

The Demands of 21st Century Learning: A Study on Primary School Teachers' Attitudes towards Using ICT in English as a Second Language (ESL) Classrooms

Vivian Anak Undi, Harwati Hashim*

Faculty of Education, Universiti Kebangsaan Malaysia, Bandar Baru Bangi, Selangor, Malaysia

Email: *harwati@ukm.edu.my

How to cite this paper: Undi, V. A., & Hashim, H. (2021). The Demands of 21st Century Learning: A Study on Primary School Teachers' Attitudes towards Using ICT in English as a Second Language (ESL) Classrooms. *Creative Education*, 12, 1666-1678. <https://doi.org/10.4236/ce.2021.127127>

Received: June 4, 2021

Accepted: July 24, 2021

Published: July 27, 2021

Copyright © 2021 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

The use of ICT has become prominent in the teaching and learning of English as Second Language (ESL) especially in 21st Century Learning. Most of the teachers are expected to be well-equipped and maximise the use of technology for benefits of the students especially in English as Second Language (ESL) classroom. The purpose of this study is to investigate teachers' attitudes towards the use of ICT in Primary ESL Classroom and the challenges faced by the teachers in the use of ICT in Primary ESL Classroom. A survey was conducted involving 50 English teachers teaching in primary schools. This study employed a quantitative research design. The respondents demonstrated positive attitude towards the use of ICT as majority of them were comfortable using ICT as a tool in teaching and learning. Besides that, teachers' lack of training on available computers or software, lack of time to prepare the lesson due to other administrative works, insufficient time to master new software or integrate ICT during a class period and lack of support from administrators or colleagues were also challenges faced by the teachers when implementing the ICT in the primary classroom.

Keywords

Attitudes, ICT, ESL, Primary Classroom, 21st Century Learning

1. Introduction

In the past few years, education in Malaysia has gone through tremendous changes and transformation. It has evolved from production-based to knowledge-based economy in order to stay relevant and compete in the global market-

place (Grapragasem, Krishnan, & Mansor, 2014). In Malaysian Education Blueprint 2013-2025, it is highlighted that a country's success depends on the knowledge, skills and competencies of its people to meet today's global economic competition (Kementerian Pelajaran Malaysia, 2012). Many efforts have been done by the government in amending the current curriculum and language policy in Malaysia in order to stay relevant to the current global needs.

According to Northrup (2013), English is the global language which has expanded through a wide variety of communicative discourses of its native and non-native speakers around the world. English Language consists of four main linguistic skills: mainly listening, speaking, reading and writing. Likewise, in Malaysia context, English Language is considered as English as Second Language whereby students procure the language by means of formal learning in school (Elder & von Randow, 2008). Hence, most users have low level of actual or perceived proficiency compared to the first language (Razali, 2017). This is also supported by Ting et al. (2017); lack of English proficiency and communication skills among Malaysian graduates resulted in high unemployment rate among graduates. Therefore, in this context, special measures must be taken in order to provide the best platform for the learners to grasp the language easily through the usage of technology. This is also supported by Foo and Richards (2004) as they mentioned that when students are exposed to ICT world, it will help them to communicate effectively locally or globally. Hence, not only the students are able to improve their communication skills, but they will also be expected to communicate in English Language as it is widely used and recognised both locally and globally.

As a result, there is an increasing demand use of technology in Malaysian classroom for the improvement of teaching and learning methods. The integration of ICT into language education becomes prominent. According to Huang & Liaw (2005), the successful implementation of the technology depends on teachers having a positive attitude towards it. Zhao et al. (2001) also suggested that teachers' attitudes play a great role in the successful use of ICT in the classroom. Teo et al. (2008) in their studies also emphasised on the teachers' attitudes and willingness to embrace the technology for the success of students' learning using ICT. Therefore, teachers' knowledge, understanding and attitudes must also align with current economic needs in order to produce a workforce that meets the demands of globalisation today (Abd Rahman et al., 2018). Besides that, the recent COVID-19 pandemic also leads to the unexpected change in our education system where online learning became a measure of organizational agility (Wu, 2020). Hence, both teachers and students are needed to adapt to the new-norm teaching and learning methods as physical interaction was not allowed in the normal classroom.

However, most teachers often opt for teacher-centered pedagogy especially in rural areas where the use of ICT is quite a challenge for some areas due to the lack of facilities and lack of knowledge in using the ICT. This is also supported by

Yunus et al. (2012) mentioned that teachers who frequently used teacher-centered pedagogy could lead to lack of interaction with students. Other than that, most teachers would prefer to use the ready-made materials like textbooks or workbooks in their lessons which might limit the students' exposure and comprehension towards English Language. Besides, the use of ready-made materials also could limit the vocabulary learned by the students as it is mostly arranged based on the theme or topics in each chapter or unit in the textbook.

2. Literature Review

2.1. The Use of ICT in Education

The term ICT refers to Information and Communication Technology that includes computers, laptops, tablets, mobile phones, projectors, and software applications (Shah & Empungan, 2015). Al-Zaidiyeen et al. (2010) mentioned that the integration of technology in the language teaching and learning process increase both students and teachers' productivity. This is because it helps the teachers and students to find the information that they need. This is also in line with Volman and van Eck (2001) in their studies which mentioned that the use of ICT is able to transform the teaching and learning process and promotes creative and great learning environments. One of the reasons is because it presents knowledge in an active, self-directed and constructive way. Tour (2010) also highlighted that the use of ICT in English as Second Language (ESL) education may offer the access to new activities and new materials which may increase students' interests and motivation which results in effective learning experiences.

According to Rastogi & Malhotra (2013), the use of ICT in the education does not necessarily contribute to the high quality or effective teaching and learning process but it may change a teacher's role. Teachers are expected to be ready in conducting the lessons using ICT and promote the advantages of using ICT in their lessons especially related to English Language learning materials which are widely available in the internet. Therefore, it is important for teachers to have positive attitudes towards the use of ICT. This is to ensure that they are capable to adapt and adopt their teaching using ICT tool to meet the learners' needs. Besides, it also helps the students to see the relevance of using ICT in the modern era that the students are living in.

2.2. 21st Century Learning in ESL Classroom

Due to the demands of the rapid change in education, there is also a shift from traditional classroom to the 21st century learning classroom. In the 21st century learning classroom, the teachers are expected to maximise the use of technology in the classroom and learners are expected to be independent learners and take charge of their learning. This is also supported by Oliver (2002) as he highlighted that information and communication technology (ICT) has become the main means of imparting knowledge gathering information in higher education and the education system has moved from content-centered curricula to compe-

tency-based curricula and from teacher-centered to student-centered teaching and learning environment. Therefore, teachers are to facilitate students' learning in order for them to experience the 21st century learning environment in the classroom to give them the insights on how and what it means to be the 21st century workers. Learning is no longer limited to the physical classroom, but learning can take place anywhere and anytime.

In this ESL context, technology can help to increase students' engagement, motivate the students and make the learning becomes meaningful. As students are learning English as their second language, they need to see the relevance of learning English. Most students are demotivated or showing less interest in learning English because they do not see the importance of using English especially those who are from rural areas in which the language is not often used in their environment. Therefore, by using technology in the classroom, teachers will help the students to have first-hand experience in using English in an authentic context especially if they were to browse the notes on internet where English is mostly used, or even to communicate with other speakers via social media platforms like Twitter, Facebook or Instagram.

Other than that, teachers' role in the 21st century learning classroom is to make learners link classroom instruction to their home-environment. Sindkhedkar (2012) states that the objective of teaching English should not be "producing bookworms" or "linguistic robots". Hashemi (2013) states that the greatest challenge in the field of English teaching remains the teaching of language skills. He adds that students in India even after studying English for 12 - 15 years, the students fail to correctly express themselves in both writing and speech. This may due to exam-oriented system that promotes product-oriented learning, lack of learner-centered teaching, non-use of multimedia in English classes. This is also likely happens in our Malaysian context where the students have difficulties to use their language skills when it comes to job application in writing their resumes or in their assignments production. Therefore, English teachers need to be more aware of their roles in the classroom so that they will be able to prepare the students who are competent in the digital world.

2.3. Teachers' Attitudes towards the Use of ICT

Teachers' attitudes towards the use of ICT refer to how they feel about implement ICT in their teaching (Albirini, 2006). According to study done by Aşkar & Umay (2001), the teachers will tend not to implement technology into their teaching and learning if the teachers perceived that computers are not important. Capan (2012) highlighted that teachers' attitudes are important because teachers play a major role in the effectiveness of using ICT tools in the classroom. Mcalister et al. (2005) in their study mentioned that teachers showed positive attitudes towards the use of computers despite their limited experience and knowledge with computers. Another study done by Shah & Empungan (2015) also revealed that ICT was used on the satisfactory level by the teachers

although they possessed positive attitudes towards the use of ICT in Literature lesson in secondary schools.

Besides, Mahmud & Ismail (2010) also highlighted that teachers' lack of knowledge in ICT leads to the challenge faced by the teacher. Kandasamy & Shah (2013) in their study also mentioned that lack of time to prepare the lesson and lack of support from the administrators and colleague also lead to the unsuccessful integration of ICT in the classroom. Teachers must adapt their roles and responsibilities as the modern classroom is changing. Xing (2005) mentioned that teachers' attitudes and willingness contribute to the success of using and implementing technology in the education sector. This is also supported by Xing (2015) as the Ministries of Education highlighted the use of technology in the educational institutions will enhance the quality of education. If the teachers stick to the cultural ways of teaching, the learners would find the learning environment dull and will not be interested to learn English Language.

Similarly, in this context, primary school students are generally from the Z-generation, which is way beyond the teachers' generation. Hashim et al. (2019) also explained that generation Z are very tech-friendly because they are so used to the existence of technology in their environment. Hence, it is important for the teachers to be constantly aware of the students' needs as they might have short attention span as they tend to have many sources of distractions. In this era, the students are to learn by doing. Therefore, the teachers need to change their attitudes towards the use of ICT as students should be the focus of education.

In addition to that, the current CEFR-aligned curriculum textbook which is designed to enhance the English Language proficiency among the students also require them to relate to other cultures that might not be relevant to them. For example, the students might not be able to relate what and how the celebration of other countries, food from other countries or even the four seasons easily. Therefore, teachers can use technology as the teaching tool to bring the "outside world to the class" as well as to encourage students to discover the knowledge by themselves using technology. As a result, students will not only have better understanding to what they are learning but also encouraged to be independent learners. This is very important especially when they are to further their studies in higher level of education as the learning is mostly done by the learners themselves. If they were to be "spoon-fed" most of the time, it might be challenging to adapt in the future. Keengwe et al. (2008) further explained that the application of multi-media technologies (those that combine texts, graphics, video, animation and audio) in teaching and learning ensures a very productive, interesting, motivating, interactive and quality delivery of classroom instruction while addressing diverse learners' needs.

While there has been much research on teachers' attitudes to use ICT in classroom, little studies focused on teachers' attitudes in using ICT in primary ESL context. Therefore, this research serves as platform to find out the attitudes among teachers towards the use of ICT in primary ESL Context. Specifically,

these research questions have guided this research:

- 1) What are the teachers' attitudes towards the use of ICT in Primary ESL Classroom?
- 2) What are the challenges or problems in using ICT tools in Primary ESL Classroom?

3. Methodology

3.1. Research Design

This study employed a quantitative research design. Quantitative research is defined as a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques. It employed the use of questionnaire as the research instrument and the data collection was based on the questionnaire distributed to the respondents served as the primary instrument for this study.

3.2. Respondents

The respondents of this study were selected in accordance with convenience sampling procedure. Based on [Cresswell \(2014\)](#), convenience sampling procedure is a quantitative procedure in which the researcher selects the participants because of their willingness and availability to be studied. Although the actual population of primary school teachers in Malaysia are large, this study intended specifically for primary school teachers in Sarawak. Hence, this study involved 50 teachers teaching English as a Second Language (ESL) in Sarawak. The respondents comprised 14 males and 36 females. All of the respondents are serving in primary schools of different areas such as rural, sub-urban and urban. Their ages are ranged from 21 - 60 years old. The respondents also vary from their academic qualifications (from diploma to PhD level), teaching experiences and formal training on ICT.

About 48% of the respondents are considered novice teachers (teaching experience for 6 - 10 years) while the other 52% are considered experienced teachers (teaching more than 10 years). For the academic qualifications, 96% of the respondents either own at least Bachelor's Degree, Master and PhD while 4% of the respondents are in diploma level. In this study, 78% of the respondents are either from sub-urban and rural area while 22% are from urban area. Likewise, majority of the respondents mentioned that they had received formal training on ICT before which comprises of 76% of the respondents while 24% of the respondents claimed that they have yet to receive the formal training on ICT.

3.3. Research Instrument

The survey method was followed to collect the data on ICT adoption of ESL Primary School Teachers in Sarawak. The data collection instrument was a questionnaire adopted and adapted from [Shah & Empungan \(2015\)](#). The questionnaire was done online-based by using Google Form. The online questionnaire

was selected instead of paper-based questionnaire as it can be administered in a time-efficient manner and able to reach wider range of intended respondents (Evans & Mathur, 2005). The questionnaire was divided into three sections. The first section asks about the demographic features such as gender, highest qualification, number of years teaching English as English as Second Language (ESL), school areas and professional development courses on ICT. Section 2 is designed to learn about teachers' attitudes towards the use of ICT in Primary ESL Classroom. There are 6 statements in a five point Likert Scale format in which 1 represents "Strongly disagree", 2 represents "Disagree", 3 represents "Neutral", 4 represents "Agree" and 5 represents "Strongly agree". The last section includes 7 statements with regard to the challenges or problems in the use of ICT tools in Primary Classroom faced by the respondents which was represented by a five point Likert scale ranging from 1 represents "Strongly disagree", 2 represents "Disagree", 3 represents "Neutral", 4 represents "Agree" and 5 represents "Strongly agree".

The data gathered through the questionnaire were analysed using the Statistical Package Social Science (SPSS). Descriptive statistics were used in the analysis in order to collect frequencies, means, percentages and standard deviation. The results are presented in the following section.

The data were then tested for the reliability using Cronbach Alpha through SPSS. **Table 1** shows the Cronbach's Alpha value of each section in the instrument.

4. Findings

4.1. Demographic Profile

Table 2 shows the findings for the demographic profiles of the respondents.

As **Table 2** shows, 72% of the respondents were female teachers and 28% of the respondents were male teachers. As for the highest qualification, most of the respondents are having Bachelor's Degree who represented 84% of the sample while 12% own Master's Degree and 4% own Diploma. As for the teaching experience, 48% have been teaching for 6 - 10 years, 18% have been teaching for 26 years and above, 12% have been teaching for 1 - 5 years, 10% have been teaching for both 11 - 15 years and 16 - 20 years and 2% have been teaching for 21 - 25 years. As for the teaching areas, 48% of the respondents are teaching in semi-urban area, 30% in rural area and 22% in urban area. The majority of the respondents which comprised 76% have received formal training on ICT and

Table 1. Cronbach's Alpha value for each section in the questionnaire.

Section	Title/Variables	Number of items	Cronbach's Alpha (α)
1	Demographic Profile	5	-
2	Teachers' Attitudes towards the Use of ICT in Primary ESL Classroom	6	0.930
3	Challenges or Problems in the Use of ICT Tools in Primary ESL Classroom	7	0.967

Table 2. Demographic profiles of the respondents.

Item	Frequency (Percentage)
Gender	Male
	14 (28)
	Female
	36 (72)
Highest Qualification	Diploma
	2 (4)
	Bachelor's Degree
	42 (84)
	Master's Degree
	6 (12)
	PhD
	0 (0)
Teaching Experience (Years)	1 - 5 years
	6 (12)
	6 - 10 years
	24 (48)
	11 - 15 years
	5 (10)
	16 - 20 years
	5 (10)
	21 - 25 years
	1 (2)
	26 years and above
	9 (18)
Teaching Areas	Rural
	15 (30)
	Semi-urban
	24 (48)
	Urban
	11 (22)
Formal Training on ICT	Yes
	38 (76)
	No
	12 (24)

24% of them did not receive formal training on the integration of ICT in teaching and learning.

4.2. Teachers' Attitudes towards the Use of ICT in Primary ESL Classroom

Table 3 is to answer the first research question: What are the teachers' attitudes towards the use of ICT in Primary ESL Classroom? Each item was rated from Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. **Table 2** presents the results among the respondents towards the use of ICT in Primary ESL Classroom.

As shown in **Table 3**, majority of the respondents (44%) were comfortable using ICT as a tool in teaching and learning as it showed the highest mean score ($M = 3.70$, $SD = 1.37$). Item 5 also showed the highest mean score ($M = 3.70$, $SD = 1.37$) in which 46% of the respondents agreed that ICT tools help them to teach in more effective ways. Based on **Table 2**, 44% of the respondents also agreed that ICT tools helped them to save time and effort in planning their lessons as it denoted the second highest mean score ($M = 3.66$, $SD = 1.39$). Next, 42% of the respondents also agreed that using ICT tools in teaching and learning will help to change the way they teach English with the mean score ($M = 3.64$, $SD = 1.41$). On the other hand, item 2 showed the lowest mean score ($M = 3.14$, $SD = 1.41$) in which only 28% of the respondents responded that the use of ICT

stresses them. This is probably due to the reason that the respondents did not receive any formal trainings on ICT hence made it difficult for them to adapt and use ICT in their teaching.

4.3. Challenges or Problems in the Use of ICT Tools in Literature Lessons

Table 4 is to answer the second research question: What are the challenges or problems in the use of ICT tools in Primary ESL Classroom? Each item was rated from Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. **Table 4** presents the results among the respondents towards the challenges or problems they found when using ICT in Primary ESL Classroom.

Based on **Table 4**, it can be seen that most of the respondents (56%) claimed that lack of training on available computers/software leads contribute to the challenge or problem in using ICT in Primary ESL Classroom as it shows the highest mean score ($M = 4.00$, $SD = 1.31$). Meanwhile, 54% of the respondents agreed

Table 3. Distribution, frequency and mean on the attitudes towards ICT.

No.	Item	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
1	I feel comfortable using ICT as a tool in teaching and learning.	4 (8)	7 (14)	11 (22)	6 (12)	22 (44)	3.70	1.37
2	The use of ICT to teach English stresses me out.	7 (14)	11 (22)	14 (28)	4 (8)	14 (28)	3.14	1.41
3	Using ICT tools will change the way I teach English.	4 (8)	9 (18)	10 (20)	5 (10)	22 (44)	3.64	1.41
4	ICT helps students understand the concept in more effective ways.	4 (8)	9 (18)	10 (20)	6 (12)	21 (42)	3.62	1.40
5	ICT tools help teachers to teach in more effective ways.	3 (6)	9 (18)	11 (22)	4 (8)	23 (46)	3.70	1.37
6	ICT tools help me to save time and effort in planning my lesson.	4 (8)	8 (16)	11 (22)	5 (10)	22 (44)	3.66	1.39

Table 4. Distribution, frequency and mean on the challenges or problems in the use of ICT tools in Primary ESL Classroom.

No.	Item	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)	Mean	SD
1	Not enough computers/ICT tools in my school.	6 (12)	8 (16)	6 (12)	5 (10)	25 (50)	3.70	1.51
2	Outdated/Incompatible computers/ICT tools in my school.	6 (12)	5 (10)	7 (14)	6 (12)	26 (52)	3.82	1.47
3	Internet access is either easily accessible or unavailable in my school.	6 (12)	6 (12)	7 (14)	6 (12)	25 (50)	3.76	1.48
4	Insufficient time to master new software or integrate ICT during a class period.	4 (8)	5 (10)	9 (18)	5 (10)	27 (54)	3.92	1.37
5	Lack of time to prepare for the lesson itself due to other administrative works.	3 (6)	5 (10)	9 (18)	6 (12)	27 (54)	3.98	1.30
6	Lack of training on available computers/software.	3 (6)	5 (10)	9 (18)	5 (10)	28 (56)	4.00	1.31
7	Lack of support from administrators/colleagues.	4 (8)	5 (10)	9 (18)	5 (10)	27 (54)	3.92	1.37

that lack of time to prepare the lesson due to other administrative works in which denoted the second highest mean score ($M = 3.98$, $SD = 1.30$) also one of the factors that leads to problem in using ICT in ESL classroom. Next, 54% of the respondents also claimed that insufficient time to master new software or integrate ICT during a class period and lack of support from administrators/colleagues also some of the challenges that they faced during the use of ICT in Primary ESL classroom as the third highest mean score ($M = 3.92$, $SD = 1.37$). On the other hand, only 20% of the respondents claimed that insufficient computers or ICT tools in their schools as one of the challenges for them to use ICT in the classroom as it showed the lowest mean score ($M = 3.70$, $SD = 1.51$).

To summarise, the findings of this study indicated that teachers show positive attitudes towards the use of ICT in Primary ESL Classroom despite their differences in teaching years, academic qualifications and experiences with the ICT gained from the formal training that they have attended previously. There are few challenges been highlighted in this study which needs to be analysed by the authority as it leads to the implications of the teaching of English Language as Second Language in Malaysia.

5. Discussions

The findings of the study can be divided into two parts namely; teachers' attitudes towards the use of ICT in the classroom and the challenges or problems faced by the teachers in using ICT.

The first part shows the attitudes which demonstrate that teachers' attitudes are positive. This result is in line with research carried out by Mcalister et al. (2005) and Shah & Empungan (2015) which highlighted on the positive attitudes of teachers in using ICT in the classroom leads to more engagement and participation from the students. These studies show that the majority of the respondents have positive attitudes towards the use of ICT in Primary ESL Classroom and it is hoped that the students will be able to be motivated to learn and able to facilitate their own learning so that they will be able to be competent in the 21st century era. Teachers too need to adapt their teaching so it would fit the students' needs and not lead to distraction. Besides, one of the less discussed areas is on how teachers could ensure that the use of ICT will benefit the students and not harm and distract them especially with the advancement of technology that could be severe for the students' pace of learning too.

The second part also shows the challenges or problems faced by the teachers in using ICT. The results show that teachers' lack of training on available computers or software became the barrier for them to use ICT. This is in line with the study by Mahmud & Ismail (2010) in which they highlighted that teachers' knowledge on the ICT lead to their attitudes in using it in the classroom. It is also important for teachers to be equipped with the progressive trainings especially with many digital learning platforms being introduced especially in this COVID-19 pandemic in which learning is mostly done online-based. Teachers

need to have a sound computer and technological skills to cope up with the fast-paced online classes and courses.

Besides, lack of time to prepare the lesson due to other administrative works, insufficient time to master new software or integrate ICT during a class period and lack of support from administrators or colleagues were also challenges faced by the teachers. These findings are supported with the study by Kandasamy & Shah (2013). Teachers need to not felt burdened in using ICT in their lessons and ample time should be given for the teachers to plan and manage their lessons so it will be able to achieve the target objectives.

6. Conclusion

This study investigated the teachers' attitudes towards ICT in primary ESL classroom and the problems and challenges that the teachers found during the use of ICT in the classroom. The study found that most of the respondents portray positive attitudes towards the use of ICT.

As a suggestion, more training on available computers or software can be done to cater to the needs of our current teachers in primary classroom. Besides, teachers' workload especially on the administrative works can be reduced so teachers will have more time preparing their lessons well besides mastering the new software available. This is also to provide more time for teachers who are not well equipped with the use of ICT to equip themselves with the required skills. Other than that, administrators should also play great roles in supporting the teachers' usage of ICT in the Primary Classroom. The use of ICT in the Primary Classroom will not work well if the burdens are put on the teachers' shoulders alone.

Besides, the survey questionnaire was used as the instrument in this study. Future researchers might want to consider the use of other data collection instruments to collect in-depth information regarding the teachers' attitudes towards the use of ICT in primary school and the challenges that the teachers faced in using ICT in primary ESL classroom.

Other than that, future researchers might want to replicate this study with a mixed-method research design to help researchers gain in-depth information on teachers' attitudes towards the use of ICT in Primary ESL Classroom and challenges that the teachers found during the use of ICT in the classroom.

Finally, it is also recommended that further study on the use of tools used in English Language Teaching could also be done to help researchers to measure which tools are preferred by the English teachers in their teaching and its relevance and how it can further enhance students' learning. It is important to see the impact of the tools used whether it leads to positive learning for the students or not.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Abd Rahman, M. J., Ali, M. M., Razak, A., Radzani, M., Daud, M. Y., Hamzah, M. I., & Ensima, N. K. (2018). The Learning Process in Cultural of Fourth Industrial Revolution 4.0 (4IR). *Religación*, 4, 228-232.
- Albirini, A. (2006). Teachers' Attitudes toward Information and Communication Technologies: The Case of Syrian EFL Teachers. *Computers & Education*, 47, 373-398. <https://doi.org/10.1016/j.compedu.2004.10.013>
- Al-Zaidiyeen, N. J., Mei, L. L., & Fook, F. S. (2010). Teachers' Attitudes and Levels of Technology Use in Classrooms: The Case of Jordan Schools. *International Education Studies*, 3, 211-218. <https://doi.org/10.5539/ies.v3n2p211>
- Aşkar, P., & Umay, A. (2001). Perceived Computer Self-Efficacy of the Students in the Elementary Mathematics Teaching Programme. *Hacettepe University Journal of Education*, 21, 1-8.
- Capan, S. A. (2012). Teacher Attitudes towards Computer Use in EFL Classrooms. *Frontiers of Language and Teaching*, 3, 248-254.
- Cresswell, T. (2014). Deja Vu All Over Again: Spatial Science, Quantitative Revolutions and the Culture of Numbers. *Dialogues in Human Geography*, 4, 54-58. <https://doi.org/10.1177/2043820614525715>
- Elder, C., & von Randow, J. (2008). Exploring the Utility of a Web-Based English Language Screening Tool. *Language Assessment Quarterly*, 5, 173-194. <https://doi.org/10.1080/15434300802229334>
- Evans, J. R., & Mathur, A. (2005). The Value of Online Surveys. *Internet Research*, 15, 195-219. <https://doi.org/10.1108/10662240510590360>
- Foo, B., & Richards, C. (2004). English in Malaysia. *RELC Journal*, 35, 229-240. <https://doi.org/10.1177/003368820403500209>
- Grapragasem, S., Krishnan, A., & Mansor, A. N. (2014). Current Trends in Malaysian Higher Education and the Effect on Education Policy and Practice: An Overview. *International Journal of Higher Education*, 3, 85-93. <https://doi.org/10.5430/ijhe.v3n1p85>
- Hashemi, B. (2013). The Investigation of Factors Affecting the Adoption of ICTs among English Language Teachers in ESL Context. *The International Journal of Language Learning and Applied Linguistics World*, 4, 58-72.
- Hashim, H. U., Rusli, R., Yunus, M. M., & Hashim, H. (2019). Are Malaysian University Students "MOOCs-Ready"? *Creative Education*, 10, 2540-2547. <https://doi.org/10.4236/ce.2019.1012181>
- Huang, H. M., & Liaw, S. S. (2005). Exploring Users' Attitudes and Intentions toward the Web as a Survey Tool. *Computers in Human Behavior*, 21, 729-743. <https://doi.org/10.1016/j.chb.2004.02.020>
- Kandasamy, M., & Shah, P. B. M. (2013). Knowledge, Attitude and Use of ICT among ESL Teachers. *Proceedings of the Global Summit on Education*, 185-199.
- Keengwe, J., Onchwari, G., & Wachira, P. (2008). The Use of Computer Tools to Support Meaningful Learning. *AACE Journal*, 16, 77-92.
- Kementerian Pelajaran Malaysia (2012). *Malaysia Education Blueprint 2013-2025*. Kementerian Pelajaran Malaysia.
- Mahmud, R., & Ismail, M. A. (2010). Impact of Training and Experience in Using ICT on In-Service Teachers' Basic ICT Literacy. *Malaysian Journal of Educational Technology*, 10, 5-10.
- McAlister, M., Dunn, J., & Quinn, L. (2005). Student Teachers' Attitudes to and Use of Computers to Teach Mathematics in the Primary Classroom. *Technology, Pedagogy*

- and Education, 14, 77-105.
- Northrup, D. (2013). *How English Became the Global Language*. Berlin: Springer.
<https://doi.org/10.1057/97811137303073>
- Oliver, R. (2002). The Role of ICT in Higher Education for the 21st Century: ICT as a Change Agent for Education. *International Conference on Higher Education for the 21st Century*, Miri Sarawak, April, 2002, 1-8.
https://d1wqtxts1xzle7.cloudfront.net/2068505/8h84gs6c74vwxl.pdf?1425083188=&response-content-disposition=inline%3B+filename%3DThe_role_of_ICT_in_higher_education_for.pdf&Expires=1626364338&Signature=R18PyJXqDt4aXIRFAqZbvb7Dh4uxIfBCy5cv7e6DnjXHChIOgYaL0RePIpZ4AyoZuFF3E8acNao4Is28hRsPboeZSGyYKKyepVeJEJzp7TaNIWfWFiAYhpvduMu1-M2wGRfjdfgw3AoT9te-XUs3gCVwLfFGJYmqK~7vzJOmUGWxX~bgKJTysTcSF-5PAI1334Ox8toZ2wEVLv8Bi3HWCd6pXF3MV-uMtBgzy3V0yisSIWYGglRa84yXMxoYLjVLnnCgELeoPftgXFM-BfillCQjEbjr~0QduSJz~BmQxxdMsBN8Q7nN8oX0kQWcDo-tuHOAAo1Py4EPEoetjHr-g_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA
- Rastogi, A., & Malhotra, S. (2013). ICT Skills and Attitude as Determinants of ICT Pedagogy Integration. *European Academic Research*, 1, 301-318.
- Razali, N. (2017). ESL in Malaysia: Looking beyond the Classroom. *The English Teacher*, 11, 1-11.
- Shah, P. M., & Empungan, J. L. (2015). ESL Teachers' Attitudes towards Using ICT in Literature Lessons. *International Journal of English Language Education*, 3, 201-218.
<https://doi.org/10.5296/ijele.v3i1.7158>
- Sindkhedkar, S. D. (2012). Objectives of Teaching and Learning English in India. *Researchers World*, 3, 191.
- Teo, T., Lee, C. B., & Chai, C. S. (2008). Understanding Pre-Service Teachers' Computer Attitudes: Applying and Extending the Technology Acceptance Model. *Journal of Computer Assisted Learning*, 24, 128-143.
<https://doi.org/10.1111/j.1365-2729.2007.00247.x>
- Ting, S. H., Marzuki, E., Chuah, K. M., Misieng, J., & Jerome, C. (2017). Employers' Views on Importance of English Proficiency and Communication Skill for Employability in Malaysia. *Indonesian Journal of Applied Linguistics*, 7, 315-327.
<https://doi.org/10.17509/ijal.v7i2.8132>
- Tour, E. (2010). Technology Use in ESL. An Investigation of Students' Experiences and the Implications for Language Education. *TESOL in Context*, 20, 5-21.
- Volman, M., & van Eck, E. (2001). Gender Equity and Information Technology in Education: The Second Decade. *Review of Educational Research*, 71, 613-634.
<https://doi.org/10.3102/00346543071004613>
- Wu, Z. (2020). How a Top Chinese University Is Responding to Coronavirus. In *World Economic Forum*.
- Xing, B. (2015). Massive Online Open Course Assisted Mechatronics Learning: A Hybrid Approach. In A. Mesquita, & P. Peres (Eds.), *Furthering Higher Education Possibilities through Massive Open Online Courses* (pp. 245-268). Hershey, PA: IGI Global.
<https://doi.org/10.4018/978-1-4666-8279-5.ch012>
- Yunus, M. M., Salehi, H., & Chenzi, C. (2012). Integrating Social Networking Tools into ESL Writing Classroom: Strengths and Weaknesses. *English Language Teaching*, 5, 42-48. <https://doi.org/10.5539/elt.v5n8p42>
- Zhao, Y., Byers, J., Mishra, P., Topper, A., Chen, H., Enfield, M. et al. (2001). What Do They Know? A Comprehensive Portrait of Exemplary Technology-Using Teachers. *Journal of Computing in Teacher Education*, 17, 24-36.