

Attitudes of teachers and school principals towards employing digital media in education

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Abstract

The teacher and school principals represent the most important variables in the education process and there have been great strides in the past few years in the use of digital media DM, which has made it necessary to identify the competencies and electronic skills needed to apply electronic media for use in teacher preparation programs and school principals. the current study sought to identify the trends of teachers and school administrators in employing DM in the learning process through electronic platforms. The study adopts the quantitative data design using a questionnaire that distributed in June 2022. Teachers and assistant principals were chosen randomly, and the sample consisted of (198) the teacher and principal from schools of the Institutes of Ministry of Education in Zarqa in Jordan. The results of this study point out the majority of the respondents agree that learning through using DM increases the quality of knowledge acquired, is very easy, gives school principals new management skills, and reduces individual differences between students by developing their practical skills in life situations. The findings of the study highlight the significance of avoiding a number of DM-related challenges in order to increase user motivation. Interactivity is yet another significant issue that needs to be avoided.

1. Introduction

Most of the world's countries have turned to digital media (DM) in education because of the coronavirus pandemic, forcing educational institutions to move to e-learning, so 1.5 billion children and young people in 188 countries around the world stay home after schools and higher education institutions close (Marr et al., 2003). Distance learning has long been talked about through DM and debate over the need to integrate it into the educational process before the Covid-19 pandemic. Therefore, it has become an important alternative to continuous education in conditions of physical distancing. Moreover, DM came because of technological developments that invaded education and became an important part (Koumi, 2006).

The world today is living in an era of technological developments that have many repercussions on the educational system in all its parts, and if the teacher and School principals represent one of the pillars of the educational system, the teacher and School principals must be prepared to keep pace with the development related to education, and this requires educational institutions to reconsider how to prepare teacher and School principals in the way of using electronic educational entrances and working to improve and develop them. That is, because the teaching profession is one of the professions that must be taken care of. In addition, teachers and School principals must be professionally oriented before joining the faculties of

education, in order to provide the mental and innate preparation in the form of competencies possessed by the teacher and School principals (Alanezi, 2020).

The teacher and school principals represent the most important variables in the education process, and therefore the competencies and experiences acquired by the teacher are of special importance, making them of great interest by researchers (Al-Salami, 2022). In addition, there have been great strides in the past few years in the use of DM, which has made it necessary to identify the competencies and electronic skills needed to apply electronic media for use in teacher preparation programs and school principals (Al-Salami, 2022).

The use of digital learning in the educational process dates back to several years ago, but in light of the Corona crisis and its subsequent effects, educational institutions headed towards digital education as an alternative to ensure the continuity of the educational process, as the Corona pandemic imposed great challenges on our country that prompted it to bring about rapid and successive changes. In educational systems, and this led to a review of educational and educational curricula. To confront these challenges, the need to develop the structure of education by updating its methods, methods and curricula in order to achieve the greatest benefit for the learner who is surrounded by the means of information and communication technology from every side. Chang (2012) stressed that challenges and crises call for relying on electronic means as an urgent and timely alternative that allows students to acquire basic skills that help them in dealing with the digital age that is sweeping all walks of life.

In addition, the effective use of digital media has a clear impact on expanding learning opportunities for different segments of society away from geographical borders and cultural barriers, and where educational institutions are located, and their distance from them (Haddad and Draxler, 2002). The concept of effective performance of using digital media is linked to actual active practice, independent self-work, and the learner's abilities to employ research and discovery based on applications of information technology on an ongoing basis, to deepen the use of that technology for self-development of professional capabilities (Bobbera, 2013).

The problem of the study lies in the futility of continuing to follow the traditional method in education, especially after the huge technological revolution and the information explosion that our contemporary world is witnessing. Therefore, many countries seek to rely on the e-learning method, but this type of education is not just software and techniques, but primarily depends on faculty members who have the capabilities and skills that help them apply e-learning tools in the educational system, and the extent of teachers and school principals' attitudes towards employing digital media in education. Based on this, the current study sought to identify the trends of teachers and school administrators in employing digital media in the learning process through electronic platforms.

2. Literature Review

2.1: Digital Media (Dm)

The modern era depends mainly on digital media or what is called the digital information revolution, which uses modern and advanced technology as a means to enhance its position. This digital age is characterized by four characteristics: decentralization, globalization, harmony, and procedurals (Abdul Aziz, 2008). The method of e-learning is an innovative transformation in the field of education in its various educational stages, as it represents the ability to quickly access specific knowledge and information through a wide

range of e-learning solutions.

Furthermore, digital media is currently a means of communication between individuals using the web and many platforms (Mangold and Faulds, 2009). Furthermore, Kaplan and Haenlein (2010) confirmed that digital media allows users to create content. In addition, personal activities are a social component, while tools and technologies that support the Internet during such activities are described by media (Ngai et al., 2015).

According to Kaplan and Haenlein (2010), digital media consists of a range of applications and advanced technology foundations that allow content to be created and used for learning, cultural exchange and language development, as well as being inexpensive and accessible to most people.

Al-Radi (2010) indicated that e-learning is the education of the future and depends on the use of modern technologies by the teacher and the learner alike in the field of progress for teaching and learning, progression for tests and assessment, and everything related to the educational process. This method enables educational institutions to overcome On the many obstacles it faces in building a modern and advanced educational system, and that the ability of e-learning to create a completely new virtual educational environment requires the availability of a variety of skills for all elements of the educational system, especially faculty members and students (Romiszowski, 2004).

2.2: Attitudes of teachers and School principals towards employing digital media in education

Teachers' attitudes, School principals and social behavior contribute to their participation in applications and guidance that contribute to the implementation of the DM system (Ngai et al., 2015). Prescott (2014) stressed that teachers and school principals' attitudes towards the use of DM in education would be exceptional. Furthermore, studies on the subject of teachers' attitudes regarding the employment of DM are still limited because most studies in this regard have considered students' attitudes and the use of DM (Bennett et al., 2012; Karvounidis et al., 2014).

During the COVID-19 pandemic, DM use in education has increased, positively affecting teachers' attitudes towards online DM use (Limaye et al., 2020). Also, Ajjan and Hartshorne (2008) believes that the attitudes of teachers and school principals strongly drive the use of DM in education. Moreover, Kormos and Nijakowsk (2017) assert that repeated participation in education through DM has positively influenced their attitudes.

In addition, several studies have investigated the extent of young people's trends in the use of social media in education. For example, Yuen et al. (2011) by taking a sample of 1,200 varieties at all levels (university, college, and secondary, primary) to determine their orientation and preparedness, the study found that teachers' attitude was positive in using DM in education and education.

Furthermore, Al-Otaibi (2018) conducted a study to identify teachers' trends in the use of DM in education. Use the descriptive curriculum and design the identification of a 140-teacher sample to set targets. According to the results, teachers had positive attitudes towards the use of DM in their employment in education.

Therefore, we assumed that there are positive attitudes among teachers and school

administrators towards their awareness of the importance of using digital media to develop education. As well, the use of DM during epidemics has a positive effect on the motivation of teachers and School principals in applying DM to online learning.

2.3: Knowledge of teachers and School principals using digital media in education

According to Beemt et al. (2019), teachers and school principals fear the use of DM will cause low knowledge in their attitudes. In addition, Hoyos (2014) emphasized that it is important that managers and teachers support the use of DM in their instruction. According to Buus (2012), managers and teachers should continue and learn to use online DM in education because it is absolutely necessary. Also, Hajli et al (2013) emphasized the interaction of teachers and school principals through DM contributes to creating new knowledge.

In the same context, Ninlawan (2015) confirmed, there is an important role for teachers and managers in motivating and supporting students in education. In addition, Ninlawan states that teachers and School principals must develop their skills in all areas based on technology and teaching techniques.

Furthermore, technology orientation in education recruitment will positively affect teachers and school principals in improving their technology efficiency (Archambault and Crippes, 2009); Koehler and Mishra, 2008). Also, Williamson-Henriques (2013) stated that teachers and school principals are aware of the use of technology, but due to lack of resources and technical support they were unwilling. Accordingly, teachers and school principals must follow technologies and developments to achieve the goal of providing students with digital technologies in education (Soykan and Ozdamli ,2016).

Odabasi and Kabakci (2007) argued that the use of advances and techniques is not the goal of teachers, but rather only to meet their wants and needs. According to Buabeng and Andoh (2012) teachers have a positive attitude towards the use of technology, facilitating its integration into education. In a study conducted by (Birkollu et al., 2013), it was found in the results of the study that teachers' tendency towards employing technology in education is positive.

Therefore, we assumed that there is a positive effect of school principals in employing a DM in education to gain new management skills. As well, there is a positive correlation between digital media and teachers and school principals towards their awareness of the importance of employing the e-learning method as a tool for education development.

3. Methodology

According to the objectives and nature of the study, the researcher has followed the quantitative approach in order to determine the effect of the phenomenon and its causes. The researcher used the random sampling technique to collect data, and it consists of (4) main sections and a total of (23) paragraphs. The target population in the current study consists of all teachers and principals of private and public schools under the supervision of the Ministry of Education in Jordan.

The questionnaire questions might be answered anonymously by participants, protecting their personal privacy. Since the researchers are typically only interested in the data that participants must provide, the set anonymity characteristic may entice more respondents from the sample of interest to participate in the research study. This would avoid the challenges of having to persuade participants to reveal their identities. The questionnaire approach should

be used if you want to broaden the study sample to include more people. Since the questionnaire approach enables the researchers to collect information from the intended audience on a wider range, when necessary, the results of the research are supported, the sample study is strengthened, and the results are more accurate and precise.

The questionnaire is the study administration that was relied upon to collect data from the study population. The questionnaire consists of (4) axes: The first axis includes 6 paragraphs about the motivational function, the direction of DM use in the education stage. The second axis includes 6 paragraphs on the academic job for which teachers and school administrators use DM in the education stage. The third axis includes 5 paragraphs on the administrative function that school principals face when using DM in the educational process. The fourth axis includes the practical aspect that teachers face when using DM in the educational process. Teachers and assistant principals were chosen randomly, and the sample consisted of (198) the teacher and principal of the school from schools of the Institutes of Ministry of Education in Zarqa in Jordan.

Furthermore, evaluation expressions will be used to determine the answers of the study sample on a five-point Likert scale ranging from strongly disagree to strongly agree. Data collecting must be done with extreme caution. The questionnaire type essentially relies on asking respondents or research participants who decided to participate in the questionnaire of the study pre-designed questions in order to collect information or gather data of interest. In June 2022, participants were contacted through Facebook, Instagram, and Twitter with an offer to take part in the study through a self-administered survey. The questionnaire used to gather data for the study was created in a generic bereavement manner with no preference on one side of the scale over the other since it is crucial that the study give genuine and realistic results without using any form of data biasing.

The Statistical Package for Social Sciences (SPSS) version 26 was used to create the legible data for the data analysis procedure. For each characteristic, the frequencies and percentages for the demographic variables were examined. While the Likert scale items were analyzed using the mean and standard deviation. Table 1 presents the evaluation criteria for each score interval

Table 1: Weight for Likert scale items (Kothari, 2008).

Score interval (Mean)	Evaluation Criteria (level of agreement)
1-2.339	Low
2.34-3.669	Medium
3.67-5.00	High

The validity and reliability of the questionnaire were investigated. The Cronbach's alpha values, which varied from 0.703 (for the educational aspect factor) to 0.864 (for the administrative aspect), show strong internal consistency. The validity tests in the current questionnaire found a significant level of 0.05 when evaluating the correlation between the questions and the overall value, indicating the validity of the questionnaire across the board.

4. Results

The current study asked the respondents to identify their demographics such as gender, age, job title, scientific level, and years of experience. The results are given in the tables showed how the 198 respondents were distributed according to the selected demographic characteristic. Table 2 presents the results of respondent's demographics participated in this study. Out of 198

respondents, 110 (55.6%) were male respondents, while the remaining 88 (44.4%) were females. Most of the age groups of the respondents participated in this research was aged 30-40 years old followed by the age group of less than 30 years old the presenting (43.4% and 29.8% respectively) of the total respondents with only 8.1% respondents' age above 50 years old. About 60% of the respondents were teachers, while 17.2% of them were principle and this is logic.

Regarding the education level, 57.6% had a bachelor's degree, followed by 27.3% who had a master's degree. Among respondents, 31.3% were postgraduate. The results showed that most of the respondents of years of experience ranged between 10-20 years representing (40.9%), followed by the experience ranged between 5-10 years with a percentage of (28.3%), and the least experience years is the respondents who have more than 5-year experience (18.7). This result reflects the difference amongst the experiences of the participants and indicates variation of the experience as well the employee satisfaction with their jobs.

Table 2: Distribution of the study sample (n=198)

Variable	Categories	N	%
Gender	Male	110	55.6
	Female	88	44.4
	Less than 30 years	59	29.8
Age	30 - 40 years	86	43.4
	40 - 50 years	37	18.7
	More than 50 years	16	8.1
Job title	Principal	34	17.2
	Administrative	45	22.7
	Teacher	119	60.1
Scientific level	Diploma	22	11.1
	Bachelor's Degree	114	57.6
	Master's degree	54	27.3
Years' experience	PHD degree	8	4
	Less than 5 years	37	18.7
	5-10 years	56	28.3
	10 -20 years	81	40.9
	More than 20 years	24	12.1

This section contains descriptions of each factor and its corresponding items. The study generally focuses on providing the mean and standard deviation for each item offered in the survey and presenting teachers and school administrators with information on using digital media in the classroom. This is the same as a variable with a high mean value, which is seen from the replies from participants. On the other hand, the standard deviation SD, which provides details on the dispersion of the data into their mean and reflects the respondents' impressions of an item, is the other descriptive of this study. The descriptive analysis' relevance stems from its capacity to present crucial details about the study items before further analysis (Brown & Robinson, 2002).

Table 3 shows the descriptive analysis of the variable of the motivation aspect with six factors stated in the survey questionnaire. The results showed that the factor coded MV2 and stated "Learning through using digital media increases the quality of knowledge acquired"

ranked the first factor of this variable and had the highest mean score with mean value 4.36 with high level of agreement. On other hand, the factor that coded MV4 and stated “Using digital media techniques helps in qualifying teachers to address the requirements of the educational process” had the lowest mean score of 3.83 with high level of agreement. There is no good or bad standard deviation, but the standard deviation used to describe the amount dispersion the responses into the mean, the obtained values of this test for this variable ranged between 0.657 to 0.998.

Table 3: Descriptive statistics of motivation aspect items

Item code	Statement	Mean	SD	Level
MV1	Using digital media develops curiosity and stimulates the acquisition of knowledge among teachers	3.88	0.941	High
MV2	Learning through using digital media increases the quality of knowledge acquired	4.36	0.817	High
MV3	Using digital media is more effective in the educational process than face-to-face education	3.91	0.978	High
MV4	Using digital media techniques helps in qualifying teachers to address the requirements of the educational process	3.83	0.998	High
MV5	Using digital media in electronic learning raises the efficiency of teachers and their skills	4.22	0.842	High
MV6	Using digital media techniques are stimulating creative mental energies	4.34	0.832	High
Motivation aspect level		4.09	0.657	High

Table4 shows the descriptive analysis of the variable of the motivation aspect with six factors stated in the survey questionnaire. The results showed that the factors coded AC1 and AC2 and stated, “Reading a textbook on a computer screen easier than reading an actual textbook” and “Giving a lecture through digital media techniques is very easy” respectively ranked the first factors of this variable and had the highest mean score with mean value 4.01 with high level of agreement. On other hand, the factor that coded AC3 and stated “Using digital media reduces teacher's mental effort” had the lowest mean score of 3.76 with high level of agreement. The standard deviation ranged between 0.700 to 0.968.

Table 4: Descriptive statistics of academic aspect items

Item code	Statement	Mean	SD	Level
AC1	Reading a textbook on a computer screen easier than reading an actual textbook	4.01	0.934	High
AC2	Giving a lecture through digital media techniques is very easy	4.01	0.940	High
AC3	Using digital media reduces teacher's mental effort	3.76	0.866	High
AC4	It is easy for teachers to be able to use digital media in the educational process	3.93	0.948	High
AC5	Using electronic learning technologies allows teachers to accomplish more tasks than traditional methods	3.87	0.929	High
AC6	Making mistakes when using electronic learning techniques is less than traditional methods	3.95	0.968	High
Academic aspect level		3.92	0.700	High

Table 5 shows the descriptive analysis of the variable of the administrative aspect with five factors stated in the survey questionnaire. The results showed that the factor coded AD3 and stated, "Using digital media techniques gives school principals new management skills" ranked the first factors of this variable and had the highest mean score with mean value 4.14 with high level of agreement. On other hand, the factor that coded AD4 and stated "The use of digital media saves the time and effort necessary to achieve the goals of the educational process" had the lowest mean score of 3.03 with medium level of agreement. The standard deviation ranged between 0.641 to 1.049.

Table 5: Descriptive statistics of administrative aspect items

Item code	Statement	Mean	SD	Level
AD1	Digital media helps school principals develop teaching plans that ensure the sustainability of the educational process	4.0	0.8	High
AD2	Digital media helps school principals to develop teaching plans that ensure the efficiency of the educational process	4.0	0.8	High
AD3	Using digital media techniques gives school principals new management skills	4.1	0.9	High
AD4	The use of digital media saves the time and effort necessary to achieve the goals of the educational process	3.0	1.0	Medium
AD5	Communication through email with student's parents is requiring less effort and time than traditional methods	3.9	0.9	High
Administrative Aspect level		3.8	0.6	High
		4	41	

Table 6 shows the descriptive analysis of the variable of the administrative aspect with five factors stated in the survey questionnaire. The results showed that the factor coded ED4 and stated, "Use digital media techniques reduces individual differences between students by developing their practical skills in life situations" ranked the first factors of this variable and had the highest mean score with mean value 4.04 with high level of agreement. On other hand, the factor that coded ED1 and stated "Learning through using digital media increases the quality of knowledge acquired by students" had the lowest mean score of 3.59 with medium level of agreement. The standard deviation ranged between 0.732 to 1.282.

Table 6: Descriptive statistics of educational aspect items

Item code	Statement	Mean	SD	Level
ED1	Learning through using digital media increases the quality of knowledge acquired by students	3.59	1.28	Medium
ED2	The electronic learning environment provides a greater opportunity to raise the level of educational achievement among students	3.73	1.21	High
ED3	Digital media helps students complete their homework, especially those who are absent	3.60	1.23	Medium
ED4	Use digital media techniques reduces individual differences between students by developing their practical skills in life situations	4.04	0.88	High
ED5	Digital media provides an opportunity for shy students to share, and Digital media provides an opportunity for shy students to share and publish their opinions	3.70	1.03	High
ED6	Simplicity and confidentiality of the student's communication with his teacher through digital media improve the student's confidence	3.75	0.93	High
Educational aspect level		3.73	0.73	High
		2		

The correlation matrix below shows that the highest correlation was 0.823 between motivation aspect and academic aspect. While the lowest was 0.415 between educational aspect

and academic aspect

Table 7: Correlation matrix

	Motivation Aspect	Academic Aspect	Administrative Aspect	Educational Aspect
Motivation Aspect	1			
Academic Aspect	.823**	1		
Administrative Aspect	.655**	.678**	1	
Educational Aspect	.423**	.415**	.559**	1

** Correlation is significant at the 0.01 level (2-tailed).

4. Discussion and Conclusion

The study aims to identify the trends of teachers and school principals in Zarqa in Jordan towards DM as a result of the effects of the COVID-19 virus over the past months. It has been acknowledged that teachers' attitudes regarding DM play a significant role on the effectiveness of technology integration in education. The study's findings imply that participants' opinions regarding DM in education were favorable. The respondents' favorable sentiments were clear in their responses to questions about motivation, academics, administration, and education. As a result, most respondents saw DM as an effective teaching tool with the ability to change how their classrooms and schools operate.

Using digital media is more effective in the educational process than face-to-face education as found in this study with a high level of agreement. The innovation-decision process is being initiated by teachers, as evidenced by their favorable views. Teachers appear to have completed the Knowledge and Persuasion stages and are likely moving on to the Decision stage (Rogers et al., 2014).

Regarding the effectiveness of DM, the study findings shows that learning through using DM increases the quality of knowledge acquired with the highest level of agreement while it didn't help in qualifying teachers to address the requirements of the educational process with the least level of agreement. And overall, there is an association between motivation aspect and using DM with a high mean value (4.09). And this finding has also been emphasized in the literature (Hwang et al., 2016; Shapiro et al., 2017; Vandergoot et al., 2018).

About the difficulties in using DM, the results shows that there is a high agreement that giving a lecture through digital media techniques is very easy, but it reduces teacher's mental effort with the least level of agreement. The researchers emphasized the need of comprehending the challenges that students have when utilizing DM. Without overcoming these issues, the use of DM might be unsuccessful because of issues with students' desire to utilize the DM and issues with their views regarding these platforms (Zhou & Teo, 2017; Alhazbi, 2016).

The items that agreed by respondents with a medium level were only three items. Which are the use of digital media saving the time and effort necessary to achieve the goals of the educational process, increases the quality of knowledge acquired by students, and helps students complete their homework, especially those who are absent. Before incorporating DM into education, there are more pressing societal concerns that need to be resolved. Therefore, it is crucial in developing countries to balance resource distribution among the conflicting areas

of need (Bryson & Andres, 2020).

In conclusion, teachers and school principals had positive attitudes towards the use of DM in their employment in education. Maybe because this study was conducted in June 2022, after adopting online learning in the Kingdom for a period of two years. And the teachers were accustomed to online learning and using DM. The findings of the study highlight the significance of avoiding a number of DM-related challenges in order to increase user motivation. Interactivity is yet another significant issue that needs to be avoided. To replicate true face-to-face interaction, the students and instructors must have a high degree of interactive communication online. Additionally, via worthwhile gains like improved quality and a reduction in learning time and effort in schools, the students' knowledge of the relevance of DM tools would be guaranteed.

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