Assessing ICT Integration in Teaching Training: A Study of Moral Education Teacher Trainers at Universiti Pendidikan Sultan Idris, Malaysia

Helda Bint Francis[1], Sakinah Salleh[2*]

[1,2] Faculty of Human Sciences, Sultan Idris Education University, 35900 Tanjong Malim, Perak, Malaysia

* sakinah.salleh@fsk.upsi.edu.my

ABSTRACT

Communication and Information Technology (ICT) has become a necessity in the education system. However, there are still teachers who have not integrated ICT into their teaching and learning. This research was carried out to examine the level of willingness to use ICT during teaching training among Moral Education teacher trainers at Universiti Pendidikan Sultan Idris (UPSI), Malaysia. The willingness aspect studied is knowledge, attitudes and practice. This study involved 103 teacher trainers as respondents. Study data was obtained from a set of research questions and analyzed using SPSS Version 25 software to obtain frequency, percentage and minimum. The results of the study show that the overall minimum score for the challenge of using ICT is high, while the differences in the level of knowledge readiness and attitudes towards the use of ICT during Teaching Training show that there is no significant difference between junior trainer teachers and senior trainer teachers. The implications of this study can help teacher trainers in integrating ICT in their teaching and learning.

Keywords: *ICT in teaching and learning, Teacher Trainer, Teaching Practice, Moral Education*

INTRODUCTION

Communication and information technology (ICT) has a huge impact on the education system in terms of the acquisition and absorption of knowledge by teachers and students. It can promote two-way interaction and increase cooperation between teachers and students regardless of the distance between them. Moral education is a subject that contains various moral values that not only need to be remembered but also need to be practiced in daily life. According to (Balakrishnan, 2007), the challenge in teaching and learning Moral Education is how to promote moral development among students and to provide opportunities for them to voice their opinions on the moral issues. This is because Moral Education not only provides teaching and the application of pure values but is also closely related to the actual practice of daily life.

In fact, teachers need to relate with students experiences in everyday life with learning topics taught in the classroom.

The spread of the Covid-19 outbreak has affected the education system in Malaysia, leading to increased use of technology in teaching and learning. This new norm requires teachers to work from home, causing teacher's work routines and culture also to change during the period of the Movement Control Order (Rahayu & Wirza, 2020). This situation encourages teachers to learn and take the initiative in increasing their knowledge and digital skills. One of the challenges while undergoing online teaching and learning is that teachers have difficulties in implementing two-way communication between students because they are not yet accustomed to the new norms implemented (Omar & Abd Karim, 2023). Apart from that, the difficulty in getting cooperation from parents also causes students often not take part in online learning (Fauzi & Khusuma, 2020). ICT should facilitate teachers' routine tasks, as has been proven by most independent studies but teachers are feel hesitate because they do not know how to integrate technology in their teaching (Azizan & Nasri, 2020).

According to (Idriki & Tan, 2022), the challenges faced by teachers when using ICT is that they cannot carry out and have limited of time. This causing the teaching content can't be well-delivered. Another problem is coming from the weak internet access in several parts of Malaysia, especially for students who live in rural areas. The education system in Malaysia is implementing *Pembelajaran Abad ke-21* (PAK21) and using these methods during online learning. Although the Malaysian Ministry of Education is taking various steps through teaching and learning, it needs to be looked holistically and systematically and not just focus solely on infrastructure and modality aspects (Azizan & Nasri, 2020).

Based on the problems stated, this study was carried out to see the comparison of the level of willingness of junior and senior trainer teachers of Moral Education at University Pendidikan Sultan Idris (UPSI). The implications of this study can help prospective teachers to be more willing in terms of knowledge, attitudes, skills and practices in using ICT during the teaching and learning process. This research wants to answer the question: 1) What are the challenges of UPSI teacher trainers regarding the use of ICT? 2) Is there a significant difference in the level of willingness to use ICT for Moral Education Teaching and learning between junior and senior teacher trainers? 3) Is there a significant difference in the practice stages of using ICT for Teaching and learning Moral Education between junior and senior teacher trainers?

METHODOLOGY

This study is using a quantitative methods. The respondents are senior and junior trainers for Moral Education in 2021. The question is design to obtain information related to the use of ICT in Moral Education Teaching and learning while undergoing teaching practice. The questionnaire form is provided based on the objective of the study, that is: 1) identifying the challenges of UPSI teacher trainers in

using ICT in the Moral Education Teaching and learning, 2) identifying the willingness of UPSI teacher trainers to apply the use of ICT in the Moral Education Teaching and learning and 3) identifying the relationship between the senior and junior teacher trainer's willingness to use ICT during teaching practice. A total of 103 teacher trainers were selected as study respondents.

Links for online research questions (Google form) have been sent with several channel of communication, scuh as: telegram application, UPSI student email and WhatsApp. Data were analyzed using the SPSS Version 25 software. The descriptive statistics used were standard minimum and standard deviation to describe overall challenges faced by teacher trainers. The minimum value is interpreted according to the study scale of the Basic Educational Design and Research Division (KPM 2006) where 1.00 – 1.804 (Very low), 1.805 – 2.604 (Low), 2.605-3.404 (Simple), 3.405 – 4.204 (High) and 4.205 – 5.00 (Very high). While the independent sample t-test has been used to see differences levels of knowledge, attitudes and practices of using ICT in teaching and learning of Moral Education .

Table 1. Research Method, Research Instrument and Statistical Analysis Techniques

Research Method	Research Instrument	Statistical Analysis Techniques
Quantitative	Feedback form through google form	- Descriptive - Independent sample t-test

RESULTS AND DISCUSSION

The practices of PAK 21 in Malaysia is aims to student-centered learning (Kamary & Hamzah, 2019). The use of technology enabled teachers to expand material course and help to shape student's perspectives on things that are closely related to moral issues. Various means of communication during teaching and learning Moral Education such as the game Kahoot!, Quizizz, Padlet and applications can help teachers fully optimize the use of ICT in the classroom.

The overall concept of teaching and learning PAK-21 is still poorly understood by teachers, especially in terms of design and implementation (Ismail & Ismail, 2018). This problems becomes barrier in integrating ICT because teachers are still tied to traditional concepts. Meanwhile, the process of teaching and learning depends on aspects of knowledge, skills and attitudes of the teachers (Nagappan, 2010). Digital learning can help students become more creative and collective compared to the traditional learning process which only depends on textbooks. Through the convenience of ICT, the teaching and learning process can be implemented anywhere, regardless of time and place.

Despite the fact, there is a challenge faced by moral education teachers in implementing teaching and learning online, like: internet access, parent cooperation and the need for technology skills (Idriki & Tan, 2022). When online teaching and learning is implemented, teachers cannot see and assess students' emotions and behavior. Compared to the situation when the class helds offline, teacher can see the student's overall moral dimension.

As the impact of this problems, teachers consider PAK21 as a burden on the education system because they are are forced to take courses related to the use of ICT. This will indirectly increase the workload of teachers. Teacher's willingness during the process really depends on aspects of the teacher's own knowledge, skills and attitudes. If the teachers can master the use of ICT, then students will start to follow that example. The emphasis on the use of ICT needs to be given to teachers so that they can fully optimize in the teaching process (Lapammu & Mahamod, 2018). If teachers have a negative attitude, such as always thinking that traditional methods are better, then education in Malaysia will difficult to compete with foreign countries. A teacher needs to have a positive attitude and willing to make changes in implementing teaching and learning. However, the convenience of computers and internet access must be complete and well accessible in order to help teachers in their efforts to integrate ICT (Sidin & Mohamad, 2004). They also wants to be simple in implementing cognitive, behavioral and affective aspects in teaching and learning so that become role model for society (Rahim & Abdullah, 2017; Omar, 2016).

Having a positive approach toward handling ICT plays a crucial role in ensuring effective ICT management and elevating professional standards (Ling & Mohamed, 2022; Zulkifli & Raja Maznah, 1994). Research underscores that teachers' views and inclinations toward ICT in education are influenced by their ICT training, with a significant number expressing a favorable stance on ICT's instructional significance (Zainudin & Bakar, 2021). Despite the widespread acknowledgment among teachers regarding the significance of ICT, some exhibit hesitancy. Trainer adaptability is noteworthy in accommodating dissenting opinions about ICT implementation in PAK21. Despite recognizing the potential of web resources and social networks in enriching teaching, some educators are apprehensive (Faridi, 2009). Studies reveal that while teachers generally possess a basic level of ICT proficiency, they demonstrate high competence in utilizing computers within school settings (Baharuddin & Badusah, 2016).

Based on the data obtained from research questions, the author using descriptive analysis and independent sample t-test analysis.

Part A Analysis, including: respondent demographics, gender, age, year of study, recent teaching training session and area where teaching training was undertaken. Data and information regarding respondents are shown in the tables below.

Analysis of Respondents According to Gender

Table 2. Distribution and percentage of respondents based on gender

Gender	Frequency	Percentage (%)
Man	27	26.2
Woman	76	73.8

Based on Table 2 shows that the majority of respondents consist of female trainers.

Analysis of Respondents Based on Age

Table 3. Analysis of respondents based on age

Age	Frequency	Percentage (%)
21-23	9	8.7
24-26	88	85.4
27 Years and above	6	5.8

Based on Table 3 shows that the majority of Moral Education trainers are aged 24-26 years.

Analysis of Respondents Based on Year of Study

Table 4. Distribution and percentage of respondents based on year of study

Year of Study	Frequency	Percentage (%)
6th semester	34	33.0
7th semester	42	40.8
Semester 8	27	26.2

Based on Table 4 shows that mostly the respondents are on their 7th semester junior trainer teachers.

Analysis of Respondents Based on Recent Teaching Training Sessions

Table 5. Analysis of respondents based on Recent Teaching Practice sessions

Latest Teaching Practice Sessions	Frequency	Percentage (%)
Teaching Practice 1 (LM1)	74	71.8
Teaching Practice 1 (LM1) & Teaching Practice 2 (LM2)	29	28.2

Based on Table 5, the majority of respondents were junior trainers who had undergone Teaching Practice 1 (LM1), with a percentage of 71.8%.

Analysis of Respondents Based on Area Undergoing Teaching Training

Table 6. Analysis of respondents by area undergoing LM

Region	Frequency	Percentage (%)
City	45	43.7
Rural	58	56.3

Based on Table 6, the majority of teacher trainers have undergone teaching training in rural areas.

Analysis of Part B: Identifying the Challenges of UPSI Teacher Trainers Using ICT While Undergoing LM for Teaching and learning Moral Education.

Descriptive methods are used and all results that have been analyzed will be presented in the form of a table showing percentage, frequency, minimum and standard allowance which is described by the average min score as in Table 2.

Table 7. Average score and min interpretation

Average Score Min	Interpretation
1.00-2.33	Low
2.34-3.66	Simple
3.67-5.00	Tall

Source: Adaptation from Hasnah & Jamaludin, 2017.

Table 8. Min amount, percentage and standard allowance for challenges using ICT during LM

ITEMS	STS	T.S	K.S	S	SS	MIN	SP
1. I prefer to teach using traditional methods rather than using ICT.	34 33.0%	21 20.4%	17 16.5%	13 12.6%	18 17.5%	22.60	1,510
2. The school provides support for technology-based learning.	3 2.9%	2 1.9%	13 12.6%	31 30.1%	54 52.4%	4.27	0.962
3. I was influenced by the way experienced teachers teach.	37 35.9%	5 4.9%	3 2.9%	31 30.1%	27 26.2%	3.10	1,706
4. All students have the opportunity to use ICT.	23 23.3%	21 20.4%	2 1.9%	16 15.5%	41 39.8%	3.23	1,687
5. I am allowed to use the computer lab.	3 3.9%	6 5.8%	5 4.9%	17 16.5%	72 69.9%	4.42	1,080
6. I had the opportunity to use a computer lab.	10 9.7%	38 36.9%	7 6.8%	15 14.6%	33 32.0%	3.18	1,487
7. The school has sufficient computer facilities.	37 35.9%	13 12.6%	9 8.7%	15 14.6%	29 28.2%	2.82	1,685
8. The school has good computer facilities.	18 17.5%	35 33.0%	7 6.8%	17 16.5%	27 26.2%	2.96	1,508
9. The use of ICT saves time	0 0%	1 1%	16 15.5%	24 23.3%	62 60.2%	4.43	0.787
10. The school where I underwent teaching training has good internet access	26 25.2%	25 24.3%	3 2.9%	14 13.6%	35 34.0%	3.05	1,677

Based on Table 8, it was found that 31 people (30.1%) of respondents said that they preferred teaching using traditional methods rather than using ICT. The second item also aims to see whether the school provides support for technology-based learning or not. Feedback found that 85 people (82.5%) of respondents agreed with this item.

This shows that there are still schools that cannot accept reforms by using ICT in teaching and learning. Based on respondents' feedback, the third item also shows that there are still many teacher trainers who are influenced by the way experienced teachers teach while undergoing LM.

Apart from that, based on the fourth item, as many as 57 people (55.3%) of respondents stated that they strongly agreed and agreed that all students have the opportunity to use ICT while in the computer laboratory. This means, even though the school fully supports the use of ICT in schools, it does not necessarily mean that the computers used are sufficient for all students. Based on respondents' feedback, the fifth item also shows that the teacher trainer received permission to use the computer laboratory by the school.

In terms of the use of information technology in the class room, it was found that more than half of the respondents, namely 10 people (9.7%), disagreed with 38 people (36.9%) and disagreed with 7 people (6.8%) that they had the opportunity to use ICT in the class room. While the number of respondents who agreed with item six was 15 people (14.6%) and 33 (32%) strongly agreed, therefore, this finding is important to describe the actual use of information technology during the teaching and learning process by moral education teacher trainers throughout the LM. One of the biggest challenges to using ICT while undergoing LM is in terms of the convenience provided at school. This is shown by the high percentage of those who strongly disagree, disagree and disagree, namely 59 people (57.2%) with the statement that the school has sufficient computer facilities. Meanwhile, only 15 respondents (14.6%) agreed, while 29 people (28.2%) strongly agreed with the fact that the school where they run LM has sufficient computer facilities. Based on respondents' feedback, the eighth item also shows that there are still many schools, especially in rural areas, that do not have good computer facilities that can be used. This is shown by the high percentage of those who strongly disagree, disagree and less agree, namely 59 people (57.3%). As many as 17 respondents (16.5%) agreed, while 27 people (26.2%) strongly agreed with this fact.

More than half of the respondents stated that they strongly agreed, 62 (60.2%) and 24 people (23.3%) agreed that the use of ICT facilitates teachers' Teaching and learning sessions because it saves time. The remaining 17 people (16.5%) did not agree that the use of ICT saves time. This is because the movement to the computer laboratory takes time and will indirectly disrupt the Teaching and learning period. The last item shows that there are still many schools experiencing the same problem, namely in terms of internet access. This is shown by the high percentage of those who strongly disagree, disagree and agree that the school where they undergo LM has good internet access, namely 54 people (52.4%). Of the remainder, only 49 people (47.6%) underwent LM at schools that had good internet access.

Analysis of Part C: Differences in Level of Knowledge and Attitudes towards Using ICT While Undergoing LM Between Junior Teacher Trainers and Senior Teacher Trainers.

Table 9. Unleaned Sample T-Test Analysis Decisions Based on Knowledge Aspects

Aspect	Gathering	N	Min	SP	t	Sig.
Knowledge	Junior trainer teacher	76	45.66	3,982	101	0,000
	Senior trainer teacher	27	49.52	1,397		

An unbiased sample t-test was conducted based on differences in the level of willingness to use ICT for knowledge aspects between junior teacher trainers (M= 45.66 , SP= 3.98) and senior trainer teachers (M= 49.52 , SP= 1.39). The results of the unbiased sample t-test showed that there was a significant difference between junior trainer teachers and senior trainer teachers, t(101.0)=-7.28, p<.05.

Table 10. Unleaning Sample T-Test Analysis Decisions Based on Attitude Aspects

Aspect	Gathering	N	Min	SP	t	Sig.
Attitude	Junior trainer teacher	76	42.54	7,317	71,266	0,000
	Senior trainer teacher	27	47.19	4,723		

An unbiased sample t-test was carried out based on differences in the level of willingness to use ICT for attitude aspects between junior teacher trainers (M= 42.54 , SP= 7.317) and senior trainer teachers (M= 47.19 , SP= 4.723). The unbiased sample t-test results showed that there were significant differences between junior teacher trainers and senior trainer teachers, t(71.26)=-3.75, p<.05.

Analysis of Part D: Differences in practice stages of ICT use during undergoing LM between junior teacher trainers and senior teacher trainers.

Table 11. Unreliable Sample T-Test Analysis Decisions Based on Practice Aspects of ICT Use

Aspect	Gathering	N	Min	SP	t	Sig.
Practice	Junior trainer teacher	76	38.24	7.923	101	0.099
	Senior trainer teacher	27	40.26	4.184		

An unbiased sample t-test was conducted based on the practical stage of ICT use among junior teacher trainers (M= 38.24 , SP= 7.92) and senior trainer teachers (M= 40.26 , SP= 4.18). The unbiased sample t-test results showed that there was an insignificant difference between junior trainer teachers and senior trainer teachers, t(86.0)=-1.70, p>.05.

Validity of the Hypothesis

As explained regarding hypothesis development in Chapter 3, the reviewer has carried out an independent sample t-test to obtain a final decision for the study hypothesis that has been formulated. The following is the validity of the hypothesis based on the data analysis decisions that have been made.

Table 12. Validity of the Hypothesis

HYPOTHESIS	SIGNIFICANT/NOT SIGNIFICANT	DECISION
Ho1	Not significant	ACCEPTED
Ho2	Not significant	ACCEPTED
Ho3	There are significant differences	REJECTED

An unbiased sample t-test was carried out based on differences in the level of willingness to use ICT between junior teacher trainers and senior teacher trainers. The results of the unleaned sample t-test are not significant, the hypothesis is accepted because p<0.05. Furthermore, the decision of the sample t-test was not based on the difference in the level of willingness to use ICT for the attitude aspect between junior trainer teachers and senior trainer teachers was not significant, so the hypothesis was accepted because p<0.05. Finally, the decision of the sample t-test was not based on the difference in the level of practice of using ICT between junior teacher trainers and senior teacher trainers which was significant, so the hypothesis was rejected because p>0.05.

CONCLUSION

The level of knowledge, attitudes and practices of teacher trainers using ICT during teaching training is closely related to the implementation of 21st century learning. Teacher trainers need to master it in order to be able to convey knowledge to students. The results of the study show that the overall minimum score for the challenge of using ICT is high, while the differences in the level of knowledge readiness and attitudes towards the use of ICT show that there is no significant difference between junior trainer teachers and senior trainer teachers. The implications of this study can help teacher trainers in integrating ICT in their teaching and learning. The implications of this study show that the use of ICT in teaching and learning is urgent in implementation of moral education. This is

because without commitment and cooperation from teachers, the education system will not reform and will continue to lag behind developed countries.

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