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Modern Information Technology in Higher Education: A Challenge to Covid-19

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Abstract. This research has conducted a survey for the modern information technology software and online learning which was carried out in Iraq and the variety of platforms used. The survey was conducted to obtain information about the use of models and platforms that were effectively used in online learning during the social distancing period to prevent the infection of COVID-19 . In addition, the information obtained from the survey also includes obstacles in the implementation of learning, how to deliver the material and the number of online meetings that are held every week. The study reached a set of conclusions, the most important of which are that the most used and influential educational platforms and software in education are Google Classroom, Zoom, Moodle and Telegram.

Keywords: MICT, Higher Education ,Google Classroom, Zoom, Moodle, Telegram, COVID-19.

Introduction

Organizations in the third millennium seek to exploit the tools of the technological revolution to improve the effectiveness and efficiency of their activities, as well as meet the increasing needs of their internal and external customers (Achrol& Kotler,2012) . Therefore, organizations within various business sectors have directed towards investing money in the provision of modern information technology, but the most important challenges they face is the low acceptance of users of new technology, as a result, many theories and models try to determine the factors affecting users' acceptance of new technology, which has become an important topic in research and studies (Jokonya, 2015).Among the institutions that have been affected by these conditions are the institutions of higher education, which are looking for modern and suitable technology for work.

Access to quality education, as a fundamental right of all people, faces a context of paradigmatic change in the 21st century. The development that Information and Communication Technologies (ICT) have reached today demands from educational systems a constant update of practices and contents that are in accordance with the new information society (UN,Michelsen& Wells, 2017).In this sense, education has been considered an essential link that integrates culture, society and productive development. However, despite the efforts made during the last years by Iraqi educational systems,

there are still important structural problems that hinder the achievement of quality education with widespread coverage in the countries of the region, such as economic and political crises, wars and pandemics (Kaharuddin, 2020).

Historically, the goal of education has been to provide knowledge, prepare students for a future job and to take their place in society. However, the future of education looks increasingly complex bearing in mind the international epidemiological situation. Therefore, it should be seen as an opportunity to develop and strengthen educational systems. This is where true change lies in times of crisis.

Educational technology must then, humanize the learning process and adapt to the circumstances of students and teachers, to facilitate teaching, academic performance, transmission of basic information or answering frequently asked questions (Baran, 2014).However, in times of crisis, educational technology limits in some cases the establishment of relationships and situations of shared, collaborative or cooperative learning with other participants, which enrich the cognitive experience and are typical of Traditional Education. However, this last element is minimized with a correct use of ICT and more specifically of educational platforms that have resources such as: forums, chat, wiki, email, hyperlinks to web pages, links to videoconferences, among others (Rodríguez &Juanes, 2019).When it comes to crisis, the most recent is the global pandemic due to COVID-19, which since January 2020 has been hitting the planet and specifically in our assessment, Iraq. As a direct consequence of the COVID-19 quarantine, many countries decided to suspend economic, political, social and educational activities, which led to the suspension of classes in the latter sphere.In light of this decision, the role of educational institutions regarding the use of educational technology to create virtual learning environments, leads to rethink the way and the tools in which schools today educate in times of crisis.

Morín (2001), considers that the administrative management of education must generate an academic approach that allows an approach to the way and form in which educational institutions should prepare to address the new realities that converge around pandemics, wars and the same warming global.It is then that in the midst of the educational crisis caused by the coronavirus, it is necessary to train, for the consolidation of an education that contributes to a viable future, that demands to create contributions to prepare education in the face of so much uncertainty about the educational future that awaits them. new generations, especially in these difficult times due to COVID-19 (Cueva,2020).

Accordingly, this study aims to identify the impact of modern information technology on higher education in light of corona pandemic.

Modern Information Technology (MICTs)

The current literature on new information and communication technologies is overwhelming. There are many definitions of the MICTs of different authors that we can find, and not necessarily concordant. Two of the common elements in most of these definitions are the relationship of the different technological advances involved in ICT and the description of the applications that these advances have generated (Bartosiewicz&Wiśniewski, 2015).Thus (Молчанова,2020) referring to information andcommunication technologies, places them as the set of technologies developed in the field of microelectronics, information technology, telecommunications, television and radio, optoelectronics. and its set of development and applications, or with Avgerou&Walsham, (2017) proposal that presents the different uses of ICT in education.Therefore, the term "modern information and communication technologies" is used when referring to different technical instruments such as the computer, networks, virtual reality that revolve around telecommunications, computer science and audiovisuals of interactive

way.Figure 1 indicates the development in information technology in recent years, which indicates the tremendous and increasing progress.

Figure 1. Evolution of IT in Last Two Years

According to (Choiet al.,2020) we should distinguish between new technologies (video and information technology) and advanced technologies , end up cradled by various authors to differentiate the really new ones (multimedia, cable and satellite television, CD-ROM, hypertexts ...). Currently, the element with the greatest potential is the Internet computer network as a channel for access to resources, services and information and a channel for user interaction. This situation makes a qualitative leap to the definition proposed so far to go from a definition focused on technical advances to another focused on the new realities generated by these advances.This new stage presents the MICT as those technical instruments that, through the treatment of information, give rise to new scenarios and communication situations; proposal closest to the characterization of the new technologies by (Mittal et al., 2019), which contemplates a technical and expressive dimension of them, This proposal extends and completes the definition of MICT presented to obtain a new result: a transformation of the communicative process that takes place in the teaching-learning process.A joint vision of different definitions draws us this new reality described a new communicative scenario and reality and, consequently, a new educational reality.

Accordingly, modern technology has contributed to the shift from traditional distribution systems towards modern distribution systems, as shown in Figure 2.

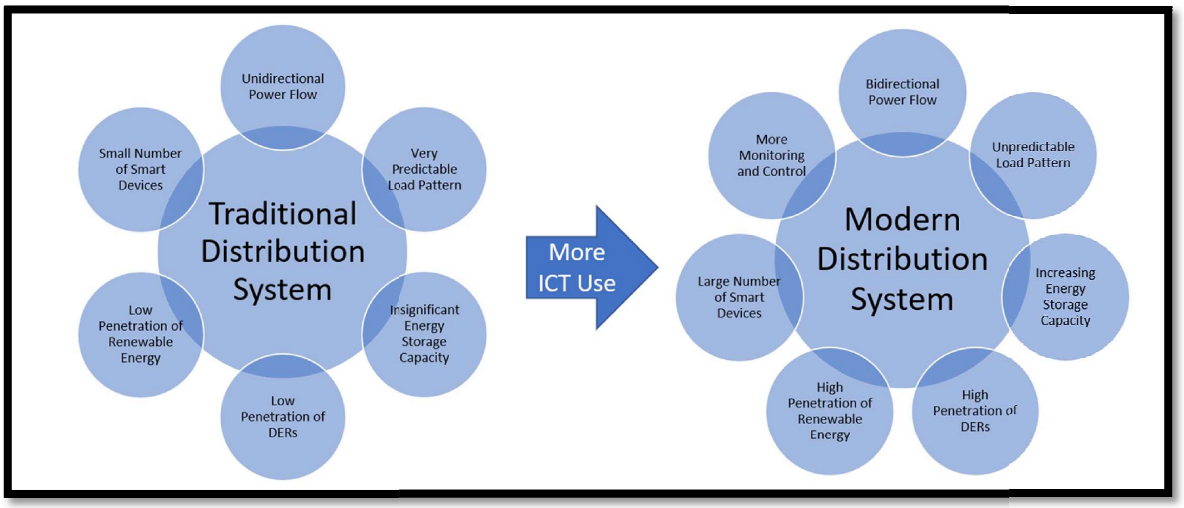

Figure 2.Trends in modern distribution systems, according to MICT

The Characteristics of MICT

As a basis, for the description of the distinctive characteristics of the modern technologies, the proposal of (Choiet al., 2020) , who describes the performance of new activities or the creation of clearly differentiated environments in education.

Accordingly, There are series of concrete contributions that are collected in Table 1 , following, again, the proposal of (Meneses, 2007).

- Eliminate space-time barriers between the teacher and the student.
- Teaching flexibility.
- Expansion of the educational offer for the student.
- Encourage both cooperative learning and self-learning.
- Individualization of teaching.
- Enhancement of lifelong learning.
- Interactivity and interconnection of the participants in the educational offer.
- Adaptation of the media to the needs and characteristics of the subjects.
- Help subjects with special educational needs to communicate and interact with their environment.

Table 1. General Characteristics of MICT

Characteristics	Impact
- Immateriality. - - Interconnection. - Instantaneity. - High image and sound quality parameters. - Digitization. - More influence on processes - than on products. - Innovation. -	Penetration in all sectors (cultural, economic, educational, industrial, etc.). - Creation of new languages Expressive- Linearity Break expressive. - Segmented audience empowerment and differentiated. - Trend towards automation. - Diversity. - Storage capacity.

Carrying out a more detailed development of each of these characteristics, we present immateriality, understanding it as a characteristic of the content of the MICT: information as an intangible element; and interconnection due to the possibilities of combination and expansion of the individual options of each of the technologies.The interactivity of ICT that allows to reach the construction of new expressive and communicative realities, shifts the control of communication from the sender to the receiver, allows a real activity on the part of the receiver as a constructor and transmitter of messages or as a decision maker of the modality of communication. use and time overcoming one-way communication strategies (Choi et al., 2020).

Interactive technologies are associated with a series of advantages, according to (Meneses, 2007): reduction of learning time and cost, distribution of information in a more consistent way than live instruction, intimacy in individual interaction, direction and control of the student. own learning, increased retention, possibility of exploring dangerous content without risk, increased motivation, democratization of education, etc.

The instantaneity due to the elimination of spatial barriers. The characteristic refers to the high image and sound parameters not only on its technical quality (high degree of chromatic elements, number of defined colors and shades) but also on the reliability and fidelity of transmission. Qualities due to digitization, new transmission mechanisms (ISDN, ATM), etc (Andujar&Salaberri, 2019).

The incorporation of new technologies has led to the appearance of new codes and languages that, in turn, have generated new literacy needs. New technologies bring expressive capacities that allow generating new messages without using external references and modifying the process of creating a communication medium.

The differentiation and segmentation of audiences in opposition to mass culture: tendency to specialize programs and media based on the characteristics and demands of the recipients. Diversity as a characteristic that defines the multiplicity of available technologies and the possibility of modifying, adapting or developing the differentiation and segmentation of audiences in opposition to mass culture: tendency to specialize programs and media based on the characteristics and demands of the recipients. Diversity as a characteristic that defines the multiplicity of available technologies and the possibility of modifying, adapting or developing the software. Finally, the storage capacity for both data and sound and image (Shao et al., 2018).

Another characteristic note, which, although it does not directly influence the generation and transmission of knowledge, describes this new situation, is the reduction in the cost of data storage and transmission. The current information society changes and multiplies the possibilities of acquisition, management, updating and access to information.

The MICT environments generated by these new technologies present as fundamental characteristics:

- Provide a high degree of flexibility and interactivity.
- Allow the real connection to a true virtual community : asking questions to the professor , receive suggestions, social relations.
- Allow access to study materials and resources.

The New technologies in Education

We live in an increasingly technological world. Chalks and notebooks are giving way to new school supplies. And that is appreciated in the classrooms (oxfamintermon, 2020).

E-books

An electronic book, one digital book or an ebook, known in English as e-book or eBook, is publishing electronic or digital of a book. It is important to differentiate the electronic or digital book from one of the most popular devices for reading it: the electronic book reader, or e-reader, in its English version (Klimova, 2018).

Smart phones

A smartphone is "a mobile device that combines mobile and cellular computing functions in one unit. They stand out from entry-level phones by their powerful hardware capabilities and extensive mobile operating systems, which facilitate the use of software, the Internet (including web browsing over mobile broadband)" (Mittal &Mattela, 2018).

MOOC

MOOC is an open source electronic group lessons, is "an online course aimed at unlimited participation and open access via the web (Kaplan & Michael, 2016).In addition to traditional course materials, such as video lectures, readings, and problem sets, many MOOCs offer online courses". Interact with user forums or social media discussions to instantly support community interactions between students, professors, and teaching assistants. Feedback on quizzes and quick assignments. MOOCs are a large-scale research development in distance education, (Masson, 2014) .

Online Learning

Online learning is "understood to be one in which teachers and students participate in a digital environment through new technologies and computer networks, making intensive use of the facilities provided by the Internet and digital technologies".The distance education literature for courses using correspondence, video, television and satellite transmission does not necessarily describe the process included in online courses (Schrum, 2010). A historical development of online learning and an analysis of the historical development of the Internet and its connections must exist to understand how and why it has grown so fast (Jardines, 2009). Online learning is learning that utilizes technology, where students try to cope with multiple tasks and make decisions at a time. One of the goals of online learning is to maximize the decisions that students have made online by being given the knowledge of correct answers and additional information that can be accessed at any time (Hoi et al., 2018). One of the benefits of students who interact in online programs is that it can improve student performance. Students can easily carry out discussions that focus on learning topics such as traditional classrooms . The most prominent characteristic of online learning is to provide convenience and flexibility for lecturers and students, especially in determining online learning schedules without prioritizing location (Bower et al., 2015).

Learning Management Systems (LMS)

In online learning process , various platforms can be used effectively in the form of applications, websites , social networks or learning management systems (LMS). The various platforms available are

used to help facilitate learning, such as a medium for delivering material, assessments, (Saroia& Gao,2019) or simply collecting assignments. According to some experts, the use of an LMS is effective for managing learning because it has very complete features and is easy to access. (Gunawan et al., 2019) revealed that LMS can be used to share learning resources, give assignments, and make assessments. This certainly supports learning outcomes and is able to train the creativity of prospective teachers. According to (Vieira et al., 2014), LMS is also able to provide online content that can be accessed anytime and anywhere so it is very supportive for distance learning.

Advantages of Online Learning

In general it is important to note that online learning includes the following aspects: (Siomer, 2020)

1) Pedagogical aspect: It is everything related to educational technology as one of the disciplines of educational science, which is linked to technological resources, educational and didactic psychology.
2) Technological aspect : Refers to Information and Communication Technology in terms of instructional design, content adequacy, hosting it on the platform, implementation of the program, course or subject, either on proprietary (private), open source or open source platforms free.

Accordingly, (Personal, 2020) indicates that the importance of online learning is:

1- Saving time: Many of the people who choose online education are interested in pursuing a university degree or a specialization, but lack of time keeps them away from these institutions. Online education respects the students' time , since they are decide at what time of the day or week they can.

2- Ease of access: With online learning , students can get training courses easily and adapting to their schedule . In this way, they can access content 24 hours a day from any device. For example, if the didactic material is disseminated through a podcast, it is possible to listen to it on the way to work.

3- Personalized tutoring: The student-teacher relationship is often limited by the number of remaining students that the teacher has to serve. With online education, each student has a tutor who gives them support, advises them and solves their doubts in a personalized way . In this way, the teacher can make a more complete and rigorous follow-up of the student .

4- Updated content: Given that most of the content that we find on educational platforms are educational materials in digital format (texts, notes, videos ...), it is possible to add, modify or update the files in a simpler and shorter way. so that students have at their disposal the updated material.

5- Geographical internationalization: One of the great benefits of online education and the reason why more and more people are betting on it is that there are no geographical barriers , that is, the student can see the educational offer of different areas of the world regardless of the place in which that resides. Many students have taken advantage of it for their studies.

COVID-19 and Education

Corona Virus Disease or COVID-19 was declared a pandemic on March 11, 2020, a disease that is endemic to almost all countries in the world. The spread of this virus is very fast and 185 countries in the world have been infected with COVID-19 (CSSE, 2020). The World Health Organization recommends one step in the spread of COVID-19 is to implement travel restrictions, quarantine, curfew restrictions, control of hazards in the workplace, and closure of public facilities. This pandemic caused severe disruption in various socio-economic fields. The education sector also experienced significant

disruptions. Schools and universities have been closed, either nationally or locally in several countries with COVID-19.

In Iraq, COVID-19 cases based on data from the Ministry of Health of the Republic of Iraq dated April 10, 2020, reported 868000 positive cases spread across 18 provinces in Iraq (Gavi, 2021) .Government policies impose social restrictions , dismiss schools and lectures. This is done to prevent the transmission of the corona virus which is very fast spreading.

Method

This study contains a survey-based research design because it focuses on an aspect of the study in which previous studies were conducted, but still requires further studies to address other questions that have yet to be answered. This research design choice is based on the methods and techniques used to conduct the research as it demonstrates how data should be collected and analyzed for research purposes. This study uses a research survey as a quantitative approach to the study. Therefore, the questionnaire is aptly suitable as a collection tool. The use of questionnaires in survey investigations is as important as structuring the questionnaire.

Various precautions were taken, such as respecting research ethics to protect the identity of the researcher, expanding the range of elements appropriately and categorically, and separating elements according to structures. The components of the tool designed for this study are subject to tests of content and validity. The content of the created questionnaire and modified portions were evaluated for validity, and feedback from the respondents was taken into consideration for further improvement. Moreover, it is recommended to conduct a pilot study to test the internal validity of the formulations to be investigated by this study. The sample represents a choice from a portion of the grouping on the basis of which a statistical inference is made about the grouping. Hence, the Iraqi education sector professors are a sample for this study.

This study adopting structural equation modeling approach in order to develop a model that refer to the relationship between variables as it is shown in Figure 3.

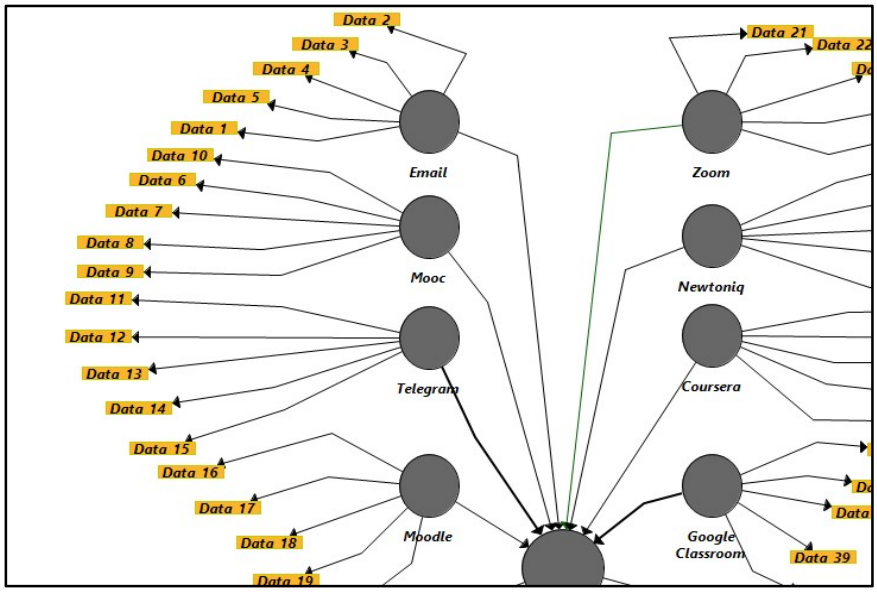

Figure 3. Study Model for Using MICT in Online Learning

Sampling

The study was limited to professors living in the capital of Iraq . The questionnaires were administered between 12 December 2021 and 20 February 2021. All of the professors in Baghdad were included in the scope of the study due to the material load and the corona virus . The ability of the research to represent is bound to answer the questionnaire form and is limited to the professors participating in the survey. These constraints affect the generalizability of the search.

When reliability analysis was performed , reliability coefficient alpha value was found to be 0.794 . This value indicates that the investigation is reliable.

Demographic profiles

Demographic profiles of the respondents were first determined within the scope of the research. 24.4% of the participants were female and 75.6% were male. According to the findings, the majority of the respondents were men. The distribution of the respondents according to the age groups is good , 30-40 age group 32.1 %, 41 to 50 age group, 57.5% , 51 to 60 age group, 8.3%, and finally the over 60 group is 2.1%. According to these findings, 17.6% of the respondents were high diploma holders. 36.8 % of respondents were master holders, 45.6 % of respondents were doctorate holders.The participant's characteristics are presented in Table 2 .

Table 2. Summary of Participants Characteristics

Factor		No.	%
Gender	Male	146	75.6%
	Female	47	24.4%
Age	30-40	62	32.1 %
	41-50	111	57.5 %
	51-60	16	8.3 %
	> 60	4	2.1 %
Education	High Diplom	34	17.6 %
	Msc	71	36.8 %
	Phd	88	45.6 %

Finding

Professors' readiness to teach and learn online is largely determined by their computer literacy skills and ability to use ICT effectively in the educational process. And the software that used in education. Table 3 shows that the ability to use search engines is highest level (84.23%), then next is word processing (73.18%). Then PowerPoint processing by percentage of (72.95 %), After that the ability to use the Internet for academic research purposes (60.02 %), and the ability to use the network to communicate with others (57.49 %), The ability to install the software (57.41 %), Familiarity with a learning management system (LMS) (52.75 %) , Finally access to high-speed internet at home (49.78 %) . Also the online learning with importance of (59.85%).

Table 3.Assessment of Professors' Computer literacy level

Factor	M	S.V.	Imp
(The ability to use search engines)	4.211	0.8279	84.23
(The ability to install the Software)	2.87	1.678	57.41
(Access to high-speed internet at home)	2.489	0.69	49.78
(The ability to use the Internet for academic research purposes)	3.001	0.861	60.02
(Word processing)	3.659	0.68	73.18
(PowerPoint processing)	3.648	0.69	72.95
(The ability to use the network to communicate with others)	2.874	0.971	57.49
(Familiarity with a Learning Management System (LMS))	2.637	0.947	52.75
(Online Learning)	2.993	0.992	59.85

In regard to the electronic platforms adopted in education, Table 4and Figure 4 indicate that the most used platform is the Google Classroom platform by 24.87 % , then the Zoom platform by the percentage of 18.30 % , then the Moodle platform by the percentage of 17.62 %, and the Telegram platform by 15.03 %, Finally, the Newtoniq platform came with 9.84 %. The results indicate that other platforms are of weak importance.

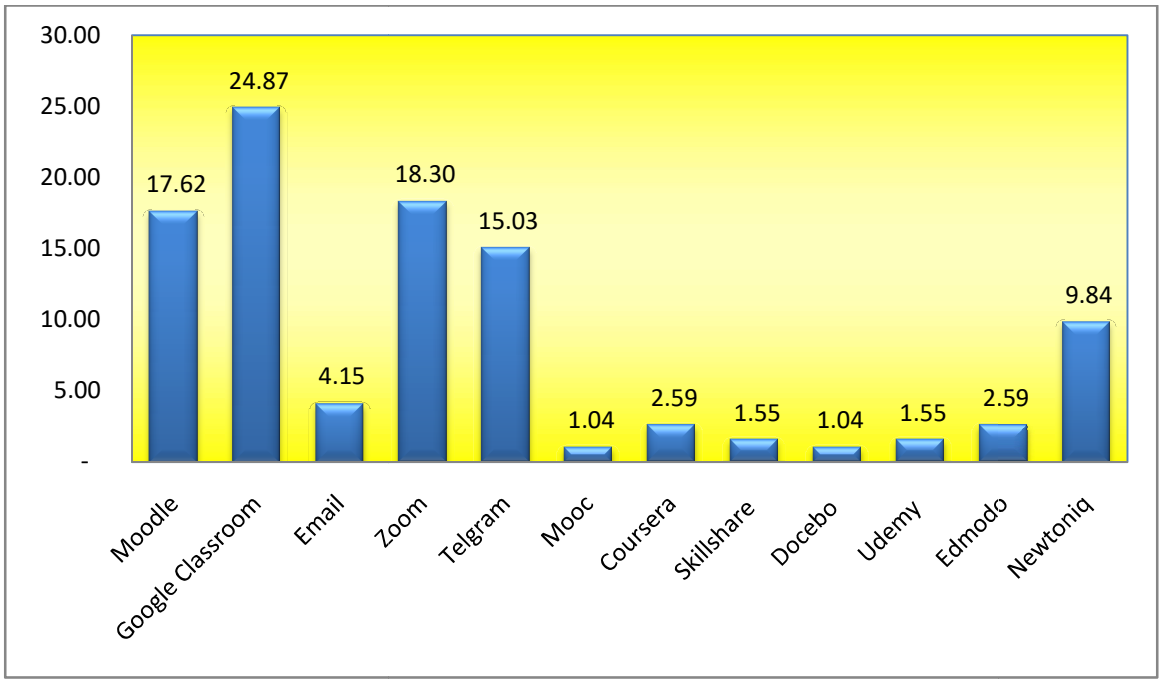

Figure 4. MICT Software

Table 4. MICT Software Data

Factors	M	S.V.	Imp
1	4.244	0.8402	84.87
2	4.202	0.8263	84.04
3	4.192	0.8225	83.83
4	4.176	0.8165	83.52
5	4.244	0.8402	84.87
Factor1(Email)	4.211	0.8279	84.23
6	2.399	1.604	47.98
7	3.124	1.712	62.49
8	2.959	1.79	59.17
9	2.948	1.523	58.96
10	2.922	1.664	58.45
Factor2(Mooc)	2.87	1.678	57.41
11	2.497	0.700	49.95
12	2.425	0.6421	48.50
13	2.549	0.735	50.98
14	2.56	0.734	51.19
15	2.415	0.624	48.29
Factor3(Telegram)	2.489	0.690	49.78
16	2.922	0.859	58.45
17	3.088	0.858	61.76
18	2.964	0.862	59.27
19	3.036	0.862	60.73
20	2.995	0.863	59.90
Factor4(Moodle)	3.001	0.861	60.02
21	3.364	0.891	67.28
22	3.855	0.407	77.10
23	3.891	0.343	77.82
24	3.803	0.502	76.06
25	3.487	0.784	69.74
Factor5(Zoom)	3.659	0.680	73.18
26	3.565	0.761	71.30
27	3.648	0.692	72.95
28	3.668	0.672	73.37
29	3.813	0.485	76.27
30	3.544	0.776	70.88
Factor6(Newtoniq)	3.648	0.690	72.95
31	2.85	0.975	56.99
32	2.995	0.983	59.89
33	2.865	0.974	57.31

34	2.922	0.973	58.45
35	2.746	0.942	54.92
Factor7(Coursera)	2.874	0.971	57.49
36	2.663	0.916	53.26
37	2.606	0.889	52.12
38	2.622	0.977	52.44
39	2.637	0.980	52.75
40	2.658	0.977	53.16
Factor8(Google Classroom)	2.637	0.947	52.75
41	3.14	0.971	62.80
42	2.876	0.981	57.51
43	3.285	0.982	65.70
44	2.72	0.943	54.40
45	2.943	0.990	58.86
Factor9(Online Learning)	2.993	0.992	59.85

Goodness of the Model

In Table 5 and Figure 5,6 the fit values obtained as a result of analysis of the research model with AMOS 23 and acceptable fit values in the literature are shown. As the model fit criteria, the most commonly used criteria were taken into consideration. The fit index values obtained from the analysis show the suitability of the model.

Results show that the software model and online learning model obtained acceptable values for goodness fit index , where the value of (X2=3.12 , 1.9) were acceptable , and (GFI= 0.911 , 0.952), and (IFI=0.934, 0.981), (CFI=0.951 , 0.988) , (RMSEA= 0.076, 0.039), (AGFI=0.916, 0.934) were acceptable. Accordingly,The calculated values are within acceptable values.This results indicates that the quality of conformity has been achieved for both models , This finding shows that the model has a good fit.

Table 5. Fit Index Values

Model Compliance Criteria	Model Compliance Value (MICT)	Model Compliance Value (Online Learning)	Acceptable Compliance
X^2 / df (Chi-square fit test)	3.12	1.9	<5
GFI (Goodness of Fit Index)	0.911	0.952	>0,89
IFI (Incremental Adjustment Index)	0.934	0.981	>0,90
CFI (Compliance Index)	0.951	0.988	>0,95
RMSEA (Average of Approximate Errors)	0.076	0.039	0.06-0.08
RMR (Karakoku of Average Errors)	0.061	0.063	0.06-0.08
NFI (Normed Compliance Index)	0.912	0.938	0.94-0.90
AGFI (Adjustment Index for Goodness of Fit)	0.916	0.934	>0,89

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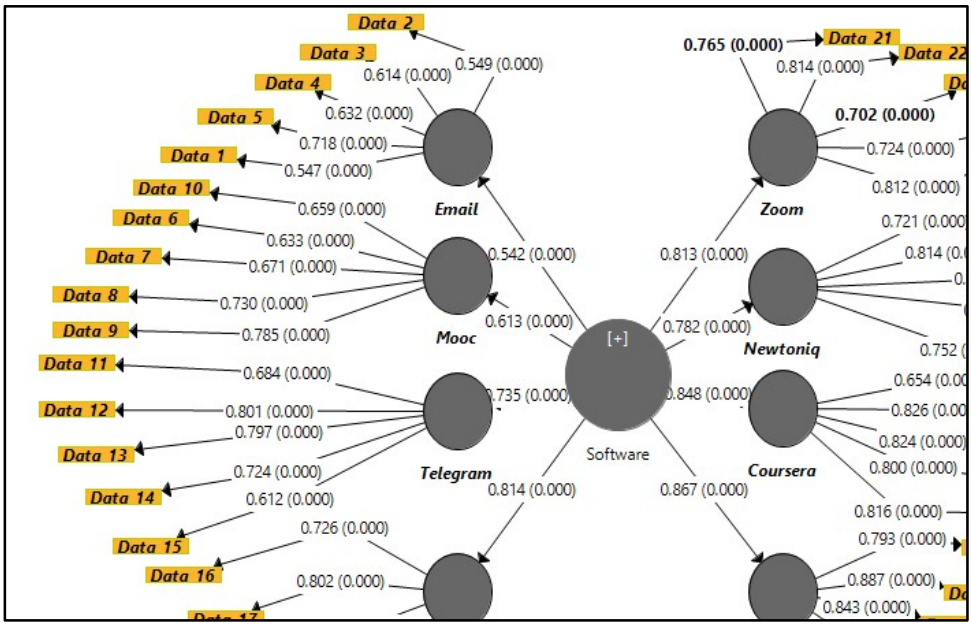

Figure 5. MICT Software Model

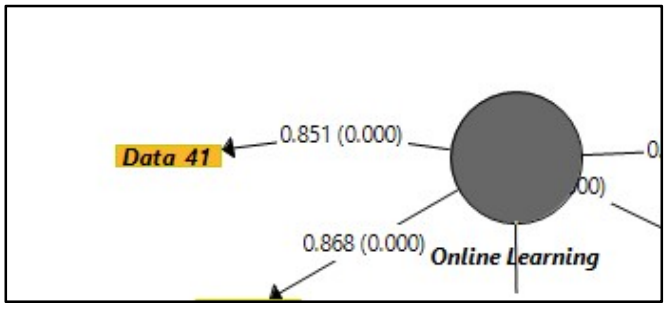

Figure 6. Online Learning Model

Effect of Software on Online learning

Table 6 Figure 7 show that the models of the effect between the factors proved that the most influential factor is Google Classroom , the effect is 0.660 and it is a significant value, as the level of significance is an acceptable and less than 0.05 , the second factor is Zoom with effect of 0.263 , and it is significant, as the level of significance is an acceptable value and less than 0.05 , the third factor is Moodle , the effect is 0.174 and it is a significant, as the level of significance is an acceptable value and less than 0.05 , finally there is a significant effect of Telegram with effect of 0.263 , and it is a significant value, as the level of significance is an acceptable value and less than 0.05. While the other factors (Email, Mooc, Newtoniq , Coursera) were weak and not effective.

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Table 6. The Effect of MICT on Online learning

Effect	(O)	(M)	(STDEV)	(|O/STDEV|)	P-Values	Decision
Coursera_ ….> Online Learning	-0.061	-0.057	0.069	0.876	0.382	Not Accept
Email ….> Online Learning	-0.015	-0.007	0.041	0.355	0.723	Not Accept
Google Classroom_ ….> Online Learning	0.66	0.654	0.071	9.317	0.000	Accept
Mooc -> Online Learning	0.081	0.081	0.048	1.679	0.094	Not Accept
Moodle ….> Online Learning	-0.174	-0.169	0.055	3.161	0.002	Accept
Newtoniq_ ….> Online Learning	0.065	0.062	0.069	0.94	0.348	Not Accept
Telegram ….> Online Learning	0.126	0.125	0.06	2.105	0.036	Accept
Zoom ….> Online Learning	0.263	0.265	0.075	3.512	0.000	Accept

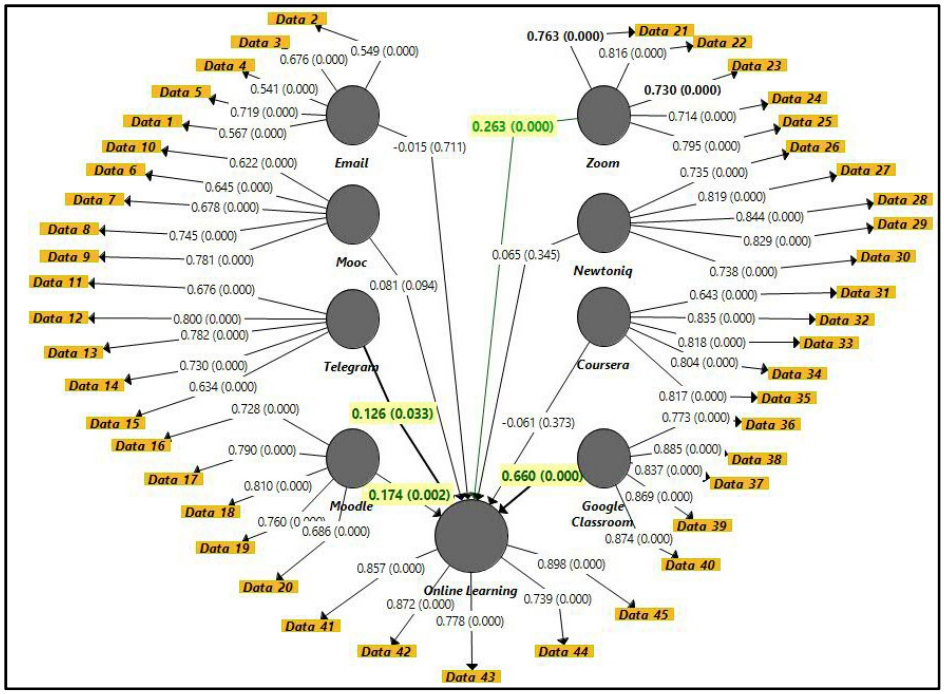

Figure7. Model of the Effect of MICT on Online learning

Discussion and Conclusion

There is no doubt that professional development remains the pillar on which the teacher relies, and the lever on which it is relied upon by keeping pace with everything new in the field of education, (Bulman&Fairlie, 2016) and in particular mentioning technological devices, Which has become the language of the age that society must learn and try to catch up with, especially since the stage the world is experiencing in the midst of the Corona pandemic, has demonstrated the urgent need to develop the

teacher's technical capabilities, along with the development of his academic and educational capabilities (Daniel, 2020). In this context, studies and literature emphasized the importance of teacher vocational training, which must include the modern technological aspect, because of its importance in developing his knowledge, and providing him with technical methods related to those devices that help him to easily communicate with the administrative system in the educational institution, as well as the performance of his various job duties inside and outside the classroom, in addition to the speed and ease of communication with his students (Siomer, 2020).

The Coronavirus crisis has affected all sectors, including the education sector, as it pushed schools, universities and educational institutions to close their doors, reducing the chances of infection. This has raised great concern among workers in this sector, especially students who are ready to take critical exams in light of a crisis that may drag on (Ahmed &Allaf, 2020).This pushed educational institutions to switch to e-learning, as an alternative method that has long been talked about and controversy over the need to integrate it into the educational process, Especially after the educational process was directly affected by the automation of industry and the development of "Artificial Intelligence" and "the Internet of Things", as well as the information technology revolution that penetrated most forms of human life and became an integral part of it.

The result of the questionnaire among professors on the application of modern information technology to distance learning during quarantine showed the following:

1) Technical problems: Reality has shown that not all higher education institutions are technically prepared. Consequently, the institutions replaced the lectures and seminars with e-conference calls, and the professors used the Google classroom service to create the material sites, the educational process and knowledge acquisition were evaluated through e-document tests, the preparation and presentation of projects through new platforms, resources and social networks that became within reach: Zoom , Moodle,Telegram, and Messenger. Professors began to use external distance learning systems as additional materials.
2) Psychological problems: Professors note that there is a lack of direct communication between students, an inability to regain lost practical classes, a significant increase in assignments, lack of time to complete assignments, and commitment to fulfilling their family duties, as universities are closed while online classes are detained, and limited access to a computer, Where the transfer was made.
3) Communication problems: The biggest problem facing professors and students is the poor communication and Iinternet services, especially at prime time, which causes weakness in the ability to communicate to receive lessons in the right way.
4) Financial problems: The professors indicated that there are many students who suffer from financial need, and the inability to pay the high costs of modern technological equipment as well as Internet connection.
5) Health problems: There are many health problems that professors and students suffer from in light of the Corona pandemic.

Despite the many challenges, there are many benefits as follows:

1. Support the ability to provide individual counseling to students by increasing the time for correspondence with students, because communication increases online courses that contain more detailed descriptions of homework than lessons in the regular class.
2. Among the positive aspects of using online learning, the professors indicated (according to the survey results) that the quality of online learning is not inferior to the quality of face-to-

face training, where modern educational methods are used.

3. There is a positive impact of the adoption of technology in education, the development of discipline and self-regulation, which allows placing training in an offline mode, the possibility of obtaining education at the appropriate time and place, and equal access to education regardless of place of residence, health or social status, etc.
4. Professors refer to the updated role of the professor , who becomes a mentor who coordinates the learning process, constantly improves the courses he teaches, promotes creativity and skills according to improvements and innovations.

In general and by way of conclusion, we can affirm that online learning is an effective solution to one of the great problems that has arisen from this international health crisis . Thus, it has become a fundamental tool that facilitates the learning process for a large number of people who otherwise could not continue to improve their academic and professional profiles. And it is that even if everything stops, the online education goes ahead.

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