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The Impact of Digital Media Learning Apps on Students' Behaviors in Distance Learning During COVID-19 at the University of Jordan

Mohammed Habes[1], Mahmoud Alghizzawi[2], Amer Khaled Ahmad[3], Orouba Almuhaisen[4]

[1]Faculty of Mass Communication - Department of Radio and Television, Yarmouk University, Irbid, Jordan. Email: mohammad.habes@yu.edu.jo

[2]Faculty of Business, Marketing Department, Amman Arab University, Jordan. Email: Dr.alghzawi87@gmail.com

[3]Faculty of Media, Journalism & Digital Media Department, Zarqa University, Jordan. Email: amer.k@zu.edu.jo

[4]Faculty of Foreign languages, Department of Applied Languages, The University of Jordan, Amman, Jordan. Email: orouba.almuhaisen95@gmail.com

Correspondence: Amer Khaled Ahmad, Faculty of Media, Journalism & Digital Media Department, Zarqa University, Jordan.

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Abstract

The Corona pandemic created many challenges for all sectors. However, confronting these challenges was easy due to the availability of Information Communication Technology. ICT penetration and usage are largely facilitated especially, in the educational arenas are attaining several benefactions. In the current research, the researcher focused on the Microsoft Team application and the extent to which students accept the e-learning process through it. To achieve the research objectives, the experimental method was adopted by designing an electronic questionnaire distributed among *n*= 250 students from the College of Languages, University of Jordan. The researcher further executed Structural Equation Modelling for the data analysis and assessing the study model. The results revealed that usability, perceived ease of use, and usefulness, all are major factors that motivate students to use Microsoft Teams Application. As they widely depend on the Microsoft Teams application, it also helps them to continue their educational activities through digital means.

Keywords: microsoft team apps, higher education, distance learning, jordan, e-learning, Covid-19

1. Introduction

Initially, the rise of Covid-19 was an epidemic, limited to the province of Wuhan, China, However, the cases increased and spread to other regions in no time. Today, there is no country, that is confronting Covid-19, and following basic SPSs such as social distancing, quarantine, and closure of public and private educational institutions (Ahmad et al., 2023; Liu et al., 2020; Wong et al., 2020). Consequently, the corona pandemic had major impacts on the lives of individuals and the world, leading to the closure of many sectors (Ahmad, 2022), including important sectors such as education. For this purpose, the decision-makers ought to take strategic decisions that may ensure the continuity of the academic sector and the educational process (Al-Rahmi et al., 2016; Salloum et al., 2019; Sharadga & Safori, 2022). In this situation, the students had to depend on digital learning platforms so that they could continue their educational activities. For this purpose, educational institutions and instructors, both took responsibility to help the students to accept and utilize digital learning (WHO, 2020). However, implementation and acceptance of distance learning were primarily dependent upon students' behavior towards digital platforms as earlier, formal classroom learning was an integral part of their educational journey (Abu-Hudra & Mohamed, 2022; Al-Rahmi et al., 2015). Moreover, educational policymakers and stakeholders were also concerned about distance learning acceptance among students (Widodo et al., 2020). The rapid transition from the formal learning environment to the eLearning was a risky shift, that also created many dilemmas for the students to resume their academic journey. Moreover, the capabilities and existing systems to adopt distance learning were also questionable to rely on eLearning patterns (Ali & Khalid, 2020).

Here, it is notable that, integrating Information Communication Technology largely depends on the capacity of a country, as the more a country focuses on ICT acceptance, the more people like to use it. Yet, both developed and

developing countries had to organize their educational system on digital platforms as it was the only option left that could guarantee the continuity of learning and student-teacher interaction for academic purposes (Alghizzawi et al., 2019; Palos-Sanchez et al., 2021). In this context, when we look at the Jordanian higher educational sector, we can see that Jordanian universities were also following the conventional learning systems based on face-to-face, traditional classroom learning environments. However, as Covid-19 created equal challenges for both developed and developing countries, Jordan also had to cope with these challenges. As a result, accepting, integrating, adopting, and depending on digital platforms was inevitable, leading to its acceptance among students from all educational levels (Ali et al., 2021; Habes et al., 2023). Today, Jordanian students are widely using web-based applications such as Microsoft Teams, Zoom, Skype, WhatsApp, IMO, and others on the daily basis to attn. their classes, and interact with their classmates and teachers (Khan, 2020). As noted by Al-Maroof *et al.*, (2020), technology has broken the fear of halting educational activities. Today, those institutions that are using digital platforms for learning, are not only successful; also they are successfully keeping pace with the modern trends in education and learning. Thus, Jordanian students are relying on web-based services such as Microsoft teams to resume their education and cope with the current healthcare crisis (Mukhtar et al., 2020). Hence, by keeping in view the importance, and acceptance of Microsoft Teams among Jordanian students, the current article also examines the factors that are leading to Microsoft Teams' acceptance and its impact on student's educational journey. For this purpose, the researcher will empirically examine the relevant phenomenon with a highly generalizable result.

2. Previous Literature & Hypotheses Development

2.1 The Relationship between Microsoft Teams Application & Usability

The world has become a small village due to the evolution of information technology and communication platforms that have brought everyone closer despite their different geographical locations (Makharesh, 2018). According to Alzyoud and Makharesh (2022), media serves an integrated purpose. It can be applied to unite society, inform the public, enlighten society, and advance democracy. Due to these web-based, electronic learning platforms, we also find major developments in the learning and educational arenas. These web-based platforms are accompanied by all the fundamental components such as sound, image, video, and participation, which in turn strengthen the educational process and raised From the ability of interactive learning.(Habes, Salous, et al., 2022).When looking at a comprehensive view of electronic learning platforms, we find that the Microsoft Team application is one of the most popular platforms in higher education among university students and professors.(Al-Hanawi et al., 2020) Microsoft Teams is a highly efficient and reliable platform that provides many advantages and characteristics that facilitate the delivery of information and academic communication.(Al-rahmi et al., 2015)Today we find the Microsoft Team application much more important for the educational process, a large percentage of students consider this application easy to use and capable of bringing out positive outcomes (Pal & Vanijja, 2020). Based on a study conducted by Wea & Kuki, (2021), the Microsoft Team application contains effective in the educational process and has advantages that ensure the continuation of the learning mechanism due to its distinguished features and services, aimed at users' convenience and maximum benefit. Thus, by keeping in view the above discussion we assume that:

H1: There is a significant relationship between Microsoft Team Application and usability

2.2 The Relationship between Usability & Distance Learning Acceptance

The modern learning environment depends on information technology systems, that are according to the requirements and demands of the new generation. According to Makharesh, Alharethi, and Campbell (2022), media has the ability and capacity to shape public opinion, strive to steer the media conversation, and turn it into widely consumed content that has an impact on audiences. Social media, the internet, smartphones, tablets, computers, laptops, and many other devices are making the educational process easy, and achievable without much effort (Al-Skaf et al., 2021)To further validate this, a study conducted by Aristovnik *et al.*, (2016) showed that e-learning has perceived benefits for the students. As these electronic platforms facilitate face-to-face interactions, students are also taking much interest in availing of maximum learning benefits from digital platforms (Harandi, 2015; Safori, 2018). As it provides easy interaction, communication, teamwork, peer-to-peer, and peer-to-teacher interaction services, students feel more motivated to adopt digital platforms to gratify their educational and informational needs (Hamidi & Chavoshi, 2018). As with the development of information technology in the educational arenas, these educational applications have become effectively applied to learning, they confirm the importance of keeping pace with the modern features and the development of information technology to continue the development process. As a result, today almost every institution has an online Learning Management System, aimed at possibly gratifying the students' educational needs (Rossing et al., 2012). Thus, by keeping in view the above discussion we assume that:

H2: There is a significant relationship between usability and Distance Learning Acceptance

2.3 The Relationship Between Microsoft Teams Application, Perceived Ease of Use & Usefulness

The rise and rapid spread of Covid-19 led to the need to instantly adopt web-based platforms in the educational process. Now, educational institutions are also motivating their students to adopt electronic means of communication, as the aim is to provide education at every doorstep. Web-based applications like Microsoft Team are much more popular among students, as they are easily usable, and accessible, and guarantee positive outcomes (Fattah, 2015; Pal & Vanijja, 2020). In this context, students need to continue their education by linking their academic journey with the applications like Microsoft Team due to its distinguished advantages and characteristics, which further help students to provide access to education (Pal & Vanijja, 2020).

A study conducted by Vauhkonen, (2020) also showed that the Microsoft Team application makes it possible to achieve equal access to information. As a result, students avail themselves of similar information, with greater accessibility and usefulness, that is positively affecting their educational performance. Besides, many other features such as private chatroom messages, and the ability to Control previous correspondence, are o greater importance (Derindag et al., 2020). A study conducted by Alameri *et al.*, (2020) also highlighted e-learning in Jordanian universities and showed that students have a positive opinion about the Microsoft Team application providing students with opportunities to perform scientific contributions and the ability to give online presentations, leading to self-reliance in learning, which is much important for the university level students. Thus, by keeping in view the above discussion we assume that:

H3a: There is a significant relationship between perceived ease of use and the Microsoft Teams Application

H3b: There is a significant relationship between usefulness and Microsoft Teams Application

2.4 The Relationship Between Perceived Ease of Use & Perceived Usefulness, Distance Learning Acceptance

Ease of use is an important factor affecting the acceptance of e-learning among students and academics. Since the educational process is no longer dependent on a specific time and place, but rather is concerned with flexibility, the efficiency of information technology, and the power of the Internet, now education is even more developed and organized (Elkaseh et al., 2016). Here, the perceived ease of use is directly associated with the perceived usefulness of web-based learning that helps the students to achieve the main goal of adopting web-based applications (Rossing et al., 2012).

However, if web-based learning applications do not facilitate the student with ease of use, and equal opportunities to learn, participate, and communicate, they will be of no use to the educational system. Formulate, usefulness, and ease of use are integral components of web-based applications, that are adding much to their importance for the student's educational process (Priyanto et al., 2017). As noted by (Cakır & Solak, 2015) the ease of use and the perceived benefits concerning the adoption of e-learning reduce the anxiety and tension of students. It provides them with equal opportunities which raise their educational achievement and positively affect the educational process by motivating students and academic staff in general. Thus, by keeping in view the above discussion we assume that:

H4a: There is a significant relationship between perceived ease of use and Distance Learning Acceptance

H4b: There is a significant relationship between usefulness and Distance Learning Acceptance

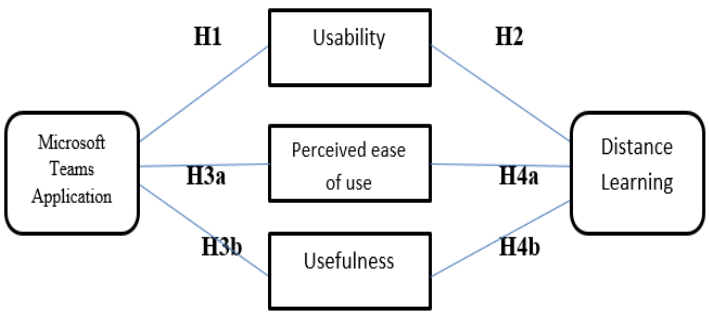

Fig. 1. The proposed study model

3. Research Methodology

The researcher followed the experimental method to examine the students' behavior toward Microsoft Teams (Hinkin, 1998; Sidler et al., 2018). For this purpose, the researcher randomly distributed *n*= 250 electronic questionnaires among the students from the University of Jordan to collect data. After, the data collection, the response rate remained at 100% as every respondent carefully answer the questions and did not leave any answers unattended. The researcher further

used Statistical Package for the Social Sciences (SPSS), and the IBM AMOS to manipulate, code, and analyze the data through both descriptive and inferential statistics (Krosnick, 1999).

As the study contains a self-proposed conceptual model, the researcher applied structural equation modeling to validate the propositions. In this regard, the researcher first examined the convergent and discriminant reliability of the researcher instrument (Mello & Collins, 2001). As given in **Table 1** below, the results of the convergent validity analysis involve factor loading, Cronbach Alpha, Average Variance Extracted, and Composite Reliability values. As we can see, the Cronbach Alpha Values are ranging from .749 to .9258, these values are higher than the threshold value of .7. Similarly, the Composite Reliability values are also ranging between .954 to 7.16, and successfully surpass the threshold value of .7. Thus, we assert that the construct reliability is successfully established. Moreover, after measuring the values from Factor Loading and Average Variance Extracted, we can observe that all the values of the Factor Loading are higher than the threshold values of .7, and Average Variance Extracted values are also surpassing the threshold value of .5, thus convergent validity is successfully established (Foundation & Radio, 2017).

Furthermore, to check the described validity, the researcher used two scales named Heterotrait-Monotrait Ratio and Forner-Larcker. As given in **Table 2**, the square root of AVE values is higher than the correlation matrix values, here discriminant validity is partially established. Similarly, after the manual calculation of the Heterotrait-Monotrait Ratio scale **(Table 3),** we found the HTMT Values as (.632) less than the threshold values of .8. Once again, we affirm that discriminant validity is also established successfully (Habes, 2020).

Table 1. Convergent, Discriminant Validity and Reliability Analysis:

Variables	Items	FL	CA	AVE	CR
Microsoft Teams Application	MTA1	.933	.860	.920	.951
	MTA2	.934			
	MTA3	.848			
	MTA4	.968			
Usability	UBY1	.740	.851	.909	2.90
	UBY2	.982			
	UBY3	.979			
	UBY4	.935			
Perceived ease of use	PEU1	.944	.928	1.829	5.63
	PEU2	.969			
	PEU3	.740			
	PEU4	.982			
	PEU5	.853			
	PEU6	.927			
	PEU7	.954			
	PEU8	.950			
Usefulness	UFS1	.853	.749	1.884	7.16
	UFS2	.927			
	UFS3	.961			
	UFS4	.959			
	UFS5	.931			
	UFS6	.976			
	UFS7	.961			
	UFS8	.968			
Distance Learning	DLG1	.766	.857	.747	1.28
	DLG2	.654			
	DLG3	.882			
	DLG4	.688			

Table 2. Fornell-Larcker Scale

	MTA	UBY	PEU	UFS	DLG
MTA	**.846**				
UBY	.165	**.826**			
PEU	.501	.254	**3.34**		
UFS	.235	.488	.099	**3.54**	
DLG	.671	.340	.985	.017	**.558**

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	MTA	UBY	PEU	UFS	DLG
MTA					
UBY	.165				
PEU	.401	.254			
UFS	.235	.488	.099		
DLG	.571	.340	.285	.019	

Demographics & Analysis of Variance

The researcher used descriptive statistics to calculate the demographical data of the respondents. As seen in **Table 4**, the majority of respondents were males (*n*= 142 or 49.3%), and *n*= 108 or 35.7% were females, Likewise, according to the age groups of the respondents, *n*= 104 or 36.1% were 23-26 years old, *n*= 53 or 18.4% were 18-22 years old, *n*= 43 or 14.9% were 27-30 years old, and *n*= 29 or 10.1% of participants were 31 years or above. Moreover, frequency calculation of the qualification level indicated that *n*= 82 or 28.5% of respondents were resuming their diploma/certification, *n*= 61 or 21.2% were continuing their Post-graduation, *n*= 54 or 18.8% were undergraduate-level students, and n= 53 or 18.4% were graduate-level students in the University of Jordan.

Here, the researcher also conducted an Analysis of Variance to examine any possible mean difference based on the respondents' demographical data (Sawyer, 2009). As summarized in Table 4 below, the significance values are exceeding the threshold value of the $p \geq .000$, we found a strong variation based on respondents' demographical backgrounds.

Table 4. Test of Homogeneity of Variances

Variables	**Constructs**	***f***	***%***	***Levene Statistics***	***f***	***Sign.***
Gender	Male	142	49.3%	2.603	.859	.425
	Female	108	37.5%			
Age	18-22	53	18.4%	6.144	1.028	.359
	23-26	104	36.1%			
	27-30	43	14.9%			
	31 or Above	29	10.1%			
Qualification Level	Under Graduation	54	18.8%	4.280	.872	.420
	Graduation	53	18.4%			
	Post-graduation	61	21.2%			
	Diploma/Certification	82	28.5%			

Hypotheses Testing: Coefficients of Determination R^2, Path Analysis:

Coefficients of Determination R^2 is an important part of the Structural Equation Modelling, that helps to examine the predictive values of the research model (Pavlov et al., 2021). In this regard, when the researcher examined the Coefficients of Determination R^2, the values were found to range from .765 to .866, indicating a strong predictive capability of the research conceptual model. Table 5 summarizes the results of the Coefficients of Determination $R^{2:}$

Table 5. Coefficients of Determination R^2

Variables	$R^{2\ \text{Value}}$	**Strength**
UBY	.765	Strong
PEU	.812	Strong
UFS	.866	Strong
DLG	.814	Strong

To assess the proposed relationship between the study variables, the research conducted a path analysis. Besides,

t-values, f-values, and significance values are also extracted to validate the study of research hypotheses (Mourougan & Sethuraman, 2017). We can observe in **Table 6**; the path values are exhibiting a significant relationship between the proposed study variables. Thus, we assume that there is a significant relationship between Microsoft Teams Application and Usability *(B= .344, p≥ .009),* Usability and Digital Learning (*B= 1.279, p≥ .000*), Microsoft Teams Application and Perceived Ese of Use (*B= .061, p≥ .000*), Microsoft Teams Application and Usefulness (*B= .432, p≥ .012*), and Usefulness and Digital Learning (*B= 2.651, p≥ .000*). However, we did not find any significant relationship between Perceived Ease of Use and Digital Learning ((*B= .021, p≥ .769*), so we reject our **4a** study hypothesis.

Table 6. Path Analysis, Linear Regression Analysis

S/R	Relation	*path*	*t*-value	*f*-value	Sign.	Status
H1	**MTA-UBY**	0.560	4.732	6.909	.009	Moderately significant
H2	**UBY-DLG**	0.643	32.72	1071.07	.000	Significant
H3a	**MTA-PEU**	0.219	3.810	14.517	.000	Significant
H3b	**MTA-UFS**	0.349	1.412	8.886	.012	Moderately significant
H4a	**PEU-DLG**	0.560	.294	.086	.769	Insignificant
H4b	**UFS-DLG**	0.610	9.107	8.126	.000	Significant

4. Discussion and Conclusion

According to (Widodo et al., 2020), despite various barriers, resuming education through web-based platforms is an optimistic approach to the crisis management system. Another surprising fact is, developing countries are equally coping with these challenges by adopting, integrating, and depending on the internet to resume educational activities. As today, distance learning is considered the most acceptable, and the only way to facilitate the educational process, online learning is a pathway to achieve the desired goals (Elareshi et al., 2022; Habes, Elareshi, et al., 2022).

During the initial days of the Covid-19 outbreak, the major concern was students' behavior toward eLearning. As earlier, eLearning was not as significant as a formal classroom learning environment, and both students and instructors faced several difficulties. However today, when Covid-19 is at its 3rd stage, and the closure of educational institutions is prolonged, students are also wide enough to continue their education by relying on electronic education platforms such as Microsoft Teams Application, Zoom, Skype, WhatsApp, and many others (Gaffar & Septyandi, 2020).

Similarly, the current research also validated the students' digital platforms' acceptance to resume their educational activities (Yaacob & Saad, 2020). However, here the aim was to analyze three factors responsible for the acceptance and use of the Microsoft Teams Application including Usability, Perceived Ease of Use, and Usefulness. Later these factors also become the source of sustaining Digital Learning despite the closure of institutions in Jordan. In this context, the relationship between Microsoft Teams Application and usability (*p≥ .009*) is found moderately significant, these results are consistent with the study conducted by (Widodo et al., 2020), as they also found online applications as acceptable due to their usability for the students, leading to resume their distance learning process (*p≥ .000*) in a best possible manner.

Likewise, the relationship between Microsoft Teams Application, perceived ease of use, and distance learning are also validated (*p≥ .000, p≥ .012*). These results also indicate a strong consistency with the research conducted by (Nikdel Teymori & Fardin, 2020), as they also highlighted the benefits of online learning in terms of sustainable education and distance learning. Finally, the relationship between, usefulness and distance learning is also significantly accepted (*p≥ .000),* as the learners consider *the* Microsoft Teams Application as capable of obtaining useful outcomes for their distance learning process. These results showed compatibility with the study carried out by (Al-Skaf et al., 2021), as they also found internet acceptance among the students to sustain their distancing learning process. Therefore, information technology is an indispensable part of the educational process. Platforms such as Microsoft Teams are getting comparatively more acceptance and success because they are accessible and easy to use. Conveniently, students can participate in face-to-face online class proceedings, raise questions during the lecture, interact with their classmates, share their opinion, and even contact their instructors whenever they want. All these advantages are strongly attributed to Microsoft Teams, which adds more value to its existence and usage for educational purposes (Alshurideh et al., 2021).

5. Study Contributions & Limitations

This study is of greater importance as it examined the use of the Microsoft Teams Application when educational

institutions are closed and resuming academic activities is a great challenge. It also involves a self-proposed study model, that is validated by the Structural Equation Modelling. As the study model is validated, it can also be used in future research to examine the usage of a digital application for learning purposes. However, his research also has some major limitations. For instance, the researcher only selected Microsoft Teams Application as the independent variable, yet many other applications are contributing to facilitating the students. Likewise, the data was collected only from the University of Jordan, so generalizing the results can be questionable. Therefore, despite some limitations, this study is adding much to the existing literature where web-based applications can play a significant role in the crisis management process.

References

Abu-Hudra, S. M., & Mohamed, A. K. (2022). The level of academic self-efficacy among female students of Science and Humanities College in Jubail during distance education in light of the Corona Pandemic. *Zarqa Journal for Research and Studies in Humanities, 22*(1), 49-68.

Ahmad, A. K. M. (2022). The Impact of the Use of Social Networking Platforms on the Jordanian Voters in the Nineteenth Jordanian Parliamentary Elections during the Emerging Pandemic of the Coronavirus (COVID-19). *Zarqa Journal for Research and Studies in Humanities, 22*(2), 333-350.

Ahmad, A. K., AL-Jalabneh, A. A., Mahmoud, A., & Safori, A. (2023). Covid-19 and the Resurgence of the Hypodermic Needle Theory Applicability in Times of Crises. In *International Conference on Business and Technology* (pp. 1423-1436). Springer, Cham. https://doi.org/10.1007/978-3-031-08954-1_124

Alameri, J., Masadeh, R., Hamadallah, E., Ismail, H. B., & Fakhouri, H. N. (2020). Students' Perceptions of E-learning platforms (Moodle, Microsoft Teams, and Zoom platforms) in The University of Jordan Education and its Relation to self-study and Academic Achievement During COVID-19 pandemic. *Journal ISSN*, *2692*, 2800.

Alghizzawi, M., Habes, M., Salloum, S. A., Ghani, M. A., Mhamdi, C., & Shaalan, K. (2019). The effect of social media usage on students' e-learning acceptance in higher education: A case study from the United Arab Emirates. *International Journal of Information Technology and Language Studies*, *3*(3).

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A. M. N., Helmy, H. Z., Abudawood, Y., … & Alsharqi, O. (2020). Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. *Frontiers in Public Health*, *8*(May), 1-10. https://doi.org/10.3389/fpubh.2020.00217

Ali, S., & Khalid, A. (2020). Is COVID-19 Immune to Misinformation ? A Brief Overview. *Asian Bioethics Review*, *March*. https://doi.org/10.1007/s41649-020-00155-x

Ali, S., Qamar, A., Derindag, O. F., Habes, M., & Youssef, E. (2021). The Mediating Role of Gender in ICT Acceptance & Its Impacts on Students ' Academic Performance during Covid -19. *International Journal of Advanced Trends in Computer Science and Engineering*, *10*(2).

Al-Maroof, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: the impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 1-16.

Al-Rahmi, W. M., Alias, N., & Shahizan, M. (2016). Social Media Used in Higher Education: A Literature Review of Theoretical Models. *INSIST*, *1*(1), 38–42.

Al-Rahmi, W. M., Othman, M. S., & Mi Yusuf, L. (2015). Social media for collaborative learning and engagement: Adoption framework in higher education institutions in Malaysia. *Mediterranean Journal of Social Sciences*, *6*(3), 246-252. https://doi.org/10.5901/mjss.2015.v6n3s1p246

Al-rahmi, W. M., Othman, M. S., & Yusuf, L. M. (2015). The effect of social media on researchers' academic performance through collaborative learning in Malaysian higher education. *Mediterranean Journal of Social Sciences*, *6*(4), 193.

Alshurideh, M. T., Kurdi, B. Al, Alhamad, A. Q., & Salloum, S. A. (2021). *Factors Affecting the Use of Smart Mobile Examination Platforms by Universities ' Postgraduate Students during the COVID-19 Pandemic : An Factors Affecting the Use of Smart Mobile Examination Platforms by Universities ' Postgraduate Students during the CO*. *April*. https://doi.org/10.3390/informatics8020032

Al-Skaf, S., Youssef, E., Habes, M., Alhumaid, K., & Salloum, S. A. (2021). The Acceptance of Social Media Sites: An Empirical Study Using PLS-SEM and ML Approaches. *Advanced Machine Learning Technologies and Applications: Proceedings of AMLTA 2021*, 548-558.

Alzyoud, S. (2022). The US Media Coverage of Islam and Muslims in the Wake of the ISIS Emergence. *Eximia, 4*(1), 195-208.

Alzyoud, S., & Makharesh, A. (2023). Racism as a tool: the myth of race to improve companies profiles and stifle the dilemma. J*ournal of Management Information and Decision Sciences, 26* (2), 1-14.

Aristovnik, A., Keržic, D., Tomaževic, N., & Umek, L. (2016). Determining Factors of Students' Perceived Usefulness of E-Learning in Higher Education. *International Association for Development of the Information Society*.

Cakır, R., & Solak, E. (2015). Attitude of Turkish EFL learners towards e-learning through tam Model. *Procedia-Social and Behavioral Sciences*, *176*, 596-601.

Derindag, O. F., Yarygina, I. Z., & Tsarev, R. Y. (2020). International trade and blockchain technologies: Implications for practice and policy. *IOP Conference Series: Earth and Environmental Science*, *421*(2). https://doi.org/10.1088/1755-1315/421/2/022051

Elareshi, M., Habes, M., Al-Tahat, K., Ziani, A., & Salloum, S. A. (2022). Factors affecting social TV acceptance among Generation Z in Jordan. *Acta Psychologica*, *230*, 103730.

Elkaseh, A. M., Wong, K. W., & Fung, C. C. (2016). Perceived Ease of Use and Perceived Usefulness of Social Media for e-Learning in Libyan Higher Education: A Structural Equation Modeling Analysis. *International Journal of Information and Education Technology*, *6*(3), 192-199. https://doi.org/10.7763/ijiet.2016.v6.683

Fattah, S. F. E. S. A. (2015). The Effectiveness of Using WhatsApp Messenger as One of Mobile Learning Techniques to Develop Students' Writing Skills. *Journal of Education and Practice*, *6*(32), 115-127.

Foundation, C. B., & Radio, M. C. (2017). *Market Research Market Research*.

Gaffar, M. R., & Septyandi, C. B. (2020). *Usinge-Learning Media During the Corona Faktor Yang Memengaruhi Kepuasan Mahasiswa Dalam Menggunakan Media E-Learning Selama Periode Pandemik Corona*. *8*(1).

Gamble, C. (2018). Exploring EFL University Students' Acceptance of E-learning Using TAM. *Kwansei Gakuin University Humanities Review*, *22*, 23-37.

Habes, M. (2020). The Influence of YouTube Videos on ELA During the COVID-19 Outbreaks in Jordan. *In 2020 Sixth International Conference on E-Learning (Econf), Pp. 133-138. IEEE, 2020.*, *December*.

Habes, M., Elareshi, M., Ziani, A., Almansoori, A., & Alsridi, H. (2022). Smart interaction and social TV used by Jordanian University students. *Technology in Society*, 102110.

Habes, M., Pasha, S. A., Ali, S., Elareshi, M., Ziani, A., & Bashir, B. A. (2023). Technology-Enhanced Learning Acceptance in Pakistani Primary Education. *European, Asian, Middle Eastern, North African Conference on Management & Information Systems*, 53-61.

Habes, M., Salous, M. H., & Al Jwaniat, M. I. (2022). Applying the Uses and Gratifications Theory to College Major Choice Using Social Networks Online Video. *International Conference on Advanced Machine Learning Technologies and Applications*, 388-400.

Hamidi, H., & Chavoshi, A. (2018). Analysis of the essential factors for the adoption of mobile learning in higher education: A case study of students of the University of Technology. *Telematics and Informatics*, *35*(4), 1053-1070.

Harandi, S. R. (2015). Effects of e-learning on Students' Motivation. *Procedia-Social and Behavioral Sciences*, *181*, 423–430.

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, *1*(1), 104-121.

Khan, T. M. (2020). Use of social media and WhatsApp to conduct teaching activities during the COVID-19 lockdown in Pakistan. *International Journal of Pharmacy Practice*, 2020. https://doi.org/10.1111/ijpp.12659

Krosnick, J. A. (1999). Survey research. *Annual Review of Psychology*, *50*, 537-567. https://doi.org/10.1146/annurev.psych.50.1.537

Liu, Y., Gayle, A. A., Wilder-Smith, A., & Rocklöv, J. (2020). The reproductive number of COVID-19 is higher compared to SARS coronavirus. *Journal of Travel Medicine*.

Makharesh, A. (2018). *Arab citizen's perceptions of the investigative journalism*. Arkansas State University.

Makharesh, A. O., Alharethi, M., & Campbell, C. (2022). Ideologies And Stereotypes Of Arab Culture In The Media: An Analysis Of Coke's 2013 Super Bowl Commercial. *Journal of Management Information & Decision Sciences*, *25*(3).

Mello, S. C. B. de, & Collins, M. (2001). Convergent and discriminant validity of the perceived risk scale in business-to-business context using the multitrait-multimethod approach. *Revista de Administração Contemporânea*, *5*(3), 167-186. https://doi.org/10.1590/s1415-65552001000300009

Mourougan, S., & Sethuraman, D. K. (2017). Hypothesis Development and Testing. *IOSR Journal of Business and Management*, *19*(05), 34-40. https://doi.org/10.9790/487x-1905013440

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, *36*(COVID-19-S4), S27.

Nikdel Teymori, A., & Fardin, M. A. (2020). COVID-19 and Educational Challenges: A Review of the Benefits of Online Education. *Annals of Military and Health Sciences Research*, *18*(3), 19-22. https://doi.org/10.5812/amh.105778

Pal, D., & Vanijja, V. (2020). Perceived usability evaluation of Microsoft Teams as an online learning platform during COVID-19 using system usability scale and technology acceptance model in India. *Children and Youth Services Review*, *119*, 105535.

Palos-Sanchez, P., Saura, J. R., & Correia, M. B. (2021). Do tourism applications' quality and user experience influence its acceptance by tourists? *Review of Managerial Science*, *0123456789*, 1-37. https://doi.org/10.1007/s11846-020-00396-y

Pavlov, G., Maydeu-Olivares, A., & Shi, D. (2021). Using the Standardized Root Mean Squared Residual (SRMR) to Assess Exact Fit in Structural Equation Models. *Educational and Psychological Measurement*, *81*(1), 110-130. https://doi.org/10.1177/0013164420926231

Priyanto, P., Sofyan, H., & Surjono, H. D. (2017). The determinats of e-learning usage by teachers of vocational high schools in the Yogyakarta Special Region. *Jurnal Pendidikan Vokasi*, *7*(1), 1. https://doi.org/10.21831/jpv.v7i1.12770

Rossing, J. P., Miller, W., Cecil, A. K., & Stamper, S. E. (2012). *iLearning: The future of higher education? Student perceptions on learning with mobile tablets*.

Safori, A. O. (2018). Journalist use of social media: Guidelines for media organizations. *The Journal of Social Sciences Research*, 772-779.

Salloum, S. A., Al-Emran, M., Habes, M., Alghizzawi, M., Ghani, M. A., & Shaalan, K. (2019). Understanding the Impact of Social Media Practices on E-Learning Systems Acceptance. *International Conference on Advanced Intelligent Systems and Informatics*, 360-369.

Sawyer, S. F. (2009). Analysis of Variance: The Fundamental Concepts. *Journal of Manual & Manipulative Therapy*, *17*(2), 27E-38E. https://doi.org/10.1179/jmt.2009.17.2.27e

Sharadga, T. M. A., & Safori, A. O. (2022). The Effectiveness of Digital Communication in the Education System in Jordan in Light of the Covid-19 Pandemic. In *The Implementation of Smart Technologies for Business Success and Sustainability: During COVID-19 Crises in Developing Countries* (pp. 617-626). Cham: Springer International Publishing.

Sidler, J. S., Viola, J. J., & Polozola, M. L. (2018). *Systems and methods for acquiring, accessing, and analyzing investigative information*. Google Patents.

Vauhkonen, O. (2020). *Implementation of Microsoft Teams at organizations in Finland*.

Wea, K. N., & Kuki, A. D. (2021). Students' Perceptions of Using Microsoft Teams Application in Online Learning During the Covid-19 Pandemic. *Journal of Physics: Conference Series*, *1842*(1), 12016.

WHO. (2020). What we know about COVID-19 transmission in schools. *Coronavirus Update 39-World Health Organization*.

Widodo, S. F. A., Wibowo, Y. E., & Wagiran, W. (2020). Online learning readiness during the Covid-19 pandemic. *Journal of Physics: Conference Series*, *1700*(1). https://doi.org/10.1088/1742-6596/1700/1/012033

Wong, J. E. L., Leo, Y. S., & Tan, C. C. (2020). COVID-19 in Singapore—current experience: critical global issues that require attention and action. *JAMA*.

Yaacob, Z., & Saad, N. H. M. (2020). Acceptance of YouTube as a Learning Platform during the Covid-19 Pandemic: The Moderating Effect of Subscription Status. *TEM Journal*, *9*(4), 1732-1739. https://doi.org/10.18421/TEM94-54