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Trainee Teachers at Sultan Idris University of Education Using Digital Media Technology

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Abstract

The purpose of this quantitative survey study is to evaluate how special education trainee teachers at Universiti Pendidikan Sultan Idris (UPSI) use and are interested in digital media technologies. Using a questionnaire instrument, the study conducted a survey of 82 trainee teachers who had successfully completed the Teacher Apprentice Program, Teaching Training 1 and Teaching Training 2. A high mean interest score of 4.174% among respondents was found through analysis using SPSS 26.0, showing a great desire in employing digital media technologies. Additionally, with a mean score of 3.641%, respondents expressed positive attitudes on the use of digital media technologies in the classroom. The study also discovered a strong positive link between trainee instructors' use of digital media technology and interest in it ($r = 0.625$, $p < .05$). These results, which are grounded on constructivism theory, highlight how crucial it is to use digital media technology in 21st-century teaching and learning, especially for children who have specific educational needs. This study emphasizes how better digital media integration is required to maximize learning results for a diverse learner.

Keywords: Technology, Digital Media, Interest And Trainee Teacher.

Introduction

These days, the application of science and technology advancements in the sphere of education is growing because of its adaptation and integration into the educational process, technology and education have become inseparable in this age of globalization. Technology is one of the things that is believed to shape or change culture, according to (Maritsa et al., 2021). This shows how information can be accessible more readily with the use of technology, which speeds up communication and adds intrigue to the learning process. Technology can help students in particular master their classroom learning and save time in the process of mastering knowledge. Jobirovich (2022), who said that the evolution of education has been greatly aided by digital technology. Students and teachers can lead and organize the learning process in an engaging and productive way in a classroom with ICT and communication devices. Nelson (2019), also state that technology assistance is a necessary component for teachers.

Several researchers have demonstrated how attitudes regarding technology differentiate educators who use it from those who don't. According to Nelson & Hawk (2020) attitudes

towards technology's significance were a powerful indicator of digital behavior. Nevertheless, regardless of how complex a technology may be, educators must possess the necessary abilities, knowledge, and attitudes to apply it in the classroom (Spiteri & Rundgren, 2020). A professional teacher must also be able to create a classroom environment that favors learning, foster close relationships with fellow citizens, plan for the future by presenting new ideas, and always seize opportunities with trust and responsibility (Sabilan et al., 2023). This is to ensure knowledge, skills and a positive attitude towards teaching and learning to be successful and can be achieved.

Statement of Problem

The current study is unique that it uses a specific set to look at teachers' use of technology. Nelson & Hawk (2020) found that attitudes of technology's significance were a powerful indicator of technology use. Serving as educators and the architects of their students' knowledge acquisition, teachers in the twenty-first century also take on the roles of advisors, leaders and change agents in their communities (Ahmad & Majid, 2018). Today's trainee instructors must, deal with a number of obstacles and issues while receiving their teaching certification in schools. The lack of adequate preparation and pedagogical understanding among trainee instructors, as well as their modest interest, attitude, knowledge, and teaching abilities, are some of the issues and limitations they must deal with (Ali et. Al., 2017). In fact, the biggest problem and challenge faced by aspiring teachers is also to implement holistic and effective teaching and learning that is related to the current state of development while utilizing a variety of support materials in the form of technology and information. As a result, instructors are crucial in driving change within the educational system. In order to guarantee that children may acquire these 21st century abilities, teachers must possess the necessary training and expertise (Hannan et al., 2019).

Furthermore, the question of using instructional aids in the classroom—whose application also depends on the initiative and proficiency of the teacher—has a direct bearing on the calibre of instruction. Rashed et al (2016) claimed that the teacher's attempts to employ a variety of materials as part of the pre-lesson preparation are one of the factors that might make the usage of teaching aids engaging. Regarding that, one of the resources that must be highlighted and employed in the classroom is the usage of digital media technology. This is the case since it is one of the materials that is thought to be highly practical and effective. As per the findings of Ahmad & Tamuri (2010), one of the key components of the global education system is the utilization of technology-based teaching aids. Therefore, professional development can be considered as important for teachers' perceived skills to keep up with the latest developments in the use of technology.

Thus, the employment of digital media technology by Universiti Pendidikan Sultan Idris special education trainee teachers would be the main subject of this study. This study also focuses on trainee instructors' interest in and usage of digital media technologies, as well as the relationship between the two.

Research Objective

1. Identifying the level of use of digital media technology among special education trainee teachers at Universiti Pendidikan Sultan Idris.
2. Identify the level of interest in the use of digital media technology among special education trainee teachers at Universiti Pendidikan Sultan Idris.

3. Identify the relationship between the level of use of digital media technology with interest among special education trainee trainee teachers at Universiti Pendidikan Sultan Idris.

Research Methodology

This study in general, takes a quantitative approach because the investigator is interested in statistical analysis of the data. According to Mamat & Abd Rahman (2019), using quantitative research methodologies can help studies yield legitimate and dependable results. He can rapidly and simply interpret the data using this strategy. Rabi (2021) also defines quantitative research as any study that makes use of information or data with quantitative features. Additionally, according to Creswell & Creswell (2018), a more intricate link between variables discovered in logistic regression, hierarchical linear modelling, and structural equation modelling techniques can explain the design of quantitative investigations. Quantitative research is a scientific tradition of social science based on positivism, denies the theological and metaphysical components of social reality (Ahmadin, 2022). This school of thought's foundation is the idea that facts from the field and empirical experience are what truly decide the validity of knowledge. All of the realities that have been captured by the senses and subjected to sensory experience through experimentation and observation comprise the truths under considerations. In order to examine the data statistically, the researcher chose for a quantitative study design. The questionnaire method is employed by the research tool.

Table 1
Demographic Summary of Respondents

Variables		Frequency	%
Gender	Men	15	18.3
	Women	67	81.7
Semester	1	1	1.2
	2	2	2.4
	3	1	1.2
	4	5	6.1
	5	17	20.7
	6	43	52.4
	7	13	15.9
	8	1	1.2
Age	20 – 25 years	67	81.7
	26 – 30 years	15	18.3
Teaching Experiences	Teacher apprenticeship program 2	25	30.5
	Teaching training 1	40	48.8

	Teaching training 2	17	20.7
Experience With Media Technology Digital	1 – 10 years	56	68.3
	11 – 20 years	16	19.5
	21 – 30 years	10	12.2
Note: N = 82			

Findings

The semester item then displays each of the 82 respondents from the first to the eighth semester. It can be concluded from this that the trainee teachers from the sixth semester, who recorded a percentage of 52.4% consisting of 43 respondents, were the trainee teachers who replied to this survey the most. In the meantime, the lowest percentage—1.2%, or one respondent was found among trainee teachers who participated in this survey during the first, third, and eighth semesters.

Additionally, the age item reveals that, of the 82 respondents, 67 (81.7%) are between the ages of 20 and 25, and 15 (18.3%) are between the ages of 26 and 30 of the respondents. Since the respondents who were chosen at random and in groups from the UPSI group of trainee instructors, the study's inference demonstrates that the findings are accurate. Similar to how teaching experience is measured, the respondents of this research tool are trainee instructors who have completed one or two school-based teaching trainings in addition to two apprenticeship programs. Thirty-five percent of teachers, or twenty-five respondents, reported having participated in the second teacher apprenticeship program. As for the percentage of teachers who have completed one teaching course, it stands at 48.8%, or 40 study participants. The percentage of teacher candidates who have completed two teaching courses is 20.7%, or 17 study participants.

Regarding the experience utilizing digital media technology item, 56 out of 82 respondents, or trainee teachers, have the highest percentage of experience (68.3%) with one to ten years of experience. The age group of 11 to 20 years old accounts for 19.5%, or 16 out of 82 respondents, and indicates a moderate percentage of experience utilizing digital media technology by trainee teachers.

Table 2
Overall Descriptive Distribution

No.	Items	Strongly disagree	Do not agree	Not sure	Agree	Totally agree	Min	Standard deviation	Interpretation
		N (%)	N (%)	N (%)	N (%)	N (%)			
B1	I always use digital media technology in teaching and learning	-	2 (2.4)	5 (6)	25 (30.1)	51 (61.4)	4.57	0.614	
B2	I can use all digital media technologies at any time	1 (1.2)	3 (3.6)	8 (9.6)	31 (37.3)	40 (48.2)	4.35	0.752	
B3	I am always learning how to use digital media technology	-	1 (1.2)	5 (6)	30 (36.1)	47 (56.6)	4.53	0.596	
B4	I find it difficult to use digital media technology	21 (25.3)	29 (34.9)	20 (24.1)	7 (8.4)	6 (7.2)	3.68	1.138	
B5	I have the skills to use digital media technology	-	2 (2.4)	13 (15.7)	41 (49.4)	27 (32.5)	4.18	0.675	
B6	I always try the latest digital media technology	-	3 (3.6)	8 (9.6)	33 (39.8)	39 (47)	4.35	0.734	
B7	I can face challenges while using digital media technology	1 (1.2)	4 (4.8)	15 (18.1)	33 (39.8)	30 (36.1)	4.10	0.871	
B8	I have no problem using digital media technology	5 (6)	15 (18.1)	23 (27.7)	24 (28.9)	16 (19.3)	3.41	1.138	
B9	I can use digital media technology comfortably	-	2 (2.4)	10 (12)	36 (43.4)	35 (42.2)	4.32	0.671	

B10	I can use digital media technology that suits the student's abilities	-	-	12 (14.5)	41 (49.4)	30 (36.1)	4.25	0.650	
Overall Mean							**4.174**	**0.784**	**High**

The distribution of descriptive data, including the overall mean score, item-by-item mean value and standard deviation, frequency, percentage and interpretation of the overall mean score, for the construct of the level of digital media technology use among UPSI trainee teachers is explained in Table 2. With a mean score of 4.174 and a standard deviation of 0.784, the overall level of use of digital media technologies among UPSI trainee teachers is at a high level.

Table 3
Descriptive Distribution Overall and According to Each Question Item for the Level of Interest in Digital Media Technology

No.	**Items**	**Strongly disagree**	**Do not agree**	**Not sure**	**Agree**	**Totally agree**	**Min**	**Standard deviation**	**Interpretation**
		N (%)	**N (%)**	**N (%)**	**N (%)**	**N (%)**			
C1	I love using digital media technology	1 (1.2)	4 (4.8)	17 (20.5)	49 (59)	12 (14.5)	3.87	0.705	
C2	I like to explain the benefits of digital media technology to students	3 (3.6)	13 (15.7)	22 (26.5)	38 (45.8)	7 (8.4)	3.48	0.875	
C3	I encourage my friends to use digital media technology	-	5 (6)	28 (33.7)	42 (50.6)	8 (9.6)	3.70	0.686	
C4	I like to share how to use digital media technology to friends	1 (1.2)	7 (8.4)	26 (31.3)	41 (49.4)	8 (9.6)	3.63	0.771	
C5	I like to attend the latest courses	5 (6)	27 (32.5)	19 (22.9)	27 (32.5)	5 (6)	3.09	0.977	

	related to digital media technology								
C6	Digital media technology is my learning method	2 (2.4)	12 (14.5)	28 (33.7)	36 (43.4)	5 (6)	3.43	0.812	
C7	I like to use digital media technology while teaching	2 (2.4)	5 (6)	27 (32.5)	41 (49.4)	8 (9.6)	3.66	0.732	
C8	I am positive about digital media technology	-	5 (6)	25 (30.1)	43 (51.8)	10 (12)	3.76	0.702	
C9	I found digital media technology added value to me	-	3 (3.6)	21 (25.3)	46 (55.4)	13 (15.7)	3.89	0.679	
C10	I like to get material using digital media technology	1 (1.2)	2 (2.4)	17 (20.5)	50 (60.2)	13 (15.7)	3.90	0.612	
Overall Mean							**3.641**	**0.755**	**High**

Table 3 displays the distribution of descriptive information for the construct of the level of interest in digital media technology among UPSI trainee teachers which is accompanied by the mean value and standard deviation as a whole, the mean value and standard deviation by item, as well as the frequency, percentage and interpretation of the overall mean score. Overall, the mean score value for the level of interest in digital media technology among UPSI trainee teachers is at a high level which is mean = 3.641 with a standard deviation value of 0.755. This finding explains that respondents strongly agree with their level of interest in digital media technology.

Regarding the items in the construct, the analysis's findings indicate that the majority of respondents agree with the statement "I like to get material using digital media technology" (mean = 3.90, sd = 0.612), while "I like to attend the latest courses related to digital media technology" (mean = 3.09, sd = 0.977) has the lowest mean score among the respondents.

The researcher must perform a normality test for each variable independently because this study employs multivariate analysis (Pallant, 2020). Understanding the form of the data distribution and demonstrating that the study data distribution is normal—that is,

symmetrically bell-shaped—are the goals of the normalcy test. To determine if a data set is modelled for a normal distribution, statisticians employ the normality test. Normal data are necessary for statistical functions like parametric analysis. Thus, the normalcy test was used to identify the suitable inference statistics for this investigation.

Table 4
One-Sample Shapiro-Wilk Test Summary Statistics (S-W) on Perception Scores

Variables	Shapiro-Wilk Statistical Test (S-W)	
	Value S-W Z	*p-value*
Use of Digital Media Technology	.972	.075
Level of Interest in Digital Media Technology	.972	.077

The Shapiro-Wilk statistical test will be used to determine whether the study is normal. In comparison to other tests, the Shapiro-Wilk test rejects the null hypothesis of normality at the smallest sample size and at all levels of skewness and kurtosis, making it the most sensitive normality test (Ahad et al., 2011). Coakes & Steed (2007) state that the data satisfies the premise of normalcy if the significance level value is greater than .05. The data is normally distributed, according to the results of the normality test (see Table 4). The Shapiro-Wilk test results on the two variables—the use of digital media technology (SW =.972, p =.075) and the degree of interest in digital media technology (SW =.972, p.

The association was found by correlation analysis. If there are any differences in the trainee teachers at UPSI's usage and interest in digital media technology. The study was conducted using the Pearson correlation coefficient, a metric to evaluate the strength and direction of the association between the variables, because the values of the variables were determined to be regularly distributed. By evaluating the connection's strength using Cohen, Manion, and Marrison's (2011) relationship strength scale, the association between these two factors was examined.

Table 5
Statistical Summary of Correlation Analysis between the Level of Use and Interest in Digital Media Technology Among UPSI Trainee Teachers

Variables	Level of Interest in Digital Media Technology	
	Pearson Coefficient of Correlation (r*)*	*p*-value
Use of Digital Media Technology	0.625**	p<0.01

** Significant at 0.01 (2-tailed)

With a significant value, p <.05., the Pearson Inter Correlation Analysis results in Table 5 demonstrate that the two variables have a meaningful link. A significant and positive association (r = 0.625) has been seen between trainee instructors' use of digital media technology and their level of interest in it.

Conclusion

In summary, this quantitative survey study clarifies the important part that digital media technologies play in Universiti Pendidikan Sultan Idris (UPSI) special education teacher preparation. The results show that trainee instructors are very interested in using digital media technologies in their classrooms; a high mean interest score indicates a strong desire to use these tools. Furthermore, the respondents' favorable opinions regarding the usage of digital media in the classroom highlight the technology's potential to improve the educational experience for students with a range of learning requirements.

The importance of successfully incorporating digital media technology into teacher training programmes is reinforced by the study's finding that there is a strong positive association between trainee instructors' use of the technology and their interest in it. Constructivism theory, which promotes immersive, interactive learning that is customised for each learner, is in line with the ideas of this integration.

Going forward, it will be crucial for practitioners, legislators and educational institutions to acknowledge the vital role that digital media technology plays in teaching and learning in the twenty- first century, especially for children who have special educational needs. The results of this study highlight the need for ongoing initiatives to improve the integration of digital media into teacher preparation programmes in order to give aspiring educators the know-how and abilities to successfully use these tools in the classroom.

Teachers may build more engaging and inclusive learning environments that meet the various needs of all students by adopting digital media technologies as essential components of teacher education. In the end, this study's conclusions highlight how crucial it is for educators to continuously innovate and adapt in order to improve student learning outcomes and support each learner's holistic development.

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