

The relationship between the application of digital education strategies and the development of technological skills of postgraduate Social Group Work students

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Abstract:

This research aims to try to determine the relationship between the practice of digital learning strategies and the development of technological skills for students of higher studies in social work, where digital learning strategies are represented in flipped education, learning contracts, self-direction, knowledge investigation, projects, educational games, programmed learning, electronic discovery, and electronic scientific statement strategies and the technological skills represented in online discussions, brainstorming, and participatory learning. The study also investigates the relationship between the use of these strategies and the development of technological skills among graduate students in the Department of Group work, Faculty of Social Work, Helwan University, where their number has reached (41), including (26) Master's and (15) PhD students. A statistically significant relationship was found between the online learning strategies and the development of technological skills for graduate students in the social work.

Keywords:

Digital Learning Strategies, Technological Skills, Graduate Student.

Introduction:

The educational process is exposed to a set of pressures and challenges, which must be faced to find solutions such as the explosion of knowledge, the steady increase in population density, the tremendous development in various fields, and the technological revolution, which has remarkably affected the speed of knowledge transfer. Thus, technology in the educational process has become an urgent need to support development in many areas. Consequently, educational institutions in their public and private sectors are racing for improvement and providing useful means to help students in their scientific growth and the development of their creative abilities with ease and facility.

As a result of rapid successive and successive changes in various fields of life, the world is living in an era of knowledge explosion, the volume of new sciences and innovative knowledge emerge at a tremendous speed transferred all over the world thanks to the Internet (Ahmed, 2017, pp.190-327). Therefore, technology in this era has become a decisive factor in social and economic change and human resource reinforcement. It is expected that the world will be more complex than ever, for it is linked to the rapid progress in science and technology and the exchange of information and affected

by an environment characterized by intense competition, but the educational methods and the preparation of its practitioners can significantly impact embodying it in practice (**Hammed, 2016, p. 289**).

E-learning in Egyptian universities has become an inevitable necessity, not a strategic option to obtain quality and accreditation. University education has become dependent on modern computer technologies and the global network of its multiple media, which have contributed to developing educational resources and creating new patterns of cooperation to avail these resources and improve the quality of education (**Abdullah, Qassem, 2013**). However, the rapid technical developments in the modern era have been one of the important challenges universities encounter as a result of the rapid and successive changes in various fields, which leads to bridging the digital divide in the use of modern technology and the inevitability of switching to a digital organizational model for universities.

Holger indicated that digital transformation is one of the prominent modern trends in the industrial, service, and business sectors, in addition to universities (**2017, p. 49**). It has become an essential feature and a contemporary requirement in university education because it enables universities to reduce their needs' costs and other financial requirements. It also functions to enhance participation and cooperation between the university and the students in a way that helps and motivates them and develops their creativity.

Digital transformation also seeks to improve the competitive advantage of universities globally, enhance student experience and performance, establish learning-centered approaches, develop the quality of the teaching process, reduce dropout rates, recruit students and retain them more efficiently, and reinforce enrollment and registration process and other administrative and educational operations.. This reflects on the institution's reputation, peer competition, and the improvement of the universities' financial soundness (**McCormack, 2020**).

In this regard, **Carmen** provided a set of educational strategies directed efficiently towards students adapting them to the learning methods used in the teaching process (**2013, pp. 851- 855**). Moreover, Carmen's study aimed to form student attitudes toward the use of these technologies and acquire them as soon as possible to obtain feedback and achieve planning, organizing, and developing educational activities from a student-oriented perspective. The study

provided some educational means to facilitate the teaching process between teachers and learners.

Likewise, (Haghani, 2012, pp.1614-1618) showed that modern technology is remarkable in the teaching process between the teacher and the learner because following modern technologies will reduce some restrictions within the classroom. Therefore, information and communication technology proposes different possibilities for developing the teaching and training process and enabling teachers to organize different types of e-learning programs, and, thus, the teacher's role as the only source of knowledge has altered.

This is the social work profession's objective achieved through its reliance on modern technological methods in the educational process. In particular, digital transformation strategies help graduates develop their technological skills in the educational process for group service decisions and activate their performance to keep pace with global and technological changes to fulfill scientific purposes.

Based on the review of previous studies, the significance of the current research is to identify "the relationship between the practice of digital education strategies and the development of technological skills for graduate students in social group work."

Study problem:

The theoretical and practical importance of the research is evident through the following points:

- 1- Benefiting from the use of technological skills for the graduates in social group work;
- 2- Enriching the theoretical aspect of the specialization of social group work in particular and social work in general;
- 3- Activating modern education mechanisms in teaching graduate students of social group work; and
- 4- Encountering rapid and successive changes in the educational process, which results in diversity and modernization in the use of educational strategies and the development of technological skills for graduate students in a way that requires professional intervention to identify and follow them.

Study Objectives:

The main objective of the study is to test the validity of the main hypothesis that digital education strategies and the development of technological skills affect the graduates in social group work. The following sub-objectives arise from this main objective:

- 1- Testing the effectiveness of practicing digital education strategies and developing the capabilities of the graduate student in the social group work on the skill of online discussion.
- 2- Testing the effectiveness of practicing digital education strategies and developing the capabilities of the graduate student in the social group work on the skill of online brainstorming.
- 3- Testing the effectiveness of practicing digital education strategies and developing the capabilities of the graduate student in the social group work on the skill of programmed e-learning.
- 4- Testing the effectiveness of practicing digital education strategies and developing the capabilities of the graduate student in the social group work on the skill of online participatory learning.

Study Concepts:

The research concepts were identified as follows: digital education strategy and technological skills. For the former,

The word "digital" is defined as "the process of creating a digital image through which information is converted from a written image on paper to an image saved on automated devices, so that it is circulated on local networks or the international information network" (**Wikipedia ,dictionary, 2008**).

Digital education strategies include a set of strategies indicated below:

- 1- **Electronic discussion:** It refers to the exchange of ideas and opinions between students engaged in conversations, i.e., an ideal means of learning in social contexts; it supports both thinking and cooperation necessary for learning between the teacher and the student (**Andresen, M, A., 2009, pp. 249-257**).
- 2- **Electronic brainstorming:** It is intended to help students in study groups generate creative ideas and opinions to solve a specific problem. These ideas and opinions are useful in triggering the mind to think thoroughly of many relevant ideas about the topic or problem at hand; in other words, it creates an atmosphere of freedom for the learners that lead to the emergence of both opinions and ideas (**Nouri, 2019, pp. 248-259**).
- 3- **Programmable e-learning:** It is a method of e-learning and teaching in which an appropriate educational environment is organized and created that allows students to work together in small heterogeneous groups to accomplish specific academic tasks: Small groups of learners work together to accomplish the

assignments until all members succeed in understanding and completing them and achieving the desired objectives. Many scientific researchers have indicated that cooperative learning leads to high levels of achievement and establishing more positive relationships among the learners (Ali, 2006, p. 106).

- 4- **Participatory learning via the web:** It aims to provide learning via a learning management system with participatory e-learning tools to allow learners to interact together in participatory groups in order to accomplish the assigned tasks or achieve common educational goals in light of organizing learning activities and interactions between the learners. Moreover, it gives them equal opportunities to understand and absorb differentiated electronic content according to their learning style (Al-Shahat et al., 2019, p.141).

Technology Skills:

Defined Mahmoud et al. (2019) the generalization process, as it is a complete educational system for the transfer of education with the aim of increasing the ability of the teacher and the learner to deal with the educational process and solve its problem, combining many types of written, audio, video and animated educational stimuli electronically, which can be employed to achieve specific educational goals. (p. 464).

Hence, they can be defined procedurally as "Those skills that relate to the ability to employ different techniques and technologies and new ideas and use them in the educational process, whether in the technical, personal or employment aspects. These skills enable the teacher, learner, trainer and trainee to deal with the challenges of the 21st century and achieve more creative goals in the educational process."

Study hypotheses:

The study hypothesizes that there is a statistically significant relationship between the practice of digital education strategies and the development of technological skills for graduate students in community service. In addition, the following sub-assumptions emerge from this main hypothesis:

- 1- There is a statistically significant relationship between the practice of digital education strategies and the development of graduate students' capabilities in social group work concerning the online discussion skill .

- 2- There is a statistically significant relationship between the practice of digital education strategies and the development of the capabilities of graduate students' capabilities in social o group work concerning the online brainstorming skill.
- 3- There is a statistically significant relationship between the practice of digital education strategies and the development of the graduate students' capabilities in social group work concerning the programmed e-learning skill .
- 4- There is a statistically significant relationship between the practice of digital education strategies and the development of the graduate students' capabilities in social group work concerning online participatory learning skills.

Theoretical guidelines of the research:

Information Systems Theory:

It refers to the system that uses people, equipment, procedures and operating policies to collect, process, distribute, and display data in its various forms (i.e., text, visual, audio) whether manually or automatically (**Abd-el-Kader, 2021, pp. 22-24**).

The basic principle of the theory is to consider the facility as a system that includes multiple elements that interact with each other, affect and are affected by each other. It also regards the organization as an open system that frequently interacts with the outside world, and affects and is affected by the surrounding environment.

Therefore, the "systems theory" believes that there is no correct method that the organization can follow to build its internal structure. Rather, the most effective organization is the one that builds its internal organization based on the data of the given environment, according to the traditional school scholars who believed that there is one ideal way to build the organization (**Al-Swat et al., 2021, pp. 61, 62**).

Accordingly, information systems can be defined as follows: "It is a set of interrelated and interrelated parts with each other, which includes the educational environment of the institution of students, faculty members, capabilities, facilities, and employees to achieve its educational goals by accepting inputs represented in the graduate student and producing outputs through an organized transformational procedure to ensure its educational effectiveness."

Methodology:

This study employs the descriptive design that examines the relationship between the practice of digital education strategies and the development of technological skills for graduate students in social group work.

Sample:

This study was applied to a sample of (41) graduate students in the Department of Social Group Work, including (26) Master's and (15) PhD students.

Tools:

The study utilized a scientific tool, a questionnaire that was applied to graduate students in the Department of Social Group Work and was arbitrated by two professors in the same department.

The design of the tool:

The researchers designed an electronic questionnaire form using Google Drive models for graduate students in the Department of Social Group Work about theoretical heritage, previous studies, and questionnaire forms related to the problem of the study.

The phrases for each dimension have been identified and formulated. Besides, the questionnaire form used the triangular gradient, so that the response to each phrase "I agree", "I agree to an extent", and "I do not agree" was given weight (I agree): yes (three points), I agree to an extent (I do not agree), not (one point). The researchers relied on logical honesty by looking at the theoretical literature and then analyzing it in order to reach the different dimensions associated with the problem of study. The researchers maintained the virtual honesty of the tool after presenting it to three staff members of the Faculty of Social Work, Helwan University. A minimum agreement rate (80%) was reached, and the form was drafted in its final form.

Results of the study:

Table (1) shows the description of the study population: (n = 41)

N	Age	k	%
1	Less than 25	9	22.0
2	From 25 Less than 30	23	56.1
3	30 to less than 40	9	22.0
N	Grades	k	%
1	Diploma	-	-
2	Master	26	63.4
3	Doctor	15	36.6

The previous table shows the description of the study population as follows:

-Age came in first place (from 25 less than 30) by (56.1%), followed by (less than 25) and (from 30 to less than 40) by (22.0%).

-The academic stage came in first place (for the Master's students) by (63.4%), followed by (the PhD students) by (36.6%), which indicates an increase in the percentage of students at the Master's level in the Department of Group Work, Faculty of Social Work, Helwan University, compared to the number of the doctoral students .

Hypothesis test:

Table (2) the relationship between digital education strategies and technological skills for graduate students in community service: (n = 41)

N	Technological skills / Digital Learning Strategies	E-discussion	Electronic brainstorming	Programmed e-learning	Participatory Web Learning	Technological skills as a whole
1	Flipped education	0.264	0.192	0.343	0.111	0.256
2	Learning Contracts	0.160	0.152	0.162	0.116	0.168
3	Self-direction	0.265	0.218	0.215	0.087	0.222
4	Knowledge Investigation	0.245	*0.370	0.263	0.130	0.290
5	Projects	0.238	0.239	0.295	0.219	0.300
6	Educational Toys	0.194	*0.327	0.221	0.151	0.259
7	Programmed learning	*0.338	0.247	0.238	0.171	0.280
8	Electronic discovery	0.182	0.135	0.123	0.076	0.146
9	Electronic Scientific Statement	0.261	*0.320	*0.329	0.165	*0.309
	Digital education strategies as a whole	*0.343	*0.364	*0.346	0.197	*0.357

****Moral at (0.01)**

*** Moral at (0.05)**

It is clear from the previous table:

Table (2) demonstrates that there is a statistically significant positive relationship at a significant level (0.05) between digital education strategies and technological skills for graduate students in the service of the group, where the value of the correlation was (0.357*) and this may be due to the strong direct correlation between

the dimensions of these variables. This justifies the study's objective to determine the nature of the relationship between the variables; it confirms the use of digital education strategies to develop technological skills for graduate students This is consistent with Abdel Fattah's study (2012, op. cit) which aimed to take notes of the e-learning concept, its types and strategies, how to benefit from it and its role in the educational process in the faculties of education. Furthermore, one of the significant findings is the popularization of e-learning techniques in educational institutions at various academic levels, enhancing the performance of faculty members in order to achieve mastery and improvement of education skills and enhance technological training.

Table (3) Results of multiple regression analysis of the relationship between digital education strategies and technological skills for graduate students in group work: (n = 41)

N	statement	Responses			Average Weight	Standard deviation	Order
		I agree	I agree to an extent	I do not agree			
		K	K	K			
1	I was able to encourage users to participate via computer and online.	33	6	2	2.75	0.537	1
2	I have the ability to use words and pictures to ask and answer questions online.	27	11	3	2.58	0.631	4
3	I have the ability to use interactive computer programs designed to promote innovative thinking.	28	12	1	2.65	0.529	2
4	I was able to raise my problem through computer programs.	20	15	6	2.34	0.728	7

N	statement	Responses			Average Weight	Standard deviation	Order
		I agree	I agree to an extent	I do not agree			
		K	K	K			
5	I was able to generate ideas about a topic and record them through computer programs.	24	16	1	2.56	0.549	5
6	I have the ability to evaluate ideas with the help of computer programs.	26	13	2	2.58	0.590	3
7	I was able to brainstorm through the Internet using communication and interaction tools.	23	14	4	2.46	0.674	6
8	I have the ability to generate ideas through the online duality module.	18	15	8	2.24	0.767	8
9	I have the ability to generate ideas through one's monologues to oneself online.	17	13	11	2.14	0.823	10
10	I have the ability to generate ideas by playing multiple roles online.	18	15	8	2.24	0.767	n8
11	I have the ability to generate ideas through online wish-fulfillment.	18	11	12	2.14	0.853	11
The variable as a whole					2.43	0.451	high

The previous table shows:

Table (3) shows that the value of the multiple correlation coefficients between the independent variable (digital education strategies) and the dependent variable (technological skills for graduate students in the service of the group) was (0.551), which indicates a direct correlation between the variables. However, the result of the P test was ($F = 1.502$), which is not significant; therefore, it indicates the insignificance of the multiple regression model. Additionally, the value of the coefficient of determination was (0.304), meaning that digital education strategies explain (30.4%) of the changes in the development of graduate students' technological skills in the group service. Besides, the result of the (T) test shows the impact of each sub-dimension of digital education strategies, as its value reached (1.951), which is not significant.

Given the results of the previous two tables, the main hypothesis of the study is verified, namely: There is a statistically significant relationship between the application of digital education strategies and the development of the graduate students' technological skills in the group work. These results are in line with **Ali's (2011) (op. cit, pp. 267:296)**. That aimed to reach a set of proposed mechanisms to achieve the digital transformation of the Egyptian universities, and reached a set of proposed mechanisms. One of these remarkable mechanisms was the clear strategy set for digital transformation based on market and needs analysis, the university's strengths and weaknesses' analysis, and the surveys of the potential opportunities and threats to the external environment surrounding the university, as well as the vision and goals to be achieved. Hence, **Ali's** results agreed with the research's results concerning the need to practice the digital learning strategy.

Table (4) the relationship between digital education strategies and the development of the capabilities of graduate students in community service on the skill of electronic discussion: (n = 41)

N	Technological skills	E-discussion
	Digital Learning Strategies	
1	Flipped education	0.264
2	Learning Contracts	0.160
3	Self-direction	0.265
4	Knowledge Investigation	0.245
5	Projects	0.238

N	Technological skills	E-discussion
	Digital Learning Strategies	
6	Educational Toys	0.194
7	Programmed learning	*0.338
8	Electronic discovery	0.182
9	Electronic Scientific Statement	0.261
Digital education strategies as a whole		*0.343

****Moral at (0.01)**

*** Moral at (0.05)**

It is clear from the previous table:

Table (4) illustrates a statistically significant positive relationship at a significant level (0.05) between digital education strategies and the development of the graduate students' capabilities in the group service regarding the online discussion skill. The value of the correlation is (0.343 *), and this may be due to the strong direct correlation between the dimensions of the variable of digital education strategies and the online discussion skill, which justifies the study's aim determining the nature of the relationship between the variables.

The results of the previous table, therefore, verifies the first sub-hypothesis of the study namely, there is a statistically significant relationship between the application of digital education strategies and the development of the graduate students' capabilities in the group service regarding the online discussion skill. This corresponds to **Hussein (2020, pp. 36, 37)**; we found that online discussions have proven their effectiveness in developing cognitive aspects, and many studies have recommended the importance of using them. Therefore, the current study aims to fill in the gaps in the previous research; it may reveal more significant results in the field of scientific research. The results of knowledge outcomes may vary according to the nature of the discussion management, and the quality of the student's discussions of the topics presented may be affected. In other words, some of the students can benefit more through the teacher's management of online discussions, and some may see that the benefit could be reinforced when the students themselves manage the content of the dicussions, which affects their skills and the development of their cognitive aspects.

Table (5) the relationship between digital education strategies and the development of the capabilities of graduate students in community service on the skill of electronic brainstorming: (n = 41)

N	Technological skills	Electronic brainstorming
	Digital Learning Strategies	
1	Flipped education	0.192
2	Learning Contracts	0.152
3	Self-direction	0.218
4	Knowledge Investigation	*0.370
5	Projects	0.239
6	Educational Toys	*0.327
7	Programmed learning	0.247
8	Electronic discovery	0.135
9	Electronic Scientific Statement	*0.320
Digital education strategies as a whole		*0.364

****Moral at (0.01)**

*** Moral at (0.05)**

It is clear from the previous table:

Table (5) represents a statistically significant positive relationship at a significant level (0.05) between online education strategies and the development of the graduate students' capabilities in the service of the group concerning the online brainstorming skill, where the value of the correlation (0.364*). This could be related to the strong direct correlation between the dimensions of the variable digital education strategies and the online brainstorming skill. The given results assert the study's objective to determine the nature of the relationship between the variables.

Accordingly, the results validate the second sub-hypothesis of the study namely; there is a statistically significant relationship between the application of digital education strategies and the development of the graduate students' capabilities in the group service o regarding online brainstorming skills. The results agree with **Abdel Wahhabi and Amani's (2020) (pp. 357-392)** which found that the strategy of online brainstorming in an e-learning environment has an impact on the development of critical thinking skills among students of the Educational Technology Division at the Faculty of Education in Damietta.

Table (6) the relationship between digital education strategies and the development of the capabilities of graduate students in community service on the skill of programmed e-learning: (n = 41)

N	Technological skills Digital Learning Strategies	Programmed e-learning
1	Flipped education	0.343
2	Learning Contracts	0.162
3	Self-direction	0.215
4	Knowledge Investigation	0.263
5	Projects	0.295
6	Educational Toys	0.221
7	Programmed learning	0.238
8	Electronic discovery	0.123
9	Electronic Scientific Statement	*0.329
Digital education strategies as a whole		*0.346

****Moral at (0.01)**

*** Moral at (0.05)**

It is clear from the previous table:

Table (6) demonstrates a statistically significant positive relationship at a significant level (0.05) between digital education strategies and the development of the graduate students' capabilities in the group service concerning the programmed e-learning skill, where the value of the correlation was (0.346 *). This may be due to the existence of a strong direct correlation between the dimensions of the variable of digital education strategies and the programmed e-learning skill; this justifies the study's aim to determine the nature of the relationship between the variables.

As per Table (6), the third sub-hypothesis of the study is accepted namely, there is a statistically significant relationship between the application of digital education strategies and the development of the graduate students' capabilities in the social group work concerning the programmed e-learning skill. Many studies have proved that the level of student achievement, their scientific tendencies, their comprehension of the academic content, and their relations with their professors have improved significantly as a result of their use of modern communication technologies; the computer functions as a patient teacher.

This aligns with **Ali, and Raid's finding (2013, pp. 19-70)** that programmed education is reflected in the student's success in the educational process. It helps reinforce their motivation to continue the

educational process, and it also saves a lot of time in teaching the subject of the anchor. It also allows the students to finish the prepared program in less time than the time allotted for teaching the study material in the traditional way.

Table (7) the relationship between digital education strategies and the development of the capabilities of graduate students in community service on the skill of participatory learning via the web: (n = 41)

N	Technological skills	Participatory Web Learning
	Digital Learning Strategies	
1	Flipped education	0.111
2	Learning Contracts	0.116
3	Self-direction	0.087
4	Knowledge Investigation	0.130
5	Projects	0.219
6	Educational Toys	0.151
7	Programmed learning	0.171
8	Electronic discovery	0.076
9	Electronic Scientific Statement	0.165
Digital education strategies as a whole		0.197

****Moral at (0.01)**

*** Moral at (0.05)**

It is clear from the previous table:

Table (7) illustrates the absence of a statistically significant positive relationship between digital education strategies and the development of the graduate students' capabilities in community service regarding the skill of participatory online learning. The value of the correlation was (0.197), and this may be due to the lack of a strong direct correlation between the dimensions of the variable of digital education strategies and the participatory online learning skill.

According to Table (7), the fourth sub-hypothesis of the study is rejected namely, there is a statistically significant relationship between the practice of digital education strategies and the development of the capabilities of graduate students in the social of the group work on the skill of participatory learning via the web, This is what was targeted by a study (Farouk, Muhammad et al., 2022, pp. 257:237) on the study of the effectiveness of participatory learning based on Web 2.0 applications to develop research skills Digital for the graduate student, and reached the effectiveness of participatory learning because of its importance in achieving cognitive educational goals skill is more than other methods used in learning.

Methods of statistical analysis:

The level of the relationship between the application of digital education strategies and the development of graduate students' technological skills in the group service was calculated based on a triple scale: agree (three points), somewhat agree (two points), and disagree (one point). The data was coded and inputted into the computer. To determine the length of the cells of the triple scale (lower and upper limits), the calculation was as follows: the range = the largest value - the lowest value ($3 - 1 = 2$); then it was divided by the number of scale cells to obtain along the corrected cell ($2/3 = 0.67$). This value was added to the lowest value in the scale or its beginning, which is the correct one in order to determine the upper limit of this cell. Accordingly, the length of the cells became as follows:

Table (8) Arithmetic Averages Level:

If the mean value of the phrase or dimension is between 1 - 1.67	Low level
If the average value of the phrase or dimension is more than 1.67 - 2.34	Intermediate level
If the mean value of the statement or dimension is more than 2.34:3	High level

The data was processed through the computer using the program (SPSS.V. 24.0) statistical packages for the social sciences, and the following statistical methods were applied: frequencies and percentages, arithmetic mean, standard deviation, range, test (T), multiple regression analysis, simple regression analysis, Pearson's correlation coefficient R, and determination coefficient R².

Based on the aforementioned results, the following recommendations are suggested:

1. The need to apply e-learning strategies to develop graduate students' technological skills in the Department of Group Work in general;
2. The need to apply e-learning strategies to develop the graduate students' online discussion skills in the Department of Group Work;
3. The need to apply e-learning strategies to develop the graduate students' online brainstorming skills in the Department of Group Work; and
4. The need to apply e-learning strategies to develop the graduate students' programmed e-learning skills in the Department of Group Work.

Discussing the research results:

The research aimed to determine the relationship between applying digital education strategies and developing the technological skills of graduate students in group work by testing the following study hypothesis: There is a statistically significant relationship between applying digital education strategies and developing the technological skills of graduate students in group work. The results of the study verified the hypothesis; the study showed a positive correlation between applying digital education strategies and developing technological skills for graduate students in group work. The study's result is consistent with **Abdel Fattah's (2012, op. cit.)** which aimed to examine the concept of e-learning, its types and strategies, how to benefit from it, and its role in the educational process in the faculties of education. One of the most prominent findings is the generalization of e-learning techniques in educational institutions at various academic and university levels, boosting faculty members' performance in order to achieve mastery and improvement of education skills and enhance technological training.

Furthermore, the study's results are in line with **Ali's (2011, pp. 296-267)** whose objective was to reach a set of mechanisms proposed to obtain the digital transformation of Egyptian universities. The most important of these mechanisms was a clear strategy for digital transformation in the light of market and needs analysis, an analysis of strengths and weaknesses at the university, and a survey of the potential opportunities and threats to the external environment surrounding the university, as well as the vision and goals to be achieved. Therefore, **Ali's** results agreed with the current research's results in the need to apply the digital learning strategy.

Moreover, the study's results aligned with **Carmen's (2013, pp.851-855)** which aimed to provide a set of educational strategies directed efficiently towards the students to engage them and adapt them to the learning methods used in the teaching process. Besides, the latter was intended to examine how to form students' attitudes towards the use of these technologies and acquire them as soon as possible to achieve feedback and planning, organization, and development of educational activities from a student-oriented perspective. The study reached a set of educational means to facilitate the teaching process between the teacher and the learner.

The results of the study also indicated the acceptance of the first, second, and third sub-hypotheses of the first, potentially due to the lack of a strong direct correlation between the dimensions of the digital learning variable.

References:

- Abdul Qadir, Howayda Ali (2021):** Management Information Systems (Theory and Practice), Electronic Information Reference.
- Ali, Osama Abdel Salam (2011):** Digital Transformation of Egyptian Universities (Requirements and Mechanisms), World Council of Comparative Education Societies - Egyptian Society for Comparative Education and Educational Administration, Volume (14), Issue (33) .
- Ali, Riyad Hussein (2006):** The use of programmed education method instead of traditional methods in the stages of education, Diyala University, College of Basic Education, Al-Fath Magazine, No. 26.
- Al-Sabbagh, Imad (2000):** Information Systems "What it is and its components", Jordan, Dar Al-Thaqafa Library for Publishing and Distribution.
- Al-Shahat et al., Suzan Mahmoud Mohamed (2019):** Criteria for designing differentiated participatory e-learning among educational technology students, Faculty of Specific Education, Department of Educational Technology.
- Al-Swat et al., Talaq Awadallah (2021):** Public Administration (Concepts, Functions, Activities).
- Anaam Qassem, Ahmed Abdullah (2013):** Using E-Learning to Achieve Total Quality, Arab Journal for Quality Assurance of Education, Volume (6), Issue (12).
- Andresen, M, A. (2009):** Asynchronous discussion forums: success factors, outcomes, assessments and limitations, educational technology & society, 12 (1).
- Caciuc Viorica – Torii, Alexandrache Carmen (2013):** The Impact of Educational Technology on the learning Styles of Students, 2nd World Conference on Educational Technology Researches – WCETR 2012, procedia – Social and Behavioral Sciences 83.
- Fakhtch Mahini “, Zahra Jabal-Ameli Forushan, Fariba Haghani (2012):** The importance of teacher’s role in technology-based education, WCES 2012, procedia – Social and Behavioral Sciences 46.
- Farouk, Muhammad et al.,(2022) :** The study of the effectiveness of participatory learning based on Web 2.0 applications to develop research skills Digital for the graduate student, Journal of Studies and Research of Specific Education, Zigzag University, Volume (8), First Issue.
- Halkan Ahmed, Abdel Maati (2017):** Obstacles to the application of electronic educational supervision in the preparatory stage in Suhag Governorate from the point of view of educational supervisors, Studies in University Education, Issue 35.
- Hammed, Hiam Ali (2016):** Students' Readiness for Community Service Study for E-Learning, Research published in the Egyptian Association of Social Workers, Issue 55.
- Holger, Sandkuhl, Kurt and Lehmann (2017):** Digital Transformation in higher education – the role of enterprise architectures and portals, digital enterprise, computing lecture notes in informatics, Bonn.
- Hussein Ali, Raid, (2013):** The effect of using programmed education on the achievement of class students, Al-Fath Magazine, Issue (53).

- Khalifa, Khaled** (2013): E-learning as an effective educational innovation, Journal of the Faculty of Arts, University of Tripoli, Issue (21).
- Mahmoud et al., Abdel Razek Mokhtar** (2019): Technological innovations and the development of skills using digital learning units, <https://maeq.journal.ekb.eg>.
- McCormack, Brooks, M** (2020): Driving Digital Transformation in Higher Education, EDUCAUSE, ECAR, report research, Louisville, CO, ECAR, JUNE.
- Talaat Hussein, Sherine,**(2020): Electronic discussion management style (teacher – peers) and its impact on developing the skills of preparing the research plan and the quality of discussions among the graduate student, Journal of Educational and Social Studies - Faculty of Education - Helwan University, Volume 26, Part 2.
- Wikipedia dictionary**, Available on line: <http://en.wikJpedia.org/wiki/digitizing> (access 2 April 2008).
- www.pssso.org.sa/Arabic/pssolibrary/nadwa01/nadwat 2019-2010.

