; Slutsky et al., 2019), found the positive teachers' attitude towards the ICT integration and its use in young children education. Furthermore, Chen (2016), study based in Taiwan found the positive association of preschool teacher's attitudes towards internet-based applications because it improves their knowledge and value.

### **Issue relates to integration, implementation, and use of ICT in English teaching and learning**

Though, the ICT application considers significant for improvement of education either offered to young children or adults. There are some developing and less developed countries; those are still facing issues related to ICT integration, implementation, and use (Dhital 2018). Also, Kimani (2017), conclude that the integration of ICT has not reached its full potential and utilization in Kenya. Furthermore, authors enlighten several challenges such as poor level of computer literacy, poor and inadequate facilities, poor level of awareness related to use of internet, and unwilling attitude of institutions toward ICT application. (PTT et al., (2019), examined the issues and challenges in use of ICT in Vietnam, study shown that teaching English in Vietnam by employing ICT had several issues and challenges such as lack of ICT competence, support, and facilities, and heavy teaching load, and oversized class.

Also Salehi and Salehi (2012), investigate the integration of ICT in language teaching, a study based on a sample of 30 school teachers in Iran. The results stated that teachers found discouraged from integrating ICT due to insufficient technical support, less access to the internet, size of classrooms, and short timings of the classes. Besides, Ogbomo (2011), concludes that there are four main issues (i.e., sustainability, cost, equity, and effectiveness), while challenges towards the use of ICT include finance, capacity building, and infrastructure). Furthermore, Budhedeo (2016), conducted study based in India, found several issues related to ICT integration, and its use some of the issues are shortage of class timing, insufficient funds, lack of trained teachers, poor attitude and beliefs, maintenance and upgrading issue, challenge of language and content, lack of technical support, unreliability of equipment and more. According to Mahdum et al., (2019), unstable internet connection, electricity load-shedding, inadequate forecasting of equipment's, and limited knowledge and ability to design ICT learning are the issues and challenges in the context of Indonesia.

### **Theory of planned behavior (TPB)**

Theory of Planned Behavior (TPB) given by Ajzen (1985), stated that “if an individual perceives a planned behavior as positive, they will be more encouraged to perform particular behavior”(Teo et al., 2016). This theory, widely used and applied, was to understand the role of individuals towards the intention (Ajzen and Manstead, 2007). Several other models practiced with TPB for instance, technology acceptance model (TAM) proposed by (Davis 1989), unified theory of acceptance and use of technology (UTAUT) proposed by (Venkatesh et al., 2003). Generally, TAM is widely utilized to examine the user's intention towards the adoption of a given technology.

Lee et al., (2010), conducted a study to investigate the teachers’ decisions regarding the use of educational technology, authors used the TPB theory as grounded theory and found a positive attitude towards using computers to create and deliver lessons. Furthermore, Apeanti (2014), the study employed the TAM model and TPB in technology use scholarship and conclude that TBP focus is on the teachers’ attitude of ICT integration in teaching. Moreover, Salleh and Albion (2004), reflected that teachers have a significant attitude towards ICT integration and its usage. Hence, we employed both theory and model as it fits this study.

### **RESEARCH METHODOLOGY**

Before we put forward, we should have an idea about the term research. It consists of two terms (Re+Search) which stand for to “search again.” There are several definitions of a term. Some scholars describe it as “it is a systematic investigation or activity to gain new knowledge of the already existing facts.” (Rossi et al., 2018). “The methodology can be a strategy or a plan of action that guiding the writer to conduct specific research, as there will always be several options and methods for carrying out an academic research paper, but the choice would depend on how the researcher see the reality” (Creswell and Clark, 2017).

#### **Research Design**

According to Merriam and Grenier (2019), there is no single research method that suits all research questions, but instead, the phenomena that are under investigation and the theoretical context well drive the research to be formulated in a unique way that can create a clear map of how the research must be conducted. Therefore, this type of scholarship in design based on the purpose of the study, the directive of the research is to examine the preschool teachers’ attitude towards ICT integration in the context of Vietnam. As per (Olsson et al., 2019; Phan and Locke, 2016), proposition to get in-depth information from respondents, most critical is to utilized general questions. However, this scholarship includes 11 statements of teachers’ attitudes

towards ICT integration, and nine statements for ICT use in classroom English teaching and learning, and seven statements for ICT selection criteria. Additionally, the five-point Likert scale used (1 represents strongly disagree, to 5 represents strongly agree). This work utilized both types of techniques qualitative and quantitative approach as a mixed approach got full acceptance for improvement of education-based research (Teddlie and Sammons 2010). The qualitative method seeks to discover how individuals experience and perceive educationally related phenomena or viewpoints on an event other than those of the researcher (Tuomainen 2015).

### **Sample size and measures**

This study used a random sampling approach to collect data (Chen and Tu, 2018); the sample size of the study include 1050 respondents and 200 schools targeted. Data was collected from September 2019 to December 2019. The demographical information of the respondents given in Table 1. To confirm the validity and common method bias, Harman's test employed as proposed by several authors and reviewers (Kock 2015; Podsakoff et al., 2003) by using SPSS 23. Moreover, 11 statements employed to measure the attitude of preschool teachers towards ICT integration. The nine statements employed to assess the use of ICT in the classrooms. The seven statements utilized to measure the ICT selection criteria in preschool English teaching and learning. Furthermore, four general statements employed for the qualitative portion and to get deeper insights into respondents related to benefits, challenges, affects, and advice for the implementation of ICT in English teaching in Vietnam. Henceforth, for all of the 27 statements, a five-point Likert scale employed (1 = strongly disagree to 5 = Strongly agree) (Nikolopoulou et al., 2019).

### **Data collection and analyzing tool**

To investigate the objectives of the study, the researcher has designed a self-administered closed and open-ended questionnaire. Choosing self-administered questionnaires for the study is encouraged by (Chen 2015; Phellas et al., 2011), who justified the self-administered questionnaire as a convenient method to administer. The justification based on the fact that less cost is involved. Furthermore, Phellas et al., (2011) stated that the only cost involved in the process of self-administered questionnaires is minimally associated with the designing of the questionnaires and electronic distribution. Also, an online and field survey utilized (for the primary data). An online questionnaire designed via Google form and spread through emails, WhatsApp, and other social media applications (Qalati et al., 2019). The online survey is generally used to accumulate more information and to reach a scattered population (Kuila et al.,

2019). To ensure the validity and relevance of the survey, an opinion has been sought from two experts, one based in China and the other one in Vietnam. Furthermore, random sampling approach employed to collect the data as it's most widely and acceptable approach when sample size is large (Qalati et al., 2019) However, in recent times, advance in technology has provided the opportunity for design and transmission of questionnaires to participants without incurring relatively much cost, time and travel. SPSS 23 used for the quantitative data analysis (such as frequency, percentage, mean, standard deviation, tables, graphs, and different types of tests use). Furthermore, Cronbach alpha used for the internal consistency of the data.

## ANALYSIS AND RESULTS

### Descriptive frequency percent analysis

This study involved 27 statements to measures the attitude of preschool teachers towards ICT integration, the use of ICT in classrooms and the selection of ICT in preschool teaching and learning the English language. Table 1, 2 and 3 reflects the frequency percentages. Most of the respondents selected agree and strongly agreed to rate statements except few statements found with the rate of disagreements such as S2, S4, and S24.

Table 1. Attitude of preschool teachers (APST) towards the ICT integration

Items	Statements	SD	D	N	A	SA
S1	ICT integration make my teaching easier	11.7	21.6	12.7	21.0	33.0
S2	ICT integration enhances my learners' critical thinking	14.3	22.2	13.8	17.1	32.6
S3	ICT integration promote innovation and problem-solving skills of my learners	14.4	23.9	13.5	18.1	30.1
S4	ICT integration enhance collaborative learning among learners and teachers	15.0	22.8	13.6	17.6	31.0
S5	ICT promote research-based teaching and learning	14.6	17.0	15.2	20.5	32.8
S6	ICTs integration help to ensure quality education	12.6	15.9	16.2	25.7	29.6
S7	Lack of ICT makes it difficult for teachers to keep up with the current trends in education	6.9	16.4	15.7	30.1	31.0
S8	Schools need to prioritize the ICT pedagogical training in their Continuous Professional Development (CPD)	5.8	13.3	17.9	28.7	34.3
S9	Teachers need to be encouraged to integrate and use ICT in their teaching and learning activities	22.5	12.4	13.4	19.4	32.3
S10	I find the ICT integration in teaching to young children is a time consuming	14.9	16.7	12.8	22.7	33.0
S11	ICT facilitates problem-based teaching and learning	14.3	18.3	16.8	22.4	28.3



Table 2. The use of ICT (UOICT) in the classrooms

Items	Statements	SD	D	N	A	SA
S12	I use ICT (computer/laptop with internet) to search information during my lesson planning and preparation	12.7	17.7	19.8	20.4	29.4
S13	I use ICT (Interactive whiteboard/projector) to arouse and direct my learners' attention/make my lesson interesting	6.5	18.4	19.0	26.4	29.8
S14	I motivate my learners to learn and solve task collaboratively through the use of the internet	7.3	16.5	20.2	26.0	30.0
S15	I use E-reader (a device to read books and newspapers on screen) during the lesson	9.5	16.5	16.9	26.5	30.7
S16	In a classroom, I use desktop computers with access to internet	1.8	6.2	16.9	35.4	39.7
S17	I only have access to computers in our school computer laboratory	2.8	6.8	14.9	27.0	48.7
S18	I allow my learners to use gadgets (ICT devices) during the lesson	2.4	8.3	18.5	32.3	38.6
S19	I prefer using ICT on my own when no-one is around/watching to see me making mistakes	3.0	8.3	16.0	29.9	42.9
S20	I confidently use different ICT devices in teaching	5.6	18.8	21.5	22.9	31.2

Table 3. ICT selection criteria (ICTSC) in preschool teaching and learning

Items	Statements	SD	D	N	A	SA
S21	The type of ICT tools I use in preschool teaching is mainly dependent on the lesson objectives and activities	7.0	19.3	21.2	23.8	28.6
S22	The type of ICT tools I use in preschool teaching is mainly dependent on the availability and accessibility at school	2.5	13.7	22.0	30.0	31.8
S23	The type of ICT tool I use in preschool teaching is mainly dependent on different learners' needs\	5.4	19.0	24.8	23.8	27.0
S24	I choose the type of technology (ICT devices) that I am familiar with or frequently use	6.1	22.9	26.6	17.4	27.0
S25	I choose the latest ICT tools available for my preschool teaching	5.7	20.0	25.2	22.4	26.7
S26	I choose the type of technology to increase pupils'/learners' confidence in learning	5.0	12.1	27.6	29.0	26.4
S27	I choose ICT tool based on the curriculum or subject policies	3.8	13.1	21.9	33.5	27.6

## Explanatory factor analysis

For the validity of statements used this scholarship, administered exploratory factor analysis. According to Field (2013), suggestion items should be removed if the value of factor loading is less than 0.3. However, this study removed S20 with a value of 0.295.

Table 4. Items factor loadings mean and standard deviation (S.D)

Items	Attitude of preschool teachers (APST) towards the ICT integration	Factor loadings	Mean	S.D
S1	ICT integration make my teaching easier	0.501	3.419	1.428
S2	ICT integration enhances my learners' critical thinking	0.552	3.315	1.473
S3	ICT integration promote innovation and problem-solving skills of my learners	0.627	3.256	1.461
S4	ICT integration enhance collaborative learning among learners and teachers	0.610	3.270	1.474
S5	ICT promote research-based teaching and learning	0.488	3.399	1.452
S6	ICTs integration help to ensure quality education	0.446	3.439	1.383
S7	Lack of ICT makes it difficult for teachers to keep up with the current trends in education	0.372	3.619	1.263
S8	Schools need to prioritize the ICT pedagogical training in their Continuous Professional Development (CPD)	0.415	3.722	1.225
S9	Teachers need to be encouraged to integrate and use ICT in their teaching and learning activities	0.410	3.266	1.561
S10	I find the ICT integration in teaching to young children is a time consuming	0.366	3.423	1.460
S11	ICT facilitates problem-based teaching and learning	0.465	3.321	1.417
<b>The use of ICT (UOICT) in the classrooms</b>				
S12	I use ICT (computer/laptop with internet) to search for information during my lesson planning and preparation	0.531	3.361	1.391
S13	I use ICT (Interactive whiteboard/projector) to arouse and direct my learners' attention/make my lesson interesting	0.548	3.546	1.255
S14	I motivate my learners to learn and solve task collaboratively through the use of the internet	0.543	3.548	1.272
S15	I use E-reader (a device to read books and newspapers on screen) during the lesson	0.492	3.522	1.328
S16	In a classroom, I use desktop computers with access to internet	0.302	4.050	0.987
S17	I only have access to computers in our school computer laboratory	0.390	4.120	1.068

<b>S18</b>	I allow my learners to use gadgets (ICT devices) during the lesson	0.511	3.963	1.056	Table 4...
<b>S19</b>	I prefer using ICT on my own when no-one is around/watching to see me making mistakes	0.436	4.014	1.089	
<b>ICT selection criteria (ICTSC) in preschool teaching and learning</b>					
<b>S21</b>	The type of ICT tools I use in preschool teaching is mainly dependent on the lesson objectives and activities	0.573	3.475	1.277	
<b>S22</b>	The type of ICT tools I use in preschool teaching is mainly dependent on the availability and accessibility at school	0.511	3.749	1.117	
<b>S23</b>	The type of ICT tool I use in preschool teaching is mainly dependent on different learners' needs\	0.734	3.481	1.223	
<b>S24</b>	I choose the type of technology (ICT devices) that I am familiar with or frequently use	0.737	3.364	1.263	
<b>S25</b>	I choose the latest ICT tools available for my preschool teaching	0.685	3.442	1.234	
<b>S26</b>	I choose the type of technology to increase pupils'/learners' confidence in learning	0.464	3.597	1.143	
<b>S27</b>	I choose ICT tool based on the curriculum or subject policies	0.401	3.680	1.123	

### Correlation analysis

The findings of the study include the significant relationships between the constructs used. Such as there is the attitude of preschool teachers towards the ICT integration demographical to the use of ICT in classroom with (0.7000, p-value < 0.05).

Table 5. Correlation Analysis

		<b>APST</b>	<b>UOICT</b>	<b>ICTSC</b>
<b>Correlation</b>	<b>APST</b>	1.000	0.700*	0.579*
	<b>UOICT</b>	0.700*	1.000	0.607*
	<b>ICTC</b>	0.579*	0.607*	1.000

\*Correlation is significant at 0.01 level

### Common Method Bias Test

According to Kock (2015) suggestion, the single factor variance should be less than 50.0 percent. In this study, the maximum variance that is explained by the only factor is 37.52 percent as shown in table 6. Henceforth, we conclude that this data set is not suffered from common method biases issues.

Table 6. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.144	37.572	37.572	10.144	37.572	37.572
2	2.805	10.390	47.962			
3	2.102	7.784	55.746			
4	1.506	5.579	61.325			
5	1.315	4.869	66.194			
6	1.088	4.028	70.222			
7	.733	2.714	72.937			
8	.668	2.473	75.410			
9	.629	2.329	77.740			
10	.615	2.278	80.017			
11	.477	1.767	81.785			
12	.446	1.651	83.436			
13	.420	1.554	84.990			
14	.408	1.512	86.502			
15	.365	1.351	87.853			
16	.353	1.308	89.161			
17	.338	1.253	90.414			
18	.333	1.233	91.647			
19	.326	1.206	92.852			
20	.293	1.085	93.938			
21	.284	1.053	94.990			
22	.273	1.013	96.003			
23	.254	.941	96.944			
24	.239	.886	97.830			
25	.221	.818	98.648			
26	.188	.695	99.343			
27	.177	.657	100.000			

*Extraction Method: Principal Component Analysis.*

### **Kaiser-Meyer-Olkin (KMO) Test**

According to Cerny and Kaiser (1977), this test used to assess the adequacy of the constructs employed in the study. Moreover, it also analyzes the proportion of variance among the construct that can be because of the common variance. If the value of the test falls between 0.8 and 1 the sampling is adequate. If 0.5 and 0.6 sampling is considered inadequate (Kaiser 1974). While the result of the test for this study proven appropriate response, as reflected in table 7.

Table 8. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.930
Bartlett's Test of Sphericity	Approx. Chi-Square	17633.559
	df	351
	Sig.	0.000

## DISCUSSION AND CONCLUSION

This study examined the attitude of preschool teachers towards the ICT integration, and use of ICT in classroom prolong with the ICT selection criteria in preschool teaching and learning. Moreover, this scholarship also focuses on the issue and challenges encountered by teachers in English teaching in the country. This adds to the existing literature on preschool teacher's attitudes in English teaching, the use of ICT and issues faces by teachers during the adaptation of ICT and its integration.

The first and foremost objective of the study is to investigate the preschool teachers' attitudes towards ICT integration — the eleven statements employed to examine their perception. On the one hand, they confirm that ICT integration makes teaching more comfortable, improve their critical thinking, promote teaching and learning, facilitates problems based education. While at other hands, it also ensured that ICT integration to young children is time-consuming. These results of the study consistent with (Salehi and Salehi, 2012).

To assess the use of ICT in preschool teaching English, we have employed the nine statements. The respondents were asked about the use of ICT from several perspectives. They responded that they use ICT to search for information during lessons, it makes their experience enjoyable, motivates learners to solve their work, and it allows them to improve their knowledge and get quick information. The result of these findings are consistent with the study of (Pira et al., 2019).

Moreover, in response to the selection criteria of ICT, most of the respondents show that they select ICT based on the lesson objectives, availability, and accessibility, needs of the learners, level of familiarity, which increases the confidence level of the learner, and requirements of subjects. These findings are consistent with (VTJ 2019)

Another objective of the study includes the find the issues and challenges related to ICT integration in Vietnam. The results of the study reflected the lack of collaboration among teachers and learners, lack of technical knowledge, and lack of support from the management and lack of qualified staff. Most of the teachers are having high school/higher secondary certificates and diplomas. These results of the study are consistent with (PTT et al., 2019).

To conclude, this study proposed to practitioners and strategy makers of the country that it should give importance to the education of preschool teachers, provide training as 60.0% of respondents are high school or higher secondary pass. Furthermore, 32.0% of respondents did not receive any trainings related to teaching and ICT. Moreover, as 40.0% of the respondents are teaching to 3 to 5 years young children, the use of ICT can improve their understanding, and produce confidence among teachers as well as learners. The caretakers of schools should implement ICT due to wider acceptability and advantages.

## RECOMMENDATIONS

Governments should provide offline and online trainings and arrange workshops for the new teachers. More profoundly, private schools should build some interactive programs for the teachers. Moreover, scholars should also focus on what and how collaboration can be improved. The future studies should investigate the how effectively teachers utilize the ICT application.

## REFERENCES

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39): Springer.
- Ajzen, I., & Manstead, A. S. (2007). Changing health-related behaviours: An approach based on the theory of planned behaviour. In *The scope of social psychology* (pp. 55-76): Psychology Press.
- Apeanti, W. (2014). Prospective mathematics teachers' perception about ICT integration in mathematics instruction in Ghana. *Global Educational Research Journal*, 2(10), 174-184.
- Bayter, O., & Bustelo, F. E. (2019). Education and Poverty in Ibero-Americana Countries. In *Strategy and Superior Performance of Micro and Small Businesses in Volatile Economies* (pp. 177-206): IGI Global.
- Birkollu, S. S., Yucesoy, Y., Baglama, B., & Kanbul, S. (2017). Investigating the attitudes of pre-service teachers towards technology based on various variables. *TEM Journal*, 6(3), 578.
- Boulton, M. J. (1997). Teachers' views on bullying: Definitions, attitudes and ability to cope. *British Journal of Educational Psychology*, 67(2), 223-233.
- Budhedeo, S. (2016). Issues and challenges in bringing ICT enabled education to rural India. *International Journal of Scientific Research and Education*, 4(10), 4759-4766.
- Cerny, B. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate behavioral research*, 12(1), 43-47.
- Chen, R.-S. (2015). The Impacts of Workplace Advantage, Learning Intentions, and Technology Skills on the Use of Information Technology-Assisted Instruction by Early Childhood Pre-Service Teachers. *Turkish Online Journal of Educational Technology-TOJET*, 14(2), 206-218.
- Chen, R.-S. (2016). Preschool Teachers' Attitudes toward Internet Applications for Professional Development in Taiwan. *Eurasia Journal of Mathematics, Science & Technology Education*, 12(10).
- Chen, R.-S., & Tu, C.-C. (2018). Parents' attitudes toward the perceived usefulness of Internet-related instruction in preschools. *Social Psychology of Education*, 21(2), 477-495.
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*: Sage publications.
- Dang, X. T. (2011). Factors influencing teachers' use of ICT in language teaching: A case study of Hanoi University, Vietnam. Paper presented at the International Conference "ICT for Language Learning" 4th edition, Simonelli Editore, 20th-21st October.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Dhital, H. (2018). Opportunities and Challenges to Use ICT in Government School Education of Nepal. *International Journal of Innovative Research in Computer and Communication Engineering*, 3215-3220.
- Dong, C. (2018). 'Young children nowadays are very smart in ICT'—preschool teachers' perceptions of ICT use. *International Journal of Early Years Education*, 1-14.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*: sage.
- Hashemi, A. (2016). The Impact of Information and Communication Technology (ICT) on Teaching English to College Students. *Efl Journal*, 1(3).
- Hutchison, A., & Reinking, D. (2011). Teachers' perceptions of integrating information and communication technologies into literacy instruction: A national survey in the United States. *Reading Research Quarterly*, 46(4), 312-333.

- Hwang, Y.-S., Bartlett, B., Greben, M., & Hand, K. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teaching and Teacher Education*, 64, 26-42.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36.
- Kamaruddin, K., Nawi, M. N. M., Abdullah, C. A. C., & Idris, M. N. (2018). The Integration of ICT in Teaching and Learning: A Study in Malaysian Private Preschool. *The Journal of Social Sciences Research*, 1011-1017: 1016.
- Kamilah, N., & Anugerahwati, M. (2017). Factors Contributing to Teachers' Resistance in Integrating ICT in EFL Classroom in Senior High School. *ELLITE: Journal of English Language, Literature, and Teaching*, 1(2).
- Kimani, J. G. (2017). Challenges Facing Integration and Use of ICT in the Management of County Governments in Kenya. *Journal of Information and Technology*, 1(1), 1-11.
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration (IJeC)*, 11(4), 1-10.
- Kuila, S., Dhanda, N., Joardar, S., Neogy, S., & Kuila, J. (2019). A Generic Survey on Medical Big Data Analysis Using Internet of Things. Paper presented at the First International Conference on Artificial Intelligence and Cognitive Computing.
- Lee, J., Cerreto, F. A., & Lee, J. (2010). Theory of planned behavior and teachers' decisions regarding use of educational technology. *Journal of Educational Technology & Society*, 13(1), 152-164.
- Maduabuchi, C. H., & Emechebe, V. I. (2016). ICT and the Teaching of Reading Comprehension in English as a Second Language in Secondary Schools: Problems and Prospects. *International Journal of Education and Literacy Studies*, 4(3), 18-23.
- Mahdum, M., Hadriana, H., & Safriyanti, M. (2019). Exploring Teacher Perceptions And Motivations To ICT Use In Learning Activities In Indonesia. *Journal of Information Technology Education*, 18.
- Merriam, S. B., & Grenier, R. S. (2019). *Qualitative research in practice: Examples for discussion and analysis*: John Wiley & Sons.
- Mertala, P. (2018). Two worlds collide? Mapping the third space of ICT integration in early childhood education.
- Nguyen, T. T. L. (2019). Using ICT to foster collaborative writing for EFL university students in Vietnam.
- Nikolopoulou, K., Akriotou, D., & Gialamas, V. (2019). Early Reading Skills in English as a Foreign Language Via ICT in Greece: Early Childhood Student Teachers' Perceptions. *Early Childhood Education Journal*, 1-10.
- Noi, H. (2018). Viet Nam's Voluntary National Review On The Implementation Of The Sustainable Development Goals. Retrieved from <https://sustainabledevelopment.un.org/memberstates/vietnam>
- Ogbomo, E. F. (2011). Issues and challenges in the use of Information Communication Technology (ICTs) in education. *Information Impact: Journal of Information and Knowledge Management*, 2(1).
- Olsson, T., Hell, M., Höst, M., Franke, U., & Borg, M. (2019). Sharing of vulnerability information among companies-- a survey of Swedish companies. *arXiv preprint arXiv:1906.04424*.
- Pelgrum, W. J., & Law, N. (2003). *ICT in education around the world: Trends, problems and prospects*: UNESCO: International Institute for Educational Planning.
- Phan, N. T. T., & Locke, T. (2016). Vietnamese teachers' self-efficacy in teaching English as a Foreign Language: Does culture matter? *English Teaching: Practice & Critique*, 15(1), 105-128.
- Phellas, C. N., Bloch, A., & Seale, C. (2011). *Structured methods: interviews, questionnaires and observation. Researching society and culture*, 3.
- Pira, L. B., Romero, R. F., & Munoz, D. P. G. (2019). Uses Of ICT In Preschool: Towards Curricular Integration/Usos De Las Tic's En Preescolar: Hacia La Integracion Curricular/Usos De Tic No Pre-Escolar: No Sentido Da Integracao Curricular. *Panorama*, 13(24), 26-59.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Prajaknate, P. (2017). Information Communication Technologies (ICT) for Education Projects in ASEAN: Can We Close the Digital Divide? In *Sustainable Development Goals in the Asian Context* (pp. 107-133): Springer.
- Preradović, N. M., Lešin, G., & Boras, D. (2017). The role and attitudes of kindergarten educators in ICT-supported early childhood education. *TEM Journal*, 6(1), 162-172.
- PTT, N., Keong, T. C., & Wah, L. K. (2019). Issues and Challenges in Using ICT for Teaching English in Vietnam. *CALL-EJ*, 20(3), 140-155.

- Qalati, S., Yuan, L., Iqbal, S., Hussain, R., & Ali, S. (2019). Impact of Price on Customer Satisfaction; mediating role of Consumer Buying Behaviour in Telecom Sector. *International Journal of Research*, 6(4), 150-165.
- Qalati, S. A., Yuan, L. W., Jamali, A. B., Kwabena, G. Y., & Erusalkina, D. (2019). Brand Equity and Mediating Role of Brand Reputation in Hospitality Industry of Pakistan. *MAYFEB Journal of Business and Management*, 1.
- Quamar, A. H., Schmeler, M. R., Collins, D. M., & Schein, R. M. (2019). Information communication technology-enabled instrumental activities of daily living: a paradigm shift in functional assessment. *Disability and Rehabilitation: Assistive Technology*, 1-8.
- Rossi, P. H., Lipsey, M. W., & Henry, G. T. (2018). *Evaluation: A systematic approach*: Sage publications.
- Salehi, H., & Salehi, Z. (2012). Integration of ICT in language teaching: Challenges and barriers. Paper presented at the Proceedings of the 3rd International Conference on e-Education, e-Business, e-Management and e-Learning (IC4E, 2012), IPEDR.
- Salleh, S., & Albion, P. (2004). Using the theory of planned behaviour to predict Bruneian teachers' intentions to use ICT in teaching. Paper presented at the Society for Information Technology & Teacher Education International Conference.
- Silin, Y., & Kwok, D. (2017). A study of students' attitudes towards using ICT in a social constructivist environment. *Australasian Journal of Educational Technology*, 33(5).
- Slutsky, R., Kragh-Müller, G., Rentzou, K., Tuul, M., Gol Guven, M., Foerch, D., & Paz-Albo, J. (2019). A cross-cultural study on technology use in preschool classrooms: early childhood teacher's preferences, time-use, impact and association with children's play. *Early Child Development and Care*, 1-13.
- Tabira, Y., & Otieno, F. X. (2017). Integration and implementation of sustainable ICT-based education in developing countries: low-cost, en masse methodology in Kenya. *Sustainability Science*, 12(2), 221-234.
- Teddle, C., & Sammons, P. (2010). Applications of mixed methods to the field of Educational Effectiveness Research. In *Methodological advances in educational effectiveness research* (pp. 129-166): Routledge.
- Teo, T., Zhou, M., & Noyes, J. (2016). Teachers and technology: Development of an extended theory of planned behavior. *Educational Technology Research and Development*, 64(6), 1033-1052.
- Trines, S. (2017). Education in Vietnam. Retrieved from <https://wenr.wes.org/2017/11/education-in-vietnam>
- Tuomainen, S. (2015). Recognition and student perceptions of non-formal and informal learning of English for specific purposes in a university context. Doctoral dissertation, Publications of the University of Eastern Finland ...
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- VietNamNet. (2019). education. Retrieved from <https://english.vietnamnet.vn/fms/education/216664/vietnam-spends-5-8--of-gdp-on-education.html>
- Vitoulis, M. (2017). The Formation Of Pre-Service Early Childhood Educators'perceptions About Ict Use In Early Childhood Education After An Experiential Approach. *European Journal of Education Studies*.
- VTJ. (2019). The use of technology in Vietnam's English education. Retrieved from <https://vietnamteachingjobs.com/use-technology-vietnam-teaching-english/>
- Yuan, L. W., Qalati, S. A., Iqbal, S., Hind, H., & Ali, S. (2019). Impact Of Prior Work Experience On Entrepreneurial Intention And Theory Of Planned Behavior In Context Of Pakistan. *Int. J. Adv. Res*, 7(4), 874-887.
- Zaranis, N., Oikonomidis, V., & Linardakis, M. (2017). Factors affecting Greek kindergarten teachers to support or oppose ICT in education. In *Research on e-Learning and ICT in Education* (pp. 203-216): Springer.