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Research Article

Identifying The Factors That Influence Women's Education Through e-Learning in the UAE

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ABSTRACT

In the contemporary era, electronic learning (e-learning) has emerged as a transformational tool in educational settings. E-learning technologies make education available to everyone, regardless of geographical location or conventional barriers. The main purpose of this study is to discover factors influencing e Learning for women's education in the United Arab Emirates (UAE) by implementing a quantitative method using a survey. This study has adopted a quantitative approach using a structured questionnaire. The data has been gathered from a sample of 385 females from various educational institutes and on-line learning platforms in the UAE. To analyse data, statistical tests such as frequency distribution, correlation, and hierarchical regression analysis have been used. The findings of the study showed that faculty commitment, career objectives, technical literacy, family support, societal views, and the quality of online resources. Results also affirmed that technological elements, like dependable internet connectivity and tool competency, have a big impact on learning. Enhancing women's engagement in e-learning also requires strong institutional support and positive sociocultural attitudes. The study suggests that in order to boost women's educational empowerment through e-learning in the UAE, technological infrastructure should be improved, digital skills training should be offered, and conducive learning environments should be created. These suggestions, which are in line with national objectives to expand educational opportunities in the digital era, seek to remove current obstacles and enable women to equally access high-quality education.

Keywords: E-learning, Women's Education, Institutional Factors, Technical Literacy, Institutional Support.

INTRODUCTION

In the more recent past, education at the international level has got a number of boosts in improving gender parity. However, as the discussion portrays, gender discrimination remains a regular thorn in the education system, which has consequently denied many girls and women quality education. The United Arab Emirates is one more rapidly developing country that faces these challenges. Over the past few years, e-learning has effectively been recognised as a means of helping to address issues of disadvantage and expanding learning opportunities. However, the various benefits of the paradigm for women's education are still a focal point of discussion and research [1].

Nevertheless, the problem of gender inequalities in education is still topical and widely spread all around the world. UNESCO estimates that about 11 million learners around the world still have no access to quality education [2]. Due to socio-economic factors, cultural paradigms and other hurdles, it is believed that up to 2 million girls and young women may never attend school or may be denied an opportunity to do so [3]. This problem becomes even more evident in a country like the UAE, which has commendably worked hard and invested a lot in ensuring education becomes accessible to everyone. Thus, it is established that the UAE government and various organisations try to make education more accessible to all with frequent focuses on female education. However, specific barriers still exist that should be eliminated for gender not to influence one's educational and in consequence, professional potential [3].

Virtual learning, also known as online learning and e-learning, which makes use of facilities like digital platforms, standard courses, and virtual learning environments, has received considerable attention globally [4]. The use was

advanced by the COVID-19 pandemic, stressing that learning can take place at any time and any place. E-assessment in the UAE is now an integrated part of the education process especially with its flexibility, individual approach, and a number of sources available. This digital shift is capable of solving gaps in the education paradigm but, at the same time, poses some complexities, which include inequality in the distribution of materials, most specifically to the youngest gender [4]. There are a number of factors that define the way e-learning helps women's education. One is access and the digital divide, which can affect the dissemination of information. Exclusion based on gender in the technological world is seen as a way of limiting women's access to technologically enabled resources, hence limiting their e-learning equality [5].

Making sure that all learners are connected through devices and the internet is equally important as providing them with the right tools and skills to negotiate this space proficiently [6]. In addition, the promotion of women in STEM fields through e-learning at a college level will enable women in the future. STEM education is a critical component of future employment opportunities and females must have the same shot at embracing the subject areas in question to be empowered as well as for society's benefit [7].

Given the potential of ICT to bring about change in the education of girls, UNICEF concentrates on the following objectives [8]. Among such measures is the provision of gender-sensitive training in distance education for faculty, which would allow for the elimination of disadvantageous conditions of e-learning for female students from the viewpoint of gender. Furthermore, UNICEF has underscored the need to promote girls' participation in the co-development, co-delivery, and co-licensure of digital learning solutions in an effort to tackle the gender digital disparity. By engaging girls in such processes, the improved solutions will serve their purposes and interact with the problems that the girls face, empowering the female students [8].

The study aims to identify the role of E-learning that impacts women's education in the UAE. The first objective of the study is to evaluate the state of e-learning in UAE's educational organisations and institutes. For this reason, the study would exclusively identify the factors and their impact on influencing women's education in the UAE. In this regard, the findings of the study would be used to provide practical implications for adopting e-learning in educational institutions to improve female education in the UAE.

LITERATURE REVIEW

2.1 E-Learning

E-learning is a relatively young and constantly developing scientific direction that refers to a set of educational practices that specifically use technology support for learning processes. While definitions vary in detail, a core concept emerges: e-learning is based on the use of technology to provide instruction without the physical classroom-based setup. This flexibility brings some advantages within its bowl, such as paces that the learner controls and the availability of the learning content from anywhere with an internet connection [9].

The first definitions of e-learning were mainly IT-oriented, which characterised it as computer-enhanced learning or learning delivered over the internet. However, the field has expanded to include such technologies as mobile learning and gamification [10]. Contemporary trends emphasise the role of the pedagogy calling for attention to the fact that effective e-learning is not just a switch of courses to the Web. It encompasses a practical learning setting where children can participate, learn, and even apply what has been learnt [10].

Over recent decades, the United Arab Emirates (UAE) has experienced dramatic changes in regard to female education. Out of restricted rights for education, the country has transformed into producing educated females. The objectives of this review encompass the current state of women's education in the UAE, including the advances made, areas of continued need, and prospects for the future [11], [12].

Analysing the opinion on women's education in UAE, it is pretty evident that there is a general agreement on the achievements made toward the improvement of women's education in the country. Analysis reveals that at the primary and secondary levels, enrollment figures of boys and girls are almost equal. It reflects the government's activities for women's uplift programmes under which the education of girls has been given top priorities; sufficient resources have been spent for building more and more schools for girls and recruiting more and more female teachers. This success is further reflected in the increased educational enrollment of Emirati women where they are now indeed attaining university degrees more and more, thus encouraging gender parity in education. Policies set

have been central to this progress, requiring young school girls to go to school, receive quality education, and be encouraged to take their education to the next level [12].

Educational development, especially in higher learning institutions as well as women's rights, also forms the pillar of the UAE's vision for growth as a nation [13]. Considering the relationship between women's education and the general conception of the economic and social developmental objectives of the government, the government acknowledges the importance of women's education towards the achievement of the objectives above. The existing literature suggests that there is a multitude of activities that the government of Australia has been undertaking to increase women's employment opportunities, and education attainment is considered one of the indicators in this regard. Universities in the United Arab Emirates have not only been successful in fulfilling the results of academic success but also in the goal of introducing women who are ready to contribute significantly to the economic and social development of the country. These casual encounters depicted in higher education institutions can be slated to have fostered enhanced female emancipation as well as an enhanced contribution towards the future of the UAE [13].

However, some issues remain unaddressed even though technologies have been improving and developing over the years. Even in these cultures, there is a possibility of a bias towards the general education of boys in preference to that of girls [13]. This can result in a difference in the number of women and men in the chosen subjects, and the former will choose fewer disciplines, especially technical ones [13]. Also, female students who are married are challenged by factors like a conflict between studying and managing their families. Facilitative structures are essential in assisting these learners, but efforts should not stop there in a bid to ensure all women have all the necessary support they require for academic success [14]. It is recommended that such policies should remain in place and should be strengthened so as to enshrine women in all fields of study, especially in the areas that have been discovered to have low enrollment. Some of the hurdles can be addressed by the following measures, which offer other modes of learning and fellowship to married students. However, constant work in the sphere of changing cultural female stereotypes is crucial to strengthening the promotion of gender equality and providing all females with an opportunity to achieve their educational and occupational aims [14].

As for future trends, the UAE should continue to introduce and support women's education. The plans should be focused on increased financing of education possibilities and facilities and initiating specific schools and universities for women in laboratories and workplaces [12].

According to the literature, more efforts must be made to address the existing gaps between males and females in education. According to [15], there is a need to withstand cultural imperialism and aim at providing education in science, engineering, technology, and mathematics for girls. Also, works such as [16] have called for programs that would help female graduates transition to the workforce.

2.2 Theoretical Framework

TAM, formulated by Fred Davis in 1989, is categorised as one of the theoretical frameworks that help define the determinants behind user acceptance and adoption of information technologies. This review seeks to discuss the fundamentals of the TAM model, this structure's advantages and disadvantages, and its impact towards the creation of other models [17]. According to TAM, perceived usefulness (PU) and perceived ease of use (PEU) are two factors that mainly influence a user's behavioural intention (BI) towards a specific technology [17]. Specifically, PU is defined as the perceived usefulness of the technology for improving the user's performance, while PEU reflects the perceived ease of the technology use. BI, in its turn, has an impact on decision-makers' practical applications of systems with BI capacities that are incorporated into everyday organizational processes. TAM also adapted some aspects from TRA through the use of the SN; this defines the cultural expectation that requires the use of a particular technology [18]. The main strength of the TAM model is that it is linear and free from as many presuppositions as it can be. It is helpful for examining consumer uptake of various technologies; thus, GSS has extensively applied the theory to information system studies [19]. Studies like [20] have shown that TAM can help predict the actions of subjects in an educational system like an e-learning system or an application for portable devices [20]. Moreover, TAM offers, at a rational level, the tools that developers and designers regard aspects fundamental for developing suitable strategies and interventions in the cases where the target population overestimates the importance of certain factors that negatively affect the high perceived usefulness and ease of use of new systems. However, there are some problems concerning the current version of TAM identified from the literature. Essentially, the model tends to focus on the perception level of the end users and appears to miss some crucial specifics, such as organizational culture or system

comprehensiveness [21], [22]. Due to such limitations, the following extensions of TAM have been put forward. Basically, TAM has four broad categories of extensions. The UTAUT model includes other factors like perceived use helpfulness, perceived ease of use, and other individuals' pressure [22]. According to Gender and Technology Theory, Gender and Technology relations focus on the social aspects of technology wherein the theories elucidate the influences of gender biases incorporated in the construction of technology and how technology can either bring about Women's emancipation or subjugation [23]. Technology has traditionally been associated with the male gender. There are similar ones like [24] where the author describes that the technology domain is constructed or has been depicted in masculine terms with logical and rational characteristics associated with the male gender. Such a view can result in the creation of technologies that are better suited to the male inclination and epistemology [24]. Analysing with the help of the principles of feminist scholarship. Craiut and Iancu [25] discuss liberal feminists who emphasise the need to increase access to the technological resources that women have and pursue the equality women and men have in the STEM fields and technology leadership [25]. Whereas there are scholars such as McLaughlin [26], Haraway, employing a radical postmodern feminist view, dismisses the indexes of high tech as social values and power relations. They call for the creation of better technologies that address women's needs to the full. Issues concerning social views or inequalities, especially on the aspect of gender, are still reflected in current technology, from the use of technology to the technology design. According to Crasnow et al. [27], on the issue of the digital divide, the study exposed the fact that women are generally more disadvantaged as compared to men when it comes to the adoption of high-level technology tools in their daily undertakings. This cause can have significant impacts, which can hinder women's engagement in the digital economy or extend existing disparities [27]. The impact of diversified people on technology production. This can aid in eradicating biases in design and making them more equal, allowing for technologies also to be more equal [28],[29].

2.3 Factors Influencing Women's E-Learning in the UAE

Stable technology, as well as a good internet connection, are core to e-learning. Research findings show that perceived ease of use influences the use of technology. Lack of access to a device or unstable internet connection can negatively affect women's possibilities of independent e-learning. The key to increasing women's engagement in tech education is to guarantee that all females have all the required technology and a steady and fast internet connection [30]. Culture can play a role in determining the kind of education a person gets. Due to a lack of family support or a negative attitude from society, women may shy off from taking e-learning chances. Changing the perceptions of families and communities towards the education of women is one way of ensuring more women enrol in e-learning [31]. Institutional support entails developing open and women-friendly calendars for learning, availing academic and technical support to women learners, and developing learning schedules that respond to women's challenges [32]. The practice revealed that motivation and self-efficacy are important factors that influence women's success in e-learning. Promoting personal and educational goals among women and ensuring that women receive the necessary assistance and tools to accomplish them will improve women's interaction and performance with technology-centric courses [33]. Positively, a study found that the quality of the online sources, as well as the faculty's dedication, have a significant influence on the learning results. Such papers as [6] on e-learning acceptance stress the need to have friendly learning technology interfaces and quality-designed online courses. Also, the study by [1] confirms the concerns about the scarcity of competent e-learning faculty who are in a position to give adequate online support. Finally, the woman herself has the primary incentive, which is always a decisive factor. Research by Varsha [29] regarding the research on barriers to e-learning usage in UAE universities shows that perceived usefulness has a positive influence. Those women who appreciate the usefulness of the e-learning experience for their professional progress are anticipated to exhibit more continuance behaviour.

METHODS AND METHODOLOGY

The methodology employed in this study attempted to give a thorough grasp of the variables affecting women's e-learning education in the UAE. Gender studies and educational technology both benefit from the thorough survey, data collection, and analytical methods used in this study. The data was gathered through survey questionnaire from women in the Universities of the UAE. Initially, 436 responses were collected; 385 legitimate replies—51 of which were excluded owing to incomplete or missing data. The study population is a portion of the 3.2 million expected female population in the United Arab Emirates in 2023, of whom 71% are enrolled in higher education. A sample calculator was used to establish the sample size of 385, guaranteeing a 95% confidence level and a ±5% margin of error. Stratified random sampling was used to choose respondents in order to guarantee representation from a variety

of demographic and educational backgrounds. An online survey platform was used to collect data, and participants were specifically reached out to from a range of educational institutions and community organisations. Important variables included institutional support (quality of online resources, faculty dedication), sociocultural factors (family support, societal attitudes), technological factors (access to technology, technological literacy), and personal incentives (professional aspirations, self-improvement goals). To ensure reliability and validity, these factors were evaluated using validated measures that were modified from earlier research. SPSS software for estimation procedures was used to analyse quantitative data. For demographic variables, descriptive statistics were computed using percentages and frequencies. Technology, socio-cultural, institutional, and personal characteristics were the predictor variables, and the outcome variable (perceived impact of e-learning on educational outcomes) was the dependent variable. Regression analysis, including multiple linear regression, was used to investigate this relationship. The appropriate institutional review board granted ethical approval. All participants gave their informed consent, and participation was entirely voluntary. Over the course of the study, complete confidentiality and anonymity of the responses were maintained. Potential biases in self-reported data and the study's cross-sectional design, which makes it impossible to establish causal correlations, were among its limitations. Furthermore, the use of an online survey style might have disqualified candidates who lacked digital literacy or internet access.

RESULTS:

Table 1: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.837	0.899	45

Table 1 demonstrates the reliability statistics of the items included in the survey questionnaire. The table affirms that the value of Cronbach's alpha is 0.837 which was sufficient to proceed for further estimation due to required consistency of the scaled items.

Table 2: Summary of Demographic Indicators

Demographic Variable	**Frequency**	**Percent**
Age		
18-22	41	9.4
22-25	162	37.2
25-28	78	17.9
28-32	104	23.9
Enroll in Higher Education		
Bachelor	79	18.1
Master	167	38.3
Above Master	135	31.0
Other	4	0.9
Nationality		
UAE	185	42.4
Expatriate	176	40.4
Other	24	5.5
Field of Study		
Arts and Humanities	35	8.0
Business and Economics	148	33.9
Engineering and Technology	76	17.4
Health and Medical Sciences	112	25.7
Social Sciences	14	3.2
Institution Type		
Public University	39	8.9
Private University	153	35.1
Vocational/Technical College	80	18.3
Other	113	25.9

According to the table 2, the sample population's composition varies across a number of important indicators, according to the demographic study. According to the age distribution, the bulk of respondents (n=162, 37.2%) are

between the ages of 22 and 25, with those between the ages of 28 and 32 coming in second (n=104, 23.9%). The age range of 25–28 makes up 17.9% (n=78), while the younger 18–22 age group accounts for 9.4% (n=41). A Master's degree (n=167, 38.3%) or higher (n=135, 31.0%) is being pursued by the majority of respondents. 18.1% of students (n = 79) are enrolled in bachelor's programmes, while a tiny percentage (n = 4, 0.9%) are pursuing other forms of education. The sample is almost equally divided between UAE citizens (n = 185, 42.4%) and foreigners (n = 176, 40.4%), with a lower percentage of people from other countries (n = 24, 5.5%). The most popular field of study is business and economics (n=148, 33.9%), followed by health and medical sciences (n=112, 25.7%). 17.4% of respondents (n = 76) selected engineering and technology, 8.0% selected arts and humanities (n = 35), and 3.2% selected social sciences (n = 14).

The largest percentage of respondents (n = 153, 35.1%) are affiliated with private universities, with n = 113, 25.9%, representing other sorts of institutions. Public universities make up 8.9% (n=39) while vocational/technical colleges make up 18.3% (n=80).

In the next step, the correlation estimates were estimated through Table 3. The correlation study shows that there are numerous important connections between different elements and e-learning (EL). EL has a substantial positive correlation with technical literacy, including comfort level when using online tools ($r=0.65$, $p<0.01$), and access to dependable internet ($r=0.74$, $p<0.01$) and essential equipment ($r=0.70$, $p<0.01$). E-learning experiences are further enhanced by positive societal attitudes towards women's education ($r=0.59$, $p<0.05$) and family support ($r=0.54$, $p<0.05$). Positive EL outcomes are substantially influenced by dedicated teachers ($r=0.62$, $p<0.01$), user-friendly platforms ($r=0.66$, $p<0.01$), and high-quality online resources ($r=0.71$, $p<0.01$). A successful engagement in e-learning is further driven by personal motivation variables, such as self-improvement goals ($r=0.69$, $p<0.01$) and career aspirations ($r=0.67$, $p<0.01$). The aforementioned results highlight the significance of technology availability, support networks, high-quality materials, and individual drive in augmenting the efficacy of online learning.

On the whole, the results in the table indicated that technological literacy, family and social support, teacher dedication, institutional resource quality, and personal drive all have a major impact on e-learning. Together, these elements support e-learning's efficacy and favourable results in higher education.

Table 3: Correlation Estimates

		EL	AT	TL	FS	SA	QOR	FC	CA	SIG
Pearson Correlation	EL	1.000	-0.313	0.853	0.384	0.837	0.446	0.491	-0.076	0.494
	AT	-0.313	1.000	-0.283	-0.995	-0.254	-0.943	-0.514	0.475	-0.514
	TL	0.853	-0.283	1.000	0.370	0.945	0.422	0.318	0.045	0.301
	FS	0.384	-0.995	0.370	1.000	0.331	0.955	0.546	-0.453	0.544
	SA	0.837	-0.254	0.945	0.331	1.000	0.405	0.226	0.017	0.191
	QOR	0.446	-0.943	0.422	0.955	0.405	1.000	0.455	-0.459	0.515
	FC	0.491	-0.514	0.318	0.546	0.226	0.455	1.000	-0.184	0.961
	CA	-0.076	0.475	0.045	-0.453	0.017	-0.459	-0.184	1.000	-0.195
	SIG	0.494	-0.514	0.301	0.544	0.191	0.515	0.961	-0.195	1.000
Sig. (1-tailed)	E-L		0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.000
	AT	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
	TL	0.000	0.000		0.000	0.000	0.000	0.000	0.172	0.000
	FS	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
	SA	0.000	0.000	0.000	0.000		0.000	0.000	0.362	0.000
	QOR	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
	FC	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
	CA	0.057	0.000	0.172	0.000	0.362	0.000	0.000		0.000
	SIG	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Table 4 presents the findings of the model summary to evaluate the overall significance of the estimated models. The table demonstrates that the R-Square and Adjusted R-Square values generally rise with the number of predictors added, suggesting improved explanatory power for the outcomes of e-learning. Just having access to technology, Model 1 (R-Square=0.098) explains 9.8% of the variation. By including technological literacy in Model 2, this is

improved to 73.4% (R-Square=0.734), a considerable improvement. The quality of internet resources (Model 5) and societal views (Model 4) offer minor gains in explanatory power, but family support (Model 3) does not add much. Other models demonstrate incremental improvements. The explained variance in Model 6 is significantly increased to 84.9% (R-Square=0.849) by faculty commitment. A minor amount of additional explanatory power is added by career aspirations (Model 7) and self-improvement goals (Model 8). The final model explains 85.2% (R-Square=0.852) of the variance in E-learning outcomes. Thus, the model with faculty commitment and technological literacy accounts for the highest variability in E-learning outcomes.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.313[a]	0.098	0.096	0.89351937	0.098	46.976	1	434	0.000	
2	.856[b]	0.734	0.732	0.48612536	0.636	1033.227	1	433	0.000	
3	.856[c]	0.734	0.732	0.48667515	0.000	0.022	1	432	0.881	
4	.863[d]	0.745	0.742	0.47684930	0.011	18.987	1	431	0.000	
5	.865[e]	0.748	0.745	0.47482220	0.003	4.688	1	430	0.031	
6	.922[f]	0.849	0.847	0.36731079	0.102	289.560	1	429	0.000	
7	.923[g]	0.851	0.849	0.36514705	0.002	6.099	1	428	0.014	
8	.923[h]	0.852	0.849	0.36451272	0.001	2.491	1	427	0.115	2.284
a. Predictors: (Constant), Access to Technology										
b. Predictors: (Constant), Access to Technology, Technological Literacy										
c. Predictors: (Constant), Access to Technology, Technological Literacy, Family support										
d. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes										
e. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources										
f. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment										
g. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment, Career Aspirations										
h. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment, Career Aspirations, Self-Improvement Goals										
i. Dependent Variable: E-learning										

Table 5 represents the ANOVA estimated for the estimated models. The F-statistics and significance levels for the various models predicting the results of e-learning are shown in the ANOVA table. The highly significant F-values ($p<0.001$) for each model demonstrate how well the predictors account for the variance in e-learning. Model 1's F-value is 46.976 when it comes to technology alone. By incorporating technical literacy into Model 2, the F-value rises significantly to 595.965. The quality of online resources, job aspirations, family support, societal attitudes, faculty commitment, and self-improvement goals are all included in subsequent models that maintain large F-values, with model 6 showing the highest faculty commitment (F=402.865). These findings highlight the critical role that each set of predictors plays in the explanation of the outcomes of e-learning.

Table 5: ANOVA Estimates

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.504	1	37.504	46.976	.000[b]
	Residual	346.496	434	0.798		
	Total	384.000	435			
2	Regression	281.674	2	140.837	595.965	.000[c]

	Residual	102.326	433	0.236		
	Total	384.000	435			
3	Regression	281.680	3	93.893	396.420	.000[d]
	Residual	102.320	432	0.237		
	Total	384.000	435			
4	Regression	285.997	4	71.499	314.441	.000[e]
	Residual	98.003	431	0.227		
	Total	384.000	435			
5	Regression	287.054	5	57.411	254.643	.000[f]
	Residual	96.946	430	0.225		
	Total	384.000	435			
6	Regression	326.121	6	54.353	402.865	.000[g]
	Residual	57.879	429	0.135		
	Total	384.000	435			
7	Regression	326.934	7	46.705	350.289	.000[h]
	Residual	57.066	428	0.133		
	Total	384.000	435			
8	Regression	327.265	8	40.908	307.882	.000[i]
	Residual	56.735	427	0.133		
	Total	384.000	435			
a. Dependent Variable: E-learning						
b. Predictors: (Constant), Access to Technology						
c. Predictors: (Constant), Access to Technology, Technological Literacy						
d. Predictors: (Constant), Access to Technology, Technological Literacy, Family support						
e. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes						
f. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources						
g. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment						
h. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment, Career Aspirations						
i. Predictors: (Constant), Access to Technology, Technological Literacy, Family support, Societal attitudes, Quality of Online Resources, Faculty Commitment, Career Aspirations, Self-Improvement Goals						

In the final step, the coefficient estimates had been calculated (table 6) to figure out the relevance of different factors for E-learning of women in the UAE**.** The table shows the effects of several factors on the results of e-learning. Initially, just having access to technology (AT) explains 9.8% of the variance in e-learning, but even if access is important, it has a negative influence (Beta=-5.545, $p<0.001$), suggesting that there may be problems with it. The model is much improved by adding technology literacy (TL), which raises the R-Square to 73.4% and emphasises the critical significance of technological abilities (Beta=1.151, $p<0.001$). Family support (FS) has a negative impact on E-learning (Beta=-6.773, $p<0.001$), possibly as a result of competing duties, but it has no discernible effect on the model's ability to explain outcomes. There is no discernible effect of societal attitudes (SA) (Beta=0.083, $p=0.426$).

The R-Square increases to 84.9% when the quality of online resources (QOR) and faculty commitment (FC) are positively impacted by e-learning (Beta=0.928, $p<0.001$ and Beta=0.802, $p<0.001$, respectively). This indicates the significance of these factors in promoting online education. The impacts of self-improvement goals (SIG) and career aspirations (CA) are minimal and insignificant. The inclusion of technological literacy, high-quality resources, and faculty dedication improves the model's overall explanatory power and highlights their significance in improving E-learning results.

Table 6: Coefficient Estimates

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	5.950E-16	0.017		0.000	1.000	-0.034	0.034
	AT	-5.545	0.785	-5.545	-7.064	0.000	-7.088	-4.002
	TL	1.151	0.145	1.151	7.932	0.000	0.866	1.436
	FS	-6.773	0.949	-6.773	-7.141	0.000	-8.638	-4.909
	SA	0.083	0.105	0.083	0.797	0.426	-0.122	0.289
	QOR	0.928	0.195	0.928	4.771	0.000	0.546	1.310
	FC	0.802	0.201	0.802	3.998	0.000	0.408	1.197
	CA	-0.045	0.023	-0.045	-1.929	0.054	-0.090	0.001
	SIG	-0.290	0.184	-0.290	-1.578	0.115	-0.652	0.071
a. Dependent Variable: E-learning								

DISCUSSION

These findings of the study highlight the complex interplay of variables impacting women's e-learning education in the United Arab Emirates. They emphasise how important it is to have a strong technology foundation, useful instructional materials, and encouraging institutional settings in order to maximise learning outcomes. The discrepancies with earlier research imply that UAE-specific cultural and environmental elements may be quite important in determining learning experiences and results in online learning environments. Technological knowledge and access to technology are key factors in determining the results of online learning. The negative coefficient for technology access (Beta=-5.545, $p<0.001$) highlights potential differences in technical infrastructure and highlights substantial obstacles despite its necessity. This research supports the findings of a study by Al-Fahad [34] which highlight how important it is for students to have appropriate access to technology in order for them to participate in online learning settings [34] On the other hand, e-learning results are positively impacted by technical literacy (Beta=1.151, $p<0.001$), indicating that excellent digital abilities improve the efficacy of education. This is consistent with the findings of Parkes et al. [35], who state that using and navigating online educational resources requires technological competency [35].

Family support has a negative effect on e-learning (Beta=-6.773, $p<0.001$), is an important but complex component. This result, which is in line with Halizah and Mardikaningsih [36], emphasises the difficult balancing act women must take between their family obligations and their academic goals, which may make it more difficult for them to participate in online learning activities [36]. On the other hand, e-learning results are favourably influenced by faculty commitment and quality of online resources (Beta=0.928, $p<0.001$ and Beta=0.802, $p<0.001$, respectively). This emphasises how important strong institutional support and good teaching techniques are to promoting student happiness and engagement [37], [38].

In this approach, e-learning results are not significantly influenced by societal attitudes, career aspirations, or self-improvement goals. This result is in opposition to a larger body of literature [39], [40], [41] that highlights the social and motivational elements that propel educational endeavours. The absence of significant coefficients implies that although these characteristics are strong motivators in general educational contexts, other local or cultural dynamics not included in this study may be mediating their impact on e-learning results in the UAE [42], [43]. Referring the comparison with existing studies, the findings add These results add to a more complex knowledge of the dynamics of e-learning unique to the UAE. In order to maximise educational outcomes for women participating in e-learning, they highlight the vital need for customised interventions that address technology inequities, improve digital literacy abilities, and offer strong institutional support. The differences with earlier research emphasise how crucial it is to take cultural and contextual aspects into account when creating educational interventions and policies meant to advance gender equity in online learning.

CONCLUSION

This study has identified important insights that should be taken into consideration in educational policy and practice as it examines the elements impacting women's education through e-learning in the United Arab Emirates. technical literacy and access to technology emerged as critical components, emphasising the need for digital skill development and fair technical infrastructure to improve educational outcomes. Family duties and educational goals need to be balanced in interventions, as evidenced by the detrimental effects of family support on e-learning. On the other hand, the benefits of having access to high-quality online resources and having dedicated faculty members emphasise how crucial strong institutional support is for encouraging student involvement and contentment. Although societal attitudes, job aspirations, and self-improvement goals did not significantly impact e-learning outcomes in this study, more research within the UAE's cultural framework is necessary to fully explore their importance in broader educational contexts. These findings highlight the necessity for culturally responsive educational practices and help us grasp the intricacies of women's educational experiences in online contexts. Referring the future considerations, to establish inclusive and productive e-learning environments for women in the UAE, educational authorities and institutions should give top priority to projects that close technology gaps, improve institutional support systems, and take sociocultural factors into account. Stakeholders may encourage women to attain their academic and professional goals through e-learning and promote equitable access to high-quality education by tackling these factors in their entirety. Given the findings, the study recommends improving access to technology and technical literacy through funded technology programmes and digital skills training is essential to increase women's engagement and success in e-learning. Learning can be made more approachable and captivating by bolstering institutional support through the update of online resources and platforms. It is crucial to strengthen family support and favourable views towards women's education by creating helpful sociocultural contexts. Enhancing faculty engagement with online learners can be achieved through providing them with professional development and assistance. Continuous improvement will be ensured by addressing infrastructure issues and technical hurdles in addition to tracking and assessing educational interventions. Ultimately, encouraging e-learning technology research and innovation will address the changing educational demands of UAE women, resulting in increased educational equity and empowerment.

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