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Microsoft teams' acceptance for the e-learning purposes during Covid-19 outbreak: A case study of UAE

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CHRONICLE	ABSTRACT
	The brisk spread of Covid-19 led educational policymakers and organizations to opt for better alternatives to resume the students' educational journey. In this context, Microsoft Teams remained one of the most devoted and credible online platforms that greatly facilitated the educational process across the globe. Current research also analyzed Microsoft Teams acceptance using the self-proposed conceptual model supported by the Technology Acceptance Model by Davis. We employed the survey method and examined the gathered using the applied Structural Equation Modelling (SEM). Results indicated that there is a significant impact of Covid-19 on the Perceived Ease of Use ($p > 0.000$) and Perceived Usefulness ($p > 0.000$). Besides, the relationship between Perceived Ease of Use and Perceived Usefulness also remained significant ($p > 0.000$). Moreover, the proposed relationship between Attitude, Perceived Ease of Use, and Perceived Usefulness also remained substantial ($p > 0.009$ and $p > 0.000$). However, the relationship between Attitude and Behavioral Intention remained insignificant ($p > 0.556$). Finally, the relationship between Behavioral Intention and Microsoft Teams Acceptance remained significant ($p > 0.088$). Thus, we concluded that Microsoft Teams is an effective study tool that unites students and instructors in the United Arab Emirates. It governs eLearning experiences and, therefore, provides a virtual environment to students and directly influences our perceptions and behavior.

1. Introduction

The rise of the Covid-19 Pandemic challenged our everyday life activities. From social, economic, political, and even educational perspectives, the normal patterns of life are adversely affected, leading us to think of alternative ways to sustain our daily life functions (Alhumaid et al., 2020). Particularly, the brisk spread of Covid-19 led educational policymakers and organizations to opt for better alternatives that may resume the students' educational journey and engage them in communication and information attaining activities to mitigate the impacts of the Pandemic (Zalat et al., 2021). In this context, educational institutions worldwide largely adopted technology-based ways to sustain and even improve students' academic activities on a maximum level. Notably, e-Learning is not a new concept, nor was we unaware about it before the Covid-19 outbreak. Yet, the Pandemic largely led us to consider eLearning as an alternative and even better than a formal learning environment (Khalil et al., 2020). As noted by (Obeidat et al., 2020), educational stakeholders considered the deep-seated of eLearning as accompanied by the feasibility and accessibility. During the disease outbreak, eLearning widely helped to tackle the troubles and obstacles while transitioning from the conventional mode of learning to information technology. This successful transition from traditional to digital learning also managed the resistance to change, implementation of massive change, and aversion to transition. According to (Khan et al., 2021), the role of digital technology in facilitating human life is undeniable. The last

part of eLearning gained momentum during the Covid-19 outbreak as the educational institutions worldwide were closed to hamper the virus transmission. During the quarantine as one of the major preventive measures against virus transmission, digital technology greatly helped the students. Many institutions also introduced learning management systems that allowed students and instructors to sustain communication, education, and learning operations. The efforts of all the stakeholders, i.e., teachers, administrations, and students, were focused on providing optimal solutions to fight against the healthcare crisis (Reimers et al., 2020).

Similarly, to sustain the educational journal of the students, many new applications are introduced, and existing ones are modified by the software providing organizations. For example, Microsoft Teams is one of the most preferred cloud computing applications that helps share and receive files and information and provides even real-time face-to-face communication. Particularly for learning and educational purposes, Microsoft Teams helps schedule online communication between instructors, virtual classes, and even administrative meetings (Martin & Tapp, 2019). As during the current healthcare crisis, switching to digital learning platforms was important, yet ensuring the credibility of the relevant media was also of greater significance. Under this consideration, Microsoft Teams remained one of the most devoted and credible online platforms that greatly facilitated the educational process globally (Almodaires et al., 2021). However, regarding incorporating Microsoft Teams in education, some motivating factors or mainly dynamic mechanisms accelerated this process. For (Alyoussef, 2021), the narratives attributed to technology are the major cause that contributes to its acceptance, especially for educational purposes. These narratives are primary qualities, including ease of use and useful outcomes that are solely interlinked with technology acceptance and incorporation in the educational sector. In this regard, (Salloum et al., 2019) argue that students and educational stakeholders well-acknowledged the importance and fruitful outcomes attributed to eLearning.

Hence, by keeping in view a wider adoption of eLearning during the Covid-19 outbreak, we also analyzed its acceptance from the Technology Acceptance perspective (Alyoussef, 2021; Snoussi & Radwan, 2020). We applied Structural Equation Modelling (SEM) further to examine the structural relationships in the current study. However, it is also notable that despite many studies that have previously discussed eLearning from the Technology Acceptance perspective, no study in the United Arab Emirates has examined the relevant phenomenon, particularly during the Covid-19 outbreak. In this regard, we have formally divided this article into five main sections (from Introduction to Conclusion) that are formal requirements of research writing and provide systematic support to the research process.

2. Review of Literature & Model Development

2.1 Technology Acceptance for eLearning in the United Arab Emirates

The growing trends in media technology and its usage became a reason behind the rise of technology in the 19th century. As a result, Davis conducted several studies and proposed the Technology Acceptance model to explain further the acceptance process accompanied by certain characteristics (Davis, 1989). The Technology Acceptance Model also supports this study as user acceptance of technology. In more relevant terms, eLearning acceptance and incorporation for educational purposes is a growing concern due to Covid-19 Pandemic (Almodaires et al., 2021; Ghurah et al., 2018). Moreover, in the United Arab Emirates, eLearning acceptance is not a new phenomenon. Especially after authorization of the private sector educational institutions in the United Arab Emirates. Today, both private and public sector institutions deliver formal and non-formal education through unique and improved methods. Likewise, technical and vocational institutions in the United Arab Emirates also offer instruction on similar patterns. However, the current trends in the United Arab Emirates also led to the wider adoption of eLearning as a modern and effective mode of education (Ati & Guessoum, 2014).

Nonetheless, the rise of the Covid-19 Pandemic further validated eLearning acceptance in the UAE as mainly accompanied by the potential ease of use and the expected outcomes attributed to eLearning. As noted by (Almaiah et al., 2021; Elnagar et al., 2020), learning acceptance through digital platforms is due to the several advantages attributed to the technology. As a result, the Technology Acceptance Model is the most suitable framework that can predict and examine the eLearning acceptance during the Covid-19 outbreak as affirmed by the previous studies during the normal situation. Thus, in the light of the Technology Acceptance Model, eLearning acceptance in the United Arab Emirates can be directly linked with the perceived benefits related to the relevant technology acceptance and incorporation (Ahmed et al., 2021).
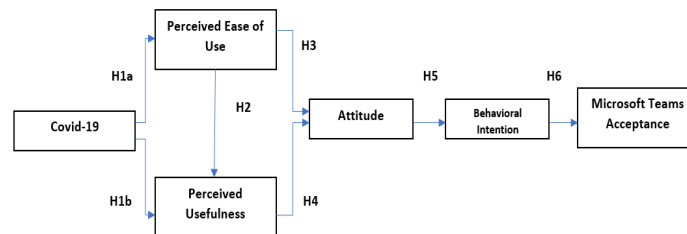

Fig. 1. Conceptual Model

2.2 eLearning, Perceived Ease of Use, and Perceived Usefulness

The rise of internet technology has greatly impacted both teachers and students in various ways. The new generations of the World Wide Web (www) motivate potential users, especially youngsters, to use them for multiple use purposes. In this context, existing literature witnesses that most of the social media users across the globe are the young generation. These studies also show that online platforms are preferred for communication, information, entertainment, and education (Elkaseh et al., 2016). As noted by (Baki et al., 2018), the use of digital platforms has always been accompanied by the positive factors attributed to them. Information systems are always preferred by keeping in view their capacity according to our requirements. Accepting online platforms is linked with their experiences and perceptions about the relevant technology (Shah & Attiq, 2016). To further affirm the technology acceptance and incorporation specifically for learning purposes, (Aristovnik et al., 2016) empirically examined it in Slovenia. The researchers applied the case study method and selected university students from Ljubljana. Results revealed that the two factors remained highly influential in accepting eLearning among the students. These factors include consistency with the prior learning experiences and the teachers' Attitude concerning motivating the students to adopt them. Consequently, students found eLearning according to their needs and demands that led them to accept it widely.

According to Alsabawy et al. (2016), educational institutions design new strategies and policies to obtain positive, constructive outcomes. From formal learning environments to modern, digital learning patterns, these institutions are opting for every method capable of attaining the desired results. For this purpose, eLearning is one of the most strategic and affordable techniques that provides a maximum benefit to the students, teachers, and management of the institutions leading them to adopt it worldwide (Alhumaid et al., 2021).

H$_{1a}$: *eLearning has a significant impact on perceived ease of use.*

H$_{1b}$: *eLearning has a significant impact on perceived usefulness.*

2.3 Perceived Ease of Use and Perceived Usefulness

A majority of existing literature directly associates perceived ease of use with perceived usefulness as a constant part of technology acceptance. Whether it is social media or any other technology, these two relevant factors work as a pioneer in accelerating the acceptance and adoption process. Many researchers consider this association significant, especially when it is about social media technology adoption for multiple purposes (Almaiah et al., 2021). Talking particularly about the technology incorporation in the educational process, (Abdullah & Toycan, 2018) cited an example of eLearning adoption in Nicosia, Cyprus, through an empirical analysis. The case study approach and gathered data from *n*= 256 from the students of the National University, Nicosia, revealed favorable results. Participants expressed eLearning acceptance as solely a result of simple and easy methods of web-based applications responsible for redirecting towards eLearning platforms. Besides, the respondents also highlighted two more factors accelerating the eLearning acceptance and incorporation, including cultural acceptance and the role of educational stakeholders. These factors merge with perceived ease of use and perceived usefulness and work as dynamic mechanisms of digital learning incorporation in the conventional learning environment. Thus, the role of information communication in this digital era makes them more acceptable for educational aspirations. Even the internet also provides new opportunities for academic researchers to explore the uses and motivations behind information technology usage more in-depth. Especially, studying its incorporation in the educational arenas can bring out even more fruitful outcomes (Samuel et al., 2018)**.**

H$_2$: *Perceived ease of use has a significant impact on perceived usefulness.*

2.4 Perceived Ease of Use and Attitude

Attitude is described as a set of feelings, emotions, perceptions that further help an individual to shape or reshape a particular behavior. Attitudes are primarily shaped due to prior experiences or our socio-cultural system. While it is notable that attitudes are also considered enduring, they can be changed accordingly (Haddock & Maio, 2008). In a similar context, technology acceptance is also linked with favorable attitudes mainly shaped by the characteristics and benefits offered by its usage in general. For instance, incorporating marketing in the existing Indonesian advertising industry has remained a remarkable shift from conventional to modern marketing techniques. Major organizations such as Ikens Group switched to online advertising but first learned and acknowledged the relevant skills through online modules and workshops. This online learning system helps the Ikens Group's employees greatly increase their skills and generate greater profit and reputation from their knowledge and skills (Indarsin & Ali, 2017)**.** As noted by Hussain & Akhter (2016), the importance of digital education can be determined by the fact that people are readily accepting it. From primary level educational institutions to highly professional level education offering institutions, eLearning contributes and leaves a positive impact on the students. As education is among the basic needs, an appropriate education accessible for all is the need of the day. When students find eLearning accessible and available for every age, they readily accept it as a distinguished part of their educational journey. This instant adoption indicates the students' positive perception, emotions, and attitudes towards eLearning that further justify the relationship between perceived ease of use and digital media adoption (Zabadi & Al-Alawi, 2016).

H₃: *Perceived ease of use has a significant impact on Attitude.*

2.5 Perceived Usefulness and Attitude

The characteristics linked with the technology are of greater significance during the technology adoption process. Decision-making during acceptance or rejection of technology largely depends on the outcomes attributed to the technology. Especially when it is about digital learning adoption, the role of perceived positive effects is of greater importance. It helps the students accept and incorporate the relevant technology for educational purposes (Ali et al., 2022). As noted by Ma et al. (2017), despite eLearning being widely incorporated with the conventional learning patterns, some weaknesses sometimes hinder its adoption among the students. Especially in the developing regions where digital platforms are yet to catch pace with the modern trends, educational stakeholders need to raise awareness concerning the importance of eLearning so that people may acknowledge its benefits and readily accept it as a part of the educational system.

Similarly, Setiawan et al. (2018) also explain the relationship between perceived useful outcomes and attitudes. The Technology Acceptance Model is an empirical witness of technology adoption due to the expected fruitful results that only focus on enhancing the users' experiences. Also, they aim to make technology a permanent part of everyday life to create and sustain a more reliable, accessible, and equally fruitful system for all. A study conducted by (Luik & Taimalu, 2021) also examined and affirmed the relationship between attitudes and perceived ease of use regarding eLearning in Estonia. Employing the case study method revealed that perceived usefulness remained a strong motivating factor for teachers and students to adopt technology in education. Thus, the researchers concluded that expected positive outcomes are dominant in accepting and incorporating technology for educational purposes.

H₄: *Perceived usefulness has a significant impact on Attitude.*

2.6 Attitude and Behavioral Intention

Since the early 1990s, behavioral scientists have been taking much interest in the relationship between Attitude and behavior and the factors that reshape one's behavior in a particular manner. Indeed, the relationship between Attitude and behavior is strong and empirically witnessed that further help, for example, the education stakeholders to adopt new approaches and design unique policies that persuade both students and teachers (Bechler et al., 2021). Learning new attitudes and transforming the behaviors is a part of human life where, e.g., new things are regularly discovered, and positive or negative attitudes are adapted accordingly. Here the objective is to attain benefit for the personal and collective interest and resume this process in the future but with even more improved techniques (Baser et al., 2017). Likewise, two of the most general questions in human psychology are the factors behind one's decision-making process and how attitudes are effectively linked with the good behavior process. In other words, the concern is regarding whether, and how a preexisting attitude is changed and behavior is shaped accordingly. Unsurprisingly, thousands of existing studies also affirm this relationship, particularly by attributing them to the desired positive outcomes that help a preexisting attitude to reshape and adopt an appropriate behavior (Marcinkowski & Reid, 2019). (Chen Ying et al., 2015) further cited an example of mobile technology adoption for commerce and learning in New Taipei, Taiwan. As argued, questions and uncertainty about a product are a part of human nature. Initially, the Attitude towards technology adoption and incorporation remains negative, and one hesitates to accept it instantly. However, others' experiences, perceptions about the usefulness of technology, and its simplistic nature to facilitate the everyday chores gradually shape their behavior to try and accept the technology.

H₅: *Attitude has a significant impact on behavioral intention.*

2.7 Behavioral Intention and Microsoft team's acceptance

According to Laurencia and Sudarto (2021), the outbreak of Covid-19 Pandemic resulted in searching for new and effective ways to sustain everyday life activities. Especially in terms of educational arenas, students and instructors actively adopt different software and applications that provide them with communication, information, and education services in the best possible manner. Accompanied by perceived ease of use and perceived usefulness. Web-based platforms are effective enough that students deliberately intend to use and incorporate them into their learning routine. As noted by (Pal & Vanijja, 2020), conventional education patterns are widely transformed into virtual environments. Online learning is even more convenient due to the wider availability of remote devices such as laptops and mobile phones, which further increases the motivation for technology adoption in the educational process. Although the concept of online learning is not new, especially after the invention of MOOC (Massive Open Online Courses), Covid-19 Pandemic has accelerated its adoption worldwide. A study conducted by Alicia (2020) also examined the Microsoft Teams' acceptance for learning purposes. The researcher applied a cross-sectional design and selected a sample of respondents from Politeknik Kota Kinabalu, Malaysia. Results revealed that students' behavioral intention to opt for eLearning motivates them to adopt Microsoft Teams for educational purposes. Respondents said that they trust Microsoft Teams to facilitate the educational activities that help them embrace the relevant software more effectively. Therefore, the evolution of wireless technology has greatly reduced the educational process. It decreases the gap between students and learning material and provides access to education even when the whole world has a gigantic healthcare emergency (Bui et al., 2020).

H₆: *Behavioral intention has a significant impact on the Microsoft team's acceptance.*

3. Research Methods

3.1 Study Design

We executed a cross-sectional design in the current study and utilized the survey method for data gathering purposes. According to (Navarro-Rivera & Kosmin, 2013), the survey method is most preferred in quantitative research. Researchers gather real-time data directly from the respondents who have relative, first-hand experience. Moreover, we used both IBM Statistical Package for the Social Sciences (SPP) and Amos Version 26.0 for the data analysis involving descriptive and inferential statistics. Notably, we performed descriptive analysis to calcite the frequency and percentage of the participants' demographic data and Structural Equation modeling for the measurement model assessment and Structural Model analysis as suggested by Henseler et al. (2015)

3.2 Study Respondents & Informed Consent

Our study respondents involved young students currently enrolled in different universities in the United Arab Emirates. However, as per the research requirements, we randomly selected a sample of $n= 300$ respondents from Al Ain city. According to (Tryfos, 1996), simple random sampling is one of the most useful sampling techniques due to the non-zero chance of the researcher's own bias. Obtained results are more generalizable and thus, affirm the reliability of outcomes as well. Therefore, we randomly selected $n= 2$ public sector universities and randomly distributed our questionnaires among the students. It is also notable that we provided our respondents with complete authority to quit the survey filling process whenever they wanted. Besides, informed consent was also taken from the respondents as suggested by (Gov, 2013). However, the overall response rate remained 91.6% as 8.4% or $n= 25$ questionnaires were missing or wrongly filled by the participants, so we had to eliminate them.

3.3 Measurement Model Assessment

3.3.1 Convergent Validity Analysis

According to Awang (2015), analyzing the measurement model is important in Structural Equation Modelling. It also helps to determine the internal consistency between the study variables, facilitating the structural model analysis pathway. Thus, the current research also involves measurement model analysis. First, we examined the convent validity of the research variables. As summarized in Table 1 (a), we first questioned the convergent validity of Covid-19, Perceived Ease of Use, and Perceived Usefulness. Convergent validity analysis of the relevant variables revealed that all the Factor Loading and Average Variance extracted values are higher than the threshold value of 0.05 as ranging from .667 to .961 and the Average Variance Extracted Values remained .796 for the Covid-19, .944 for the Perceived Ease of Use, and .812 for the Perceived Usefulness. Furthermore, the Cronbach Alpha value for the Covid-19 remained .870, .900 for the Perceived Ease of Use, and .800 for the Perceived Usefulness. Besides, the Composite Reliability value for the Covid-19 remained .902, 1.00 for the Perceived Ease of Use, and .885 for the Perceived Usefulness. Thus, values from both Cronbach Alpha and Composite Reliability remained higher than the threshold value of 0.7 as suggested by Golfashni (2011).

Table 1 (a)
Convergent Validity Assessment

Variables	Constructs	FL	LAM	APRIL	AVE	CA	CR
	CVD1	.877	.769	.230			
	CVD2	.667	.444	.555			
	CVD3	.669	.447	.552			
Covid-19	CVD4	.878	.770	.229	.796	.870	.902
	CVD5	.704	.495	.504			
	CVD6	.875	.765	.235			
	CVD7	.877	.769	.230			
	CVD8	.827	.683	.316			
	PEEU1	.949	.900	.099			
	PEEU2	.929	.863	.136			
	PEEU3	.956	913	.086			
Perceived Ease of Use	PEEU4	.975	.950	.049	.944	.900	1.00
	PEEU5	.961	.923	.076			
	PEEU6	.969	.938	.061			
	PEEU7	.962	.925	.074			
	PEEU8	.964	.929	.070			
	PUSE1	.905	.819	.180			
	PUSE2	.762	.580	.419			
	PUSE3	.906	.820	.179			
	PUSE4	.583	.339	.660			
	PUSE5	,.594	.352	.647	.812	.800	.885
Perceived Usefulness	PUSE6	..887	.786	.213			
	PUSE7	..612	.374	.625			
	PUSE8	.905	.819	.180			

Resuming the convergent validity analysis, we also conducted the relevant analysis of the last three latent variables (See Table 1b) as suggested by (Henseler et al., 2015). Here we found that all the Factor Values range from .619. to .969, and all the Average Variance Extracted Values range from .797 to .927. Thus, both Factor Loading and Average Variance Extracted Values are higher than the threshold value of 0.5. Furthermore, the Cronbach Alpha value for the Attitude remained .987, .870 for the Behavioral Intention, and .918 for the Microsoft Teams Acceptance. Finally, the Cross Loading value for the Attitude remained .977, .910 for the Behavioral Intention, and .967 for the Microsoft Teams Acceptance. Hence, all the Cronbach Alpha and Composite Reliability values are higher than the threshold hold value of 0.7. In this regard, we found that the convergent validity of the measurement model is successfully established.

Table 1 (b)
Convergent Validity Assessment

Variables	Constructs	FL	LAM	APRIL	AVE	CA	CR
Attitude	ADE1	.955	.912	.087			
	ADE2	.955	.912	.087			
	ADE3	.941	.885	.114			
	ADE4	.823	.677	.322	.927	.987	.977
	ADE5	.940	.883	.116			
	ADE6	.940	.883	.116			
	ADE7	.928	.861	.138			
	ADE8	.939	.881	.118			
Behavioral Intention	BEN1	.877	.769	.230S			
	BEN2	.671	.450	.549			
	BEN3	.670	.449	.548			
	BEN4	.876	.767	.232			
	BEN5	.704	.495	.504	.797	.870	.910
	BEN6	.874	.763	.236			
	BEN7	.877	.769	.230			
	BEN8	.828	.685	.314			
Microsoft Team Acceptance	MTN1	.959	.919	.080			
	MTN2	.928	.861	.138			
	MTN3	.941	.885	.114			
	MTN4	.938	.879	.120	.898	.918	.967
	MTN5	.909	.826	.173			
	MTN6	.935	.874	.124			
	MTN7	.959	.919	.080			
	MTN8	.619	.383	.616			

3.3.2 Discriminant Validity Analysis

We also examined the discriminant validity of the latent variables as suggested by (Civelek, 2018). According to (Alarcón & Sánchez, 2015), discriminant validity assessment helps to examine the extent to which measures related to different traits are unrelated. In the current research, we first used the Fornell-Larker criterion to assess the discriminant validity. Here, we found that all the Average Variance Extracted values squares are higher than the correlation values mentioned in Table 2. We also used Heterotrait-Monotrait Ratio to analyze the discriminant validity further. First, we calculated the Mean of all the correlations related to our latent variables. We employed the relevant formula and found the HTMT value at 0.471, which is lower than the threshold value of 0.90, indicating that the discriminant validity of the measurement model is successfully established. Table 3 summarizes the correlation values further utilized for the HTMT assessment:

Table 2
Fornell-Larker Criterion

	CVD	PERU	PURSE	ADE	BEN	MTN
CVD	**.633**					
PERU	-.161	**.891**				
PUSE	.207	.026	**.659**			
ADE	-.183	-.127	-.934	**.857**		
BEN	-.019	-.064	-.079	.058	**.635**	
MTN	-.220	-.080	.024	.054	-.006	**.806**

Table 3
Heterotrait-Monotrait Ratio Scale

	CVD	PEEU	PUSE	ADE	BEN	MTN
CVD						
PERU	.179					
PURSE	-.107	.232				
ADE	-.031	.271	.939			
BEN	.015	.079	.083	.062		
MTN	.249	.064	-.217	-.202	.000	

3.3.3 Goodness of Fit

After assessing the internal consistency of the measuring model, we further examined the Goodness of Fit, also recommended by Dijkstra and Henseler, 2015). As noted by Wong (2013), assessing the goodness of fit determines the strength and accuracy of the measuring model, which further helps analyze the structural relationship between the study variables. Thus, the goodness of fit analysis indicated the cumulative chi-square value of χ^2=7690.847 (df= 894) along with the probability level; at .000, that is lower than the threshold value of 0.05. Moreover, we also found the Root Mean Square of Error Approximation at 1.68, Adjusted goodness-of-fit (AGFI) remained at .396, and Goodness-of-fit index (GFI) value at .454, indicating Goodness-of-fit index is greater than the 0.09 as suggested by Hooper et al. (2008). Thus, we found that the measuring is appropriate for the structural model analysis after adjusting certain constructs.

3.4 Analysis of Structural Model

3.4.1 Coefficients of Determination R^2

To examine the effects of independent variables on the dependent variables, we conducted the R^2 analysis of the latent variables. According to (Dufour, 2011), R^2 helps determine the predictive power of dependent variables and the extent to which independent variables are causing variance in the dependent variables. Thus, the R^2 analysis of the latent variables revealed that the independent variable (Covid-19) is causing .272 or 27.2% of the variance in Perceived Ease of Use, .217 or 21.7% of the variance in the Perceived Usefulness, .202 or 20.2% of variance in the Attitude, .433 or 43.3% of the variance in the Behavioral Intention, and .249 or 24.9% of variance in the Microsoft Teams Acceptance. Thus, the values ranging from .202 to .433 indicate that all the latent variables have a moderately strong predictive power (see Table 4).

Table 4
R^2 Analysis of Latent Variables

S/R.	Latent Variables	R^2 Value	Strength
1.	Perceived Ease of Use	.272	Moderately Strong
2.	Perceived Usefulness	.217	Moderately Strong
3.	Attitude	.202	Moderately Strong
4.	Behavioral Intention	.433	Moderately Strong
5.	Microsoft Teams Acceptance	.249	Moderately Strong

3.4.2 Hypotheses Testing: Path Analysis

According to (Stage et al., 2004), path analysis helps to examine the proposed causal relationships between the study variables. As an important technique to assess causal patterns, path analysis was first developed during the 1920s. Particularly regarding model building, path analysis is conducted to examine the data set relevant to the prespecified causal model (Chepkirui & Huang, 2021). Thus, as the second important step in the structural model analysis, we also conducted path analysis in the current research by using IBM Amos. Results indicated a significant impact of Covid-19 on the Perceived Ease of Use with the path value at *.343* and significance value at *p> 0.000* and Perceived Usefulness with the path value at .617 and significance value at *p> 0.000*. Besides, the relationship between Perceived Ease of Use and Perceived Usefulness also remained significant, with the t-value at 4.985 and significance value at *p> 0.000*. Similarly, in the H3 and H4 of the study, the proposed relationship between Attitude, Perceived Ease of Use, and Perceived Usefulness we found significant relationships with the t values at 2.625 and 16.106 (respectively) and the significance values at *p> 0.009 and p> 0.000*. However, the relationship between Attitude and Behavioral Intention remained insignificant, with the t-value at -.588 and significance value at *p> 0.556*. Moreover, the relationship between Behavioral Intention and Microsoft Teams Acceptance remained significant, with the t-value at 1.704. and significance value at *p> 0.088*. Table 5 summarizes the findings of the path analysis, and Fig. 2 graphically illustrates the relevant findings.

Table 5
Path Analysis of the Structural Relationships

Hyp	Relationships	Path	t-value	Sign	Decision
H1a	CVD>PEEU	.343	6.453	.000***	Supported
H1b	CVD>PUSE	.617	11.949	.000***	Supported
H2	PEEU>PUSE	.935	4.985	.000***	Supported
H3	PEEU>ADE	.374	2.625	.009**	Supported
H4	PUSE>ADE	.870	16.106	.000***	Supported
H5	ADE>BEN	-.155	-.588	.556	Not Supported
H6	BEN>MTN	.106	1.704	.088*	Not Supported

4. Discussion on Results

According to (Zabadi & Al-Alawi, 2016), experiences obtained from online learning through various platforms provide a potential opportunity for Emirati students to explore unique areas of their educational journey. Both private and public sector

educational institutions in the United Arab Emirates enabled students to access educational opportunities anytime, everywhere with just a single click. Even during a crisis like Covid-19 Pandemic, despite educational institutions being closed across the country, students are dominating their learning experiences and qualifying successfully to attain the learning curse, communicate with their teachers, and even stay connected with their educational institutions (Habes et al., 2021).
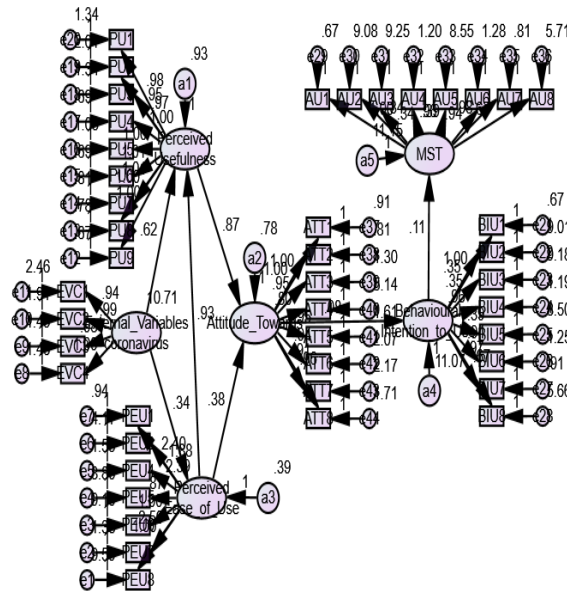

Fig. 2. Path Diagram of the Structural Model Analysis

Similarly, the study centralized its focus towards a single city to examine the technology adoption of the young residents. More specifically, the focus was towards exploring the factors behind Microsoft Teams acceptance, as also proposed by (Davis, 1989) in the Technology Acceptance Model (TAM). In this context, we found that the majority of our respondents (56.8%) were females, and 48.2% were males. All the respondents were currently enrolled in Al-Ain university, in different departments, including Education, Business, Engineering, Communication Sciences, Law, and others. Moreover, our respondents also revealed that most (55.0) of them own personal computers for learning purposes, 36.2% use their mobile phones, and 9.6% of participants use IPad/Tablet devices for learning purposes. As noted by (Ally et al., 2017), the wider availability of personal computers, mobiles phones, laptops, smartwatches, and tablet devices have largely enhanced students' learning experiences through online platforms. These devices enable the students to communicate; they also provide virtual platforms to resume their educational activities and acquire real-time education in a virtual environment. Talking particularly about the Microsoft Teams availability and usage, we found that 69.7% of respondents indicated university websites as a source of information and availability of the Microsoft Teams. According to (Shahid et al., 2020), educational institutions motivating their students to adopt different online platforms for learning purposes heralds an optimistic approach to mitigate the effects of the over-19 outbreak. The more students learn about various websites and applications, the more they try them, and thus, the more they use them for educational purposes.

Furthermore, regarding the Microsoft Teams acceptance and usage during the Covid-19 Pandemic, a majority of students revealed that they largely depend on it for educational purposes as it not only helps them to stay connected, also provides them educational opportunities which were earlier hampered due to a sudden closure of their educational institution. As noted by (Pal & Vanijja, 2020), the transformation of internet technology has also transformed the educational system across the globe. Today, when we found the closure of educational institutions as the only solution to counteract the outbreak, information technology was the only option to solve the uncertainties. Indeed, information technology in education is a big and revolutionary step that is a positive and strong part of the crisis management system.

We further scrutinized the students' access to Microsoft Teams and the extent to which the simple and easy-to-use features accompany it. Our respondents strongly agreed that Microsoft Teams is easily available with the subscription on the university website, which does not contain any technical errors. The relevant program is designed to facilitate its usage at maximum. As a result, respondents feel satisfied to use Microsoft Teams for both communication and learning purposes. The path analysis of the relevant statements further revealed a significance value at *p> 0.000,* indicating a strong consistency between the current study and the study conducted by (Rizun & Strzelecki, 2020). Rizun and Strzelecki also found Microsoft Team usage mainly attributed to the perceived ease of use among the students in Katowice, Poland, during the Covid-19 outbreak.

Regarding the relationship between Microsoft Teams usage and perceived usefulness, students revealed they like the idea of distance education through Microsoft Teams, as it provides them limitless access to their peers, instructors, and institutional

management. They communicate, share their ideas, and acquire study material from communicating with each other that helps them perform well in their educational journey. The significance value further validates this agreement at *p> 0.000* that is also compatible with the study conducted by (Laurencia & Sudarto, 2021) as they also found Microsoft Teams usage and adoption as accompanied by tits usefulness and students expectations to improve their academic performance during the Covid-19 Pandemic in Tarumanagara, Indonesia. As a result, we also found a significant relationship between the perceived usefulness (*p> .009*), perceived ease of use (*p> .000*), and attitudes of our respondents. as participants revealed that Microsoft Teams acceptance provides the students with educational independence, prospects for career development, and also gives them autonomy to choose their study material accordingly. Consequently, participants feel motivated and have a positive attitude towards Microsoft Teams. According to (Ly et al., 2021), Microsoft Teams is a positive, constructive application for students to study online. Despite some limitations, Microsoft Teams' opportunities help the students have a positive attitude about its acceptance and incorporation in the learning process.

Moreover, the relationship between attitudes and behavioral intention remained insignificant, with the significance level at *p> .556*. However, the proposed relationship between behavioral intention and Microsoft Teams acceptance was also validated with the significance level at p> .088, indicating a greater consistency with the study (Laurencia & Sudarto, 2021). Laurencia and Sudarto empirically found that Microsoft Teams is an effective study tool that unites students and instructors worldwide. It governs our eLearning experiences and thus, provides a virtual environment to students and directly influences our perceptions and behavior. Therefore, traditional patterns of distance learning were weak due to fewer student engagement. However, applications like Microsoft Teams alleviate this weakness and motivate the students to take part in an online, face-to-face, virtual classroom environment. Especially during the current healthcare crisis, dependency and its usage are subsequently increased, providing a better solution to mitigate the impacts of the Pandemic (Sobaih et al., 2021).

5. Conclusion and Implications

This study aimed to analyze the factors behind Microsoft Teams' acceptance in the United Arab Emirates during the Covid-19 Pandemic. We used a systematic and empirical approach to analyze the structural relationships proposed in the study model. Based on the data gathered from the study participants, we found that Microsoft Teams is a popular platform in the United Arab Emirates, mainly for eLearning purposes. The mutual agreement on the impacts of perceived usefulness and ease of use affecting the Attitude and behavioral intention shows a clear link with the technology acceptance in general and eLearning acceleration in particular. This article provides a future framework for the educational institutions across the globe to develop a permanent infrastructure that may not only prepare online education as a crisis management system also motivate the students and provide them with a variety of online platforms that may encourage the students to consider eLearning as a part of formal learning system and equally considerable like the conventional learning techniques. Besides, offering the students free internet access to online learning applications can also be highly beneficial, especially during the current healthcare crisis. Therefore, deploying the eLearning culture and further providing the students with suitable applications and equipment will offer equal chances to access educational opportunities to all, significantly increasing the literacy rates among future generations.

5.1 Study Contribution

This study is unique as it is a significant addition to the existing literature concerning technology acceptance for educational purposes. We have used a self-proposed model further validated by the measurement model assessment and structural model analysis. We have additionally incorporated behavioral intention as another variable to advance the Technology Acceptance Model. Further, that is another major contributor to the current research that fills the research gap mentioned earlier.

5.2 Limitations & Recommendations

Although we have extensively examined the technology acceptance during the Covid-19 Pandemic for educational purposes, this study has limitations. **First**, this study is conducted in the only city (Al Ain), which questions the generalizability of its results in other geographical regions. **Second**, we have used TAM propositions, whereas other behavioral frameworks could also support the structural assumptions of this research. **The third** and final limitation involves selecting students, while teachers could also be chosen for the response gathering purposes that could further enhance the scope of the current project. However, we recommend more studies, especially regarding eLearning acceptance through online platforms mainly supported by the behavioral theory of adoption involving both students and teachers as participants to find in-depth results.

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