

# The Role of Political and Social Institutions in Dealing with Educational Problems Relating to the COVID-19 Pandemic: A Mixed Study

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**Abstract** This study applied the sequential exploratory mixed research design, which started with collecting and analyzing qualitative data, followed by collecting and analyzing quantitative data to interpret the qualitative results and prepare a scale of the success factors of e-learning from the parents' and teachers' point of view during the COVID-19 pandemic. This mixed study consisted of two stages: Study (1) was a qualitative study aimed to investigate formal and informal institutions' role in dealing with the students' educational problems related to the COVID-19 outbreak. The second stage was a quantitative study to reveal the elements for the success of distance learning. A qualitative study (1) applied the grounded theory method. This study used a purposeful sampling method, with 20 teachers in schools and universities. As well, the quantitative study (2) applied the descriptive method on sample consisted of teachers and parents (105) and parents (194). The results showed that there are many roles the ministries of education and families must take to deal with the educational problems. A new theory of distance learning has emerged through the qualitative analysis of the data collected from the research participants. This new theory crystallizes distance learning success factors' basic concepts in light of disasters and crises (COVID-19). The quantitative results also showed no significant statistical differences between teachers' and

parents' views about the importance of distance learning success through the COVID-19 pandemic.

**Keywords** Distance Learning, Virtual Platforms, Grounded Theory, Sequential Exploratory Mixed Design

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## 1. Introduction

During the past few months, as the COVID-19 invaded various countries worldwide, decisions to cancel the study began to be taken in one country after another [3, 4, 7, 9, 16, 17]. United Nations Educational, Scientific and Cultural Organization, as of March 13, 2020 report: schools have been declared closed in 61 countries in Africa, Asia, Europe, the Middle East, North America, and South America, out of those 39 countries that have announced the closure of all their schools, compared to 14 countries have closed some of its schools, decisions to delay studies have affected more than 4 million students and young adults [10, 16, 17, 29].

The closure of schools, even if temporary, has a high social and economic cost, as the closure causes disturbance to all communities. Still, it has a more significant impact on boys and girls belonging to

disadvantaged groups, as well as on their families. The direct effects on students, which cause us concern at this stage of the crisis:

1. Learning losses.
2. Increase drop-out rates from the study.
3. Students do not get the most important meal of the day.
4. Increase the academic stresses on students from different educational stages.
5. Increase students' reliance on electronic devices, and spend long hours on the Internet.
6. Increase the role of students and reduce the role of the teacher.

Technology has imposed itself on educational systems through COVID-19. Educational technology should not be seen as merely a set of devices and equipment, but rather be covered in a manner that includes all elements of the learning process from a teacher, learner, educational content, methods of interaction and activities, experiences, and tools for evaluation [7, 13, 15, 21, 23]. Distance learning has become essential, and once the Coronavirus epidemic has spread, it is the alternative to traditional education after schools have been closed [13, 4, 7, 19, 12, 25, 27].

## 2. Materials and Methods

The researchers chose the design of the mixed study. This sequential explanatory study design begins with the qualitative study, data collection, and analysis. The quantitative study follows it, the collection of quantitative data and its analysis, to in-depth into the interpretation of the role of political and social institutions in dealing with the educational problems resulting from the outbreak of the COVID-19 pandemic, and also to overcome deficiencies that may result from using the qualitative or quantitative study design alone, and also to develop the success factors of distance education checklist. Informed

consent was obtained from all study participants before conducting the in-depth interviews and a list of distance education success factors. The current mixed study consists of two stages as follows. Phase 1: Qualitative study seeks to formulate a theory on the new learning related to the COVID-19 outbreak and reveal the formal institution's role in dealing with the learning problem correlated to the COVID-19 pandemic, whether for normal or with special needs students.

This study applied qualitative research designs to increase the understanding of a phenomenon that we have little information about it [6, 7, 14]. Glaser & Holton [18] defined the grounded theory method as "a set of integrated conceptual assumptions systematically created to produce an inductive theory around an objective field" to frame a conceptual theory.

In this qualitative study using a purposeful sampling method, 20 (9 male and 11 female) teachers in schools (7) and universities (13), their ages ranged between (35 to 56 years old) were asked to Participate in a study about the deal with the problems of learning through COVID-19 outbreak.

Due to the home quarantine conditions, the researcher used the in-depth interview method through telephone and WhatsApp to collect data about the participants' study questions after their approval. This interview with the study participants lasted 45 to 60 minutes, from April 19 to May 23, 2020. In this in-depth- interview, open-ended questions were used to gather the data about the study questions.

The grounded theory method is focused on creating conceptual frameworks or theories by building inductive data analysis. Thus, the information gathered and analyzed used Corbin and Strauss's [14] strategy, which classified descriptively (open classification) and determined the patterns using the axial classification to bring meanings and identify patterns and topics within the data. Moreover, abbreviate many texts with more comprehensive words and addresses using induction (see Figure 1).

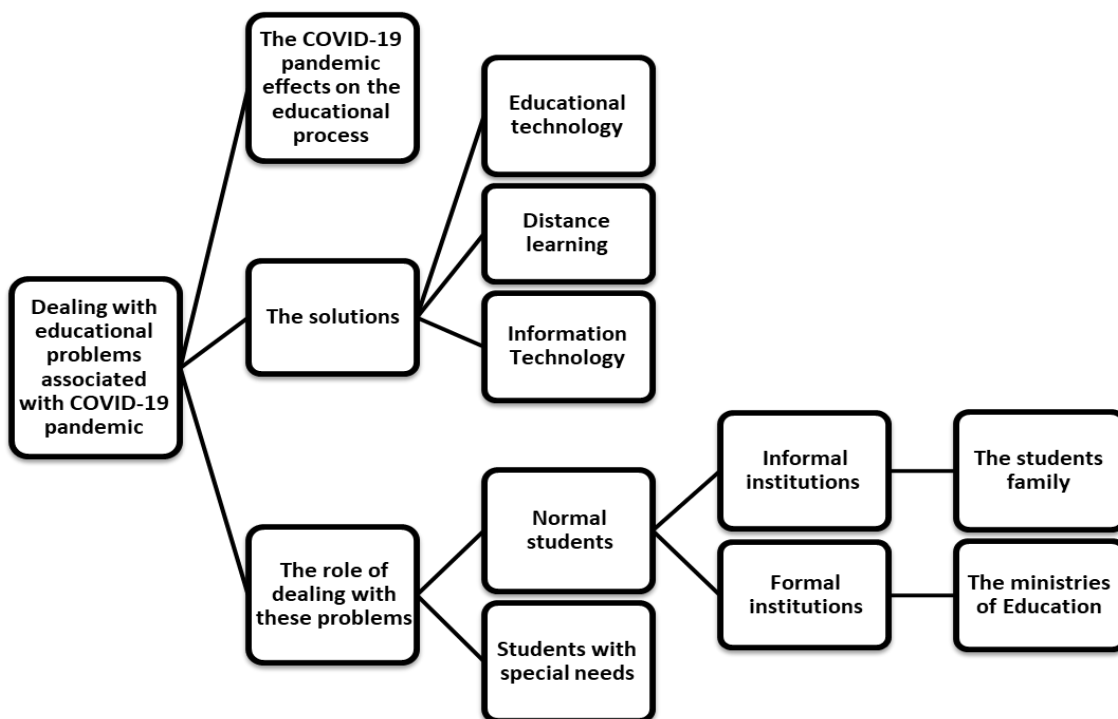


Figure 1. Results of selective coding of axial groups

**Phase 2: Quantitative study**

Based on the qualitative study results about the role of formal and informal institutions in dealing with the educational problems, this quantitative study aimed to reveal the elements for the success of distance to overcome the educational problems through COVID-19 pandemic from both teachers and parents.

The sample of this quantitative study included teachers and parents. The online study tools were circulated to a large number of teachers and parents via social media. In total, 299 respondents agreed to Participate and completed a checklist about distance learning success elements. These respondents were teachers, staff members (105), and parents (194).

The checklist about distance learning success elements was prepared in this study, consisting of 25 items, which are evenly distributed over five dimensions: Infrastructure intelligence, political intelligence, technological intelligence, health care intelligence, and Family intelligence. Each item is rated on a 5-point Likert scale (never = 1 to very much = 5). The validity and reliability of the scale were verified; the results shown in Table (1) indicate that the correlations between items and the score of its dimension belonging and the total checklist score were statistically significant at 0.01 level (2-tailed). As well as, Cronbach’s Alpha for the checklist and their dimensions were (.925, .847, .836, .778, .845, .921) respectively, the Spearman-Brown Coefficient for checklist and their dimensions unequal length were (.911, .843, .770, .789, .872) respectively. These results indicated that CPRS-9 is validated and reliable.

Table 1. Correlations between item, total scores, and with the dimension its belonging

| N   | Correlation with a total score | Correlation with dimension |
|-----|--------------------------------|----------------------------|
| 1.  | .700                           | .817**                     |
| 2.  | .646                           | .800**                     |
| 3.  | .751                           | .775**                     |
| 4.  | .637**                         | .776**                     |
| 5.  | .712**                         | .787**                     |
| 6.  | .684**                         | .806**                     |
| 7.  | .545**                         | .713**                     |
| 8.  | .750**                         | .798**                     |
| 9.  | .694**                         | .795**                     |
| 10. | .683**                         | .772**                     |
| 11. | .732**                         | .629**                     |
| 12. | .594**                         | .799**                     |
| 13. | .697**                         | .702**                     |
| 14. | .771**                         | .797**                     |
| 15. | .445**                         | .827**                     |
| 16. | .667**                         | .749**                     |
| 17. | .672**                         | .859**                     |
| 18. | .558**                         | .759**                     |
| 19. | .768**                         | .796**                     |
| 20. | .725**                         | .771**                     |
| 21. | .667**                         | .721**                     |
| 22. | .898**                         | .901**                     |
| 23. | .990**                         | .992**                     |
| 24. | .674**                         | .734**                     |
| 25. | .823**                         | .864**                     |

\*\* Correlation is significant at level (.01).

The data were analyzed by using SPSS 25.0.

Descriptive statistics were used, as well as a t-test.

### 3. Results

The thematic analysis was applied to six phases: familiarizing with our data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the study report. The coding data process found five main axes framing the theory of dealing with the educational problem through the COVID-19 outbreak. Researchers applied many strategies to establish trustworthiness, such as researchers triangulation, peer debriefing, test for referential adequacy by returning to raw data, documentation of team meetings regarding themes, and team consensus.

#### **Question 1: What is the effect of the COVID-19 epidemic on the learning process?**

The qualitative data analysis showed that the study participants indicated there are many effects that the quarantine due to the COVID-19 pandemic outbreak had on the learning of students in different educational stages:

1. **Learning stops:** Participant (2) said that: *“Schools provide basic learning, but when closed, students are denied opportunities for growth and development. The disadvantages of closing are more severe for students from disadvantaged groups, who have fewer educational opportunities outside of school”*.
2. **Nutrition:** Participant (19) said that: *“Many students and young people depend on free or low-cost meals provided by schools for their access to food and proper nutrition, but when schools are closed, their nutrition is negatively affected.”*
3. **Parents’ unwillingness to educate their students remotely:** Participant (1) said that: *“When schools are closed, parents are often required to facilitate the learning of students at home, and they may have difficulty performing this task, especially for parents with limited learning and resources.”*
4. **Inequality in access to digital learning platforms:** Participant (5) said: *“The lack of technology or poor internet connectivity is a barrier to continuing learning, especially for students from disadvantaged families.”*
5. **Disparities in student care:** Participant (3) said: *“Workers’ parents leave students at home alone, this may lead students to engage in many dangerous behaviors, such as the increased influence of peer stress and drug use.”*
6. **High economic costs:** Likely, working parents will not perform their work when schools are closed because they are free to care for their students, which causes income to decline in many cases and negatively affects productivity.

7. **Unexpected stresses on the health care system:** Participant (1) said: *“Most health care workers are often women who are often unable to go to work because of their commitment to childcare as a result of school closures. That means that many health care providers are absent from their most needed workplace. To them at a time of health crises”*.
8. **Increased stresses:** The Participant (19) said: *“School closures putting stress on schools, students and his parents because of staying at home and the role that is added to parents of follow up his sons and daughters learning at home.”*
9. **The tendency for drop-out rates to rise:** Participant (14) said that *“Ensuring that students and youth returning to school when it reopens and continues to study is a challenge, especially when it comes to closing schools for a long time.”*
10. **Social isolation:** Participant (18) said: *“Schools are centers for social activities and human interaction. When schools close their doors, many students and youth lose their social relationships that have a fundamental role in learning and development”*.

#### **Question 2: What are the appropriate solutions to the COVID-19 pandemic’s educational problems?**

All the study participants agreed that the appropriate solution to the educational problems associated with the COVID-19 outbreak is applying educational technology; in other words, the solution is distance learning.

Participant (1) said: *“In disasters and crises, we always resort to technology and tools solution way out of the crisis temporarily. From here, the importance of technology and its means to help people overcome crises emerged”*.

Participant (2) said that: *“All countries are now between the option to stop studying and teaching completely, or to follow alternative electronic means.”*

Participant (3) said: *“The COVID-19 crisis left its huge impact on the learning, and it has contributed to highlighting the importance of distance learning in many of our schools and universities. Virtual lectures enabled students to follow the lectures in their homes via computers”*.

Participant (10) said: *“Distance learning is one of the modern learning methods, and it mainly depends on the teacher giving his lectures from the virtual classroom. The virtual class opens to everyone for interactive discussion and quarterly participation in a way it benefits all students from anywhere in the world”*.

Participant (13) said: *“The Arab universities have not failed to build and open the gates of distance learning to those wishing to know and learn.”*

Participant (16) said that: *“The difficult equation that the world is facing is that the costs of building educational institutions and providing their cadres and*

equipment are very high and that the rates of increase in the population, and consequently the increase in the demand for learning, will exceed the very high rates available, and therefore the deficits began to be clear in accepting students in many universities in developing countries.”

Participant (17) said that: “The distance learning project came to save human civilization from the failure to absorb more students and pioneers of science. Distance learning integrated learning of elements and activities, starting with the design of the interactive curriculum, then contracting with the competencies that can manage knowledge, knowing the latest in modern technology, and ending with exams systems and continuous scientific evaluation”.

Participant (18) said: “Technology is a key outlet and outlet in difficult times, so everyone must strive to provide a robust technological infrastructure capable of facing any crises at any time.”

As well, the Participant (19) said: “Distance learning has interactive electronic systems, modern educational tools, and specialized software linked to educational portfolios equipped with high-level competencies. Thus, learning programs rise to the level of conviction at broad segments of students of science and knowledge”.

Participant (20) said that: “Despite its disadvantages, which observers believe are only temporary and will overcome in the future, distance learning remains an alternative to traditional learning in critical situations, and traditional learning, in turn, embraces many disadvantages. That the COVID-19 epidemic may be causing them to think deeply”.

Moreover, the participants add some of the Obstacles to applying distance learning. Participant (4) said that: “Despite the widespread use of the Internet in the region, many countries have not previously tested the technologies offered by e-learning, and Arab experiences are still very modest, and the successful ones are only partially concentrated in only in some rich oil countries, but many Arab countries have not even been able to introduce learning from Yet in the university system, although prestigious universities across the world have adopted digital lectures more than a decade.”

Participant (6) said that: “there are great doubts among the followers of this process, the complaints on social platforms are only evident to them, the biggest obstacles are the poor living conditions of a large part of the population, the lack of internet coverage in all regions of the country, and the inability of the mass media to create a reaction similar to what is going on in traditional classes, as well as structural problems suffered by Arab educational systems, most of which lie at the bottom of the ladder with international learning indicators.”

Participant (12) said that: “Although many countries have invoked government educational channels to generalize the lessons, there are no figures about the

reality of the demand for these channels, which did not achieve large follow-up numbers in the normal days, and still dealing with television is done on the basis that it is an entertainment device.”

Participant (14) mentioned that: “Among the urgent challenges is the lack of preparation of teachers for distance learning, as the bulk of the training is limited to dealing with the traditional classroom, and most of the digital initiatives that were taking place between teachers and students were voluntary.”

Participant (17) said that: “There is another challenge regarding students’ digital culture, traditional curricula often focus on simple programs such as Office, compared to the curricula of advanced countries that provide students with very advanced lessons in the digital field.”

There are fears that distance learning will strengthen the class disparity between the population as the more affluent class has the required equipment. They can even benefit from private lessons inside their homes in times of quarantine. If equipment and Internet access are present in the cities, it is more acute in the countryside, especially as it does not have a strong internet network. Many families’ low educational level makes it difficult for home learning and monitoring students, especially with high illiteracy rates [3, 4, 6, 7, 8, 19, 25, 26].

### **Question 3: What is the ministers’ role in dealing with the educational problem associated with the COVID-19 pandemic outbreak?**

The qualitative data analysis showed that all the current study participants agreed that the following procedure Ministries of Education should do to overcome educational crises resulting from the COVID-19.

**Development of distance learning platforms.** Distance learning has become the light of the COVID-19 pandemic outbreak and has become a necessity and not a luxury. Therefore, the Ministries of Education should strive to develop their online educational platforms.

**Future planning.** As Participant 11 said: “Provided that the plans are flexible and accept the modification, in light of the change in our information about pandemic paths from day to day, in light of the uncertainty surrounding the pandemic mitigation procedures that each country takes in light of the information that is perceived.”

Participant (18) mentioned that: “The idea of future planning is not only to provide learning (via distance), but also to continue learning through a unified system that guarantees access to scientific and educational materials for all lessons and through wide options that suit different classes of students and their circumstances, with the same level and educational competence, through dozens of teachers who they cover all curricula for different levels of study, and also ensure (an interactive environment) that ensures the communication of teachers and students

through technical systems, programs, and smartphone applications.”

**Increasing numerical skills of teachers.** Participant (3) said that: “The Ministries of Education will gain a clearer understanding of the gaps and challenges (in the ability to communicate, equipment, the integration of digital tools in the curricula, and the readiness of teachers) to use technology effectively, and will take action on it.”

Participant (7) mentioned that: “COVID-19 pandemic would enhance the future learning system in countries. Although we linked to classroom learning and the social life that comes with it, a growing body of evidence shows that high-quality e-learning can improve the student experience and learning outcomes. But today, we are not in a normal position”.

Participant (11) said that: “As the students’ attention is distracted, the professors are not sufficiently trained in this type of learning, and the technological infrastructure is not fully qualified to support this transition.”

Participant (15) said: “While designing high-quality online learning experiences takes a long time, including integrating new educational practices. The only short-term option for some providers is to use video conferencing applications and virtual collaboration tools to try to simulate traditional classrooms”.

**Activating the role of the media in developing societal awareness.** Participant (2) said: “Radio and television stations must realize the pivotal role entrusted to them in supporting national educational aims, and then push as hoped towards improving the quality of their programs while understanding their great social responsibility.”

Participant (14) said: “In light of the circumstances of the COVID-19 pandemic, the role of the audio-visual media in raising health awareness of the symptoms and health risks of infection with the COVID-19 escalates”.

**They are maintaining enthusiasm for student participation.** Participant (6) said that: “It is vital to maintain students’ enthusiasm to Participant, especially young people at the secondary level. Drop-out rates are still very high in many countries, and their prolonged discontinuation can increase them”.

Participant (9) said that: “For all students, this is a time to develop emotional, social skills, and learn more about how they can contribute as citizens to the development of their societies. Although parents and the family’s role is always critical, it is more important in that regard”.

**Increase student health care.** Participant (3) mentioned that: “In light of the pandemic conditions of COVID-19, prevention of infection or treatment requires that the Ministries of Education make the greatest effort to protect students from its deadly risks, by providing medical and psychological health care for these students, and providing medicines and appropriate treatment for those who were infected with the Coronavirus, also provide online psychological counseling for those who

were negatively affected by the COVID-19 crisis”.

Participant (6) said that: “We always say that prevention is better than cure, and that is why the Ministries of Education should pay attention to school feeding programs. In many parts of the world, school feeding programs provide students with the most important meal they eat every day”.

Participant (17) said: “If meals or food cannot be delivered for logistical reasons, the cash transfer programs should be expanded and applied to compensate parents in this regard. COVID-19 and infection prevention requires proper nutrition, and some low-income families may not be able to provide healthy food and satisfy the needs of healthy food and drink for their students. For this, they need to provide financial assistance”.

#### **Question 4: What is the families’ role in dealing with the educational problem associated with the COVID-19 pandemic outbreak?**

The data analysis revealed that all the participants indicated some procedures that the students’ families must take to overcome the educational problems through the COVID-19 pandemic.

**Priorities: core materials.** Participant (6) said that: “Parents, especially those who do not work in the field of learning, should set realistic goals. Trying to follow the curriculum carefully will not work, and parents and students will be placed in a tense atmosphere, especially if the parents work from home”.

Participant (14) said that: “It is best to give priority to mathematics and English subjects (depending on the case of the United Kingdom here, and Arabic may be the priority in Arab countries), as there is an abundance of free lessons on the Internet, in addition to those that schools may send, and only parents will be left to define priorities and to plan for what students will receive, such as setting a job for each day of the week.”

**Key lessons.** Participant (11) said that: “Fortunately, the semester you are running is small, and this is an opportunity for your students to focus on something and not get caught up in their peers.”

Participant (16) said: “After you have finished teaching your students a lesson, you can flip the photo and ask them to teach you what they have learned. And in case things did not go well, do not be cruel to yourself or your class. And do not hesitate to amend the educational plan”.

**Healthy food and exercise.** Participant (7) said that: “You will discover that the task of teaching is stressful, especially that you will be responsible for other logistical matters that were not taken into account such as the school canteen, as the “home school” canteen should be full of healthy foods such as vegetables, fruits, plenty of water and avoid sugars.”

Participant (20) said that: “For the students to be

convincing, their parents should set an example for them, meaning that they eat healthy food and exercise; this is why parents should practice morning and morning special exercises with their students to stimulate students and not to overburden them, just like those practiced by school students.”

**Question 5: What is the role of the Ministries of Education in dealing with the educational problems associated with the COVID-19 outbreak for students with special needs?**

About the role of the Ministries of Education in solving the educational problems associated with the COVID-19 outbreak for students with special needs, the data analysis showed that all of the study participants indicated these procedures:

1. Participant (9) said: “Develop online educational and TV programs or episodes from the blind, deaf, or dumb, like others.”
2. Participant (14) said that: “Develop counseling and awareness programs to all members of society about how to provide appropriate care and prevention for people with special needs in their places of residence, including a group with weak immunity and in need of special care and attention.”
3. Participant (17) said that: “Provide training programs for families and those accompanying people with special needs that help them obtain part of their necessary qualifying programs.”

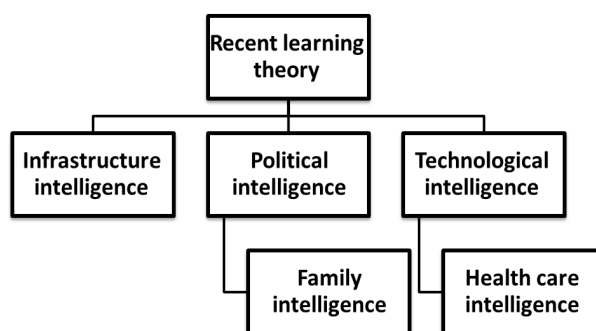
One of the most important things mentioned in the agreement was in Article (11), including: “In compliance with their obligations under international law, including international humanitarian and international human rights law, States parties have undertaken to take all necessary procedures to ensure the protection and safety of persons with disabilities who are in dangerous situations, including in armed conflict, humanitarian emergencies and the Shabby natural” [4, 5, 7, 28, 29].

**Question 6: What theoretical concepts of the new theory of learning are through the COVID-19 pandemic outbreak?**

We can formulate a new theory of learning based on the student’s counseling from the data analysis. This theory contains five concepts, as follows (see Figure 2):

1. **Infrastructure intelligence:** This concept means that the school buildings must develop the infrastructure information technology, and train the teachers to use this technology, and design programs for students’ acceptance in the schools and universities, and increase the basic needs of online learning.
2. **Political intelligence:** This means the resilience of decision-makers and intelligence in the decision-making process and effectively solving conflicts.

3. **Technological intelligence:** Define as develop online learning platforms and knowledge management and apply information technology.
4. **Health care intelligence:** This concept means that it provides online health care online, develops online prevention programs and psychological services for students, moreover, develops information technology in medical and psychological health care.
5. **Family intelligence** means parents’ resilience, solving problems that face their sons and daughters through the distance learning process—the support from brothers and accepting the learning students at home from the family members.



**Figure 2.** The recent learning theory based on the student’s counseling through crisis and disaster

The quantitative analysis results revealed that regarding the teachers’ point of view about the elements of the distance learning success through the COVID-19 pandemic, the results showed in Table (2) indicated that the item (22) is the most important element for success the distance learning during COVID-19 crisis ( $M=3.981$ ,  $SD=.588$ ), followed by the item (18) ( $M= 3.933$ ,  $SD= 1.203$ ), then the item (24) ( $M=3.819$ ,  $SD= .601$ ), then the item 21 ( $M= 3.724$ ,  $SD=1.326$ ), followed by the item (23) ( $M= 3.695$ ,  $SD=.774$ ), then the item 15 ( $M= 3.686$ ,  $SD=1.077$ ), followed by the item 17 ( $M=3.524$ ,  $SD=1.202$ ), followed by the item 25 ( $M=3.419$ ,  $SD=.782$ ), followed by item 16 ( $M=3.409$ ,  $SD=1.206$ ), followed by item 5 ( $M=3.267$ ,  $SD=1.195$ ), followed by item 13 ( $M=3.229$ ,  $SD=1.346$ ), then item 14 ( $M=3.190$ ,  $SD=1.256$ ), then item 3( $M=3.181$ ,  $SD=1.292$ ), followed by item 11 ( $M=3.038$ ,  $SD=1.315$ ), followed by item 10 ( $M=2.990$ ,  $SD=1.369$ ), followed by item 1 ( $M=2.990$ ,  $SD=1.079$ ), then Item 19 ( $M=2.952$ ,  $SD=1.354$ ), followed by item 9 ( $M=2.895$ ,  $SD=1.329$ ), then item 12 ( $M=2.800$ ,  $SD=1.304$ ), then item 2 ( $M=2.667$ ,  $SD=1.124$ ), followed by item 4 ( $M=2.562$ ,  $SD=1.255$ ), then item 7 ( $M=2.495$ ,  $SD=1.287$ ), then at the end came the item 8 ( $M=2.457$ ,  $SD=1.286$ ). About the importance of the elements of the success of distance learning from the teachers’ point of view, the dimension named “health care intelligence” ( $M=18.638$ ,  $SD=1.850$ ) was the most important of the distance learning success, then the dimension named “family intelligence” ( $M=17.390$ ,  $SD=4.966$ ), then

dimension” technological intelligence” (M=15.943, SD=4.563), then dimension “political intelligence” (M=14.667, SD=4.753), then dimension “ infrastructure intelligence” in the end (M=13.752, SD=5.082).

**Table 2.** Means and Standard Deviation of teacher sample (N=105)

| N   | M      | SD     | The importance of the item |
|-----|--------|--------|----------------------------|
| 1.  | 2.990  | 1.079  | 17                         |
| 2.  | 2.667  | 1.1237 | 22                         |
| 3.  | 3.181  | 1.292  | 14                         |
| 4.  | 2.562  | 1.255  | 23                         |
| 5.  | 3.267  | 1.195  | 11                         |
| 6.  | 2.914  | 1.218  | 19                         |
| 7.  | 2.495  | 1.287  | 24                         |
| 8.  | 2.457  | 1.2862 | 25                         |
| 9.  | 2.895  | 1.329  | 20                         |
| 10. | 2.990  | 1.369  | 16                         |
| 11. | 3.038  | 1.315  | 15                         |
| 12. | 2.800  | 1.304  | 21                         |
| 13. | 3.229  | 1.346  | 12                         |
| 14. | 3.190  | 1.256  | 13                         |
| 15. | 3.6857 | 1.077  | 6                          |
| 16. | 3.409  | 1.206  | 10                         |
| 17. | 3.524  | 1.202  | 8                          |
| 18. | 3.933  | 1.203  | 2                          |
| 19. | 2.952  | 1.354  | 18                         |
| 20. | 3.571  | 1.3506 | 7                          |
| 21. | 3.724  | 1.326  | 4                          |
| 22. | 3.981  | .588   | 1                          |
| 23. | 3.695  | .774   | 5                          |
| 24. | 3.819  | .601   | 3                          |
| 25. | 3.419  | .7818  | 9                          |

However, from the parents point of view about the elements of the success of distance learning through the COVID-19 pandemic, the results showed in Table 3 indicated that (item (18) was the most important element for success the distance learning (M=4.06, SD=1.121), then the item (21) (M= 4.02, SD= 1.163), then the item (23) (M=3.871, SD= .635), then the item 17 (M= 3.76, SD=1.173), followed by the item (15) (M= 3.72, SD=1.081), followed by the item 20 (M= 3.69, SD=1.230), followed by the item 25 (M=3.680, SD=.742), followed by the item 16 (M=3.47, SD=1.235), followed by item 3 (M=3.42, SD=1.203), followed by item 24 (M=3.387, SD=.827), followed by item 5 (M=3.27, SD=1.171), then item 13 (M=3.18, SD=1.407), then item 14 (M=3.13, SD=1.264), followed by item 9 (M=3.11, SD=1.291), followed by item 19 (M=3.11, SD=1.252), followed by item 6 (M=3.07, SD=1.249), then Item 11 (M=3.05,

SD=1.270), followed by item 10 (M=2.96, SD=1.258), then item 12 (M=2.89, SD=1.313), then item 1 (M=2.87, SD=1.119), followed by item 4 (M=2.70, SD=1.382), then item 8 (M=2.61, SD=1.263), then item 7 (M=2.56, SD=1.242), then at the end came the item 2 (M=2.48, SD=1.12). About the importance of the elements of the success of distance learning from the parents of view, the dimension named “health care intelligence” (M=18.897, SD=1.849), then the dimension “family intelligence” (M=18.082, SD=4.735), then dimension” technological intelligence” (M=15.942, SD=15.969), then dimension “political intelligence” (M=14.747, SD=4.735), then dimension “infrastructure intelligence” in the end (M=14.319, SD=4.888).

**Table 3.** Means and Standard Deviation of parents’ sample (N=194)

| N   | M     | SD    | The importance of the item |
|-----|-------|-------|----------------------------|
| 1.  | 2.87  | 1.119 | 21                         |
| 2.  | 2.48  | 1.121 | 25                         |
| 3.  | 3.42  | 1.203 | 10                         |
| 4.  | 2.70  | 1.382 | 22                         |
| 5.  | 3.27  | 1.171 | 12                         |
| 6.  | 3.07  | 1.249 | 17                         |
| 7.  | 2.56  | 1.242 | 24                         |
| 8.  | 2.61  | 1.263 | 23                         |
| 9.  | 3.11  | 1.291 | 15                         |
| 10. | 2.96  | 1.258 | 19                         |
| 11. | 3.05  | 1.270 | 18                         |
| 12. | 2.89  | 1.313 | 20                         |
| 13. | 3.18  | 1.407 | 13                         |
| 14. | 3.13  | 1.264 | 14                         |
| 15. | 3.72  | 1.081 | 6                          |
| 16. | 3.47  | 1.235 | 9                          |
| 17. | 3.76  | 1.173 | 5                          |
| 18. | 4.06  | 1.121 | 1                          |
| 19. | 3.11  | 1.252 | 16                         |
| 20. | 3.69  | 1.230 | 7                          |
| 21. | 4.02  | 1.163 | 2                          |
| 22. | 3.943 | .5109 | 3                          |
| 23. | 3.871 | .635  | 4                          |
| 24. | 3.387 | .827  | 11                         |
| 25. | 3.680 | .742  | 8                          |

As well, the results of the T-test shown in Table (4) indicated that there are no significant statistical differences (t=.168, .992, .075, 1.214, 1.038, .788 p> 0.05) between teachers, member staff, and parents’ point of view about the elements of the success of distance learning (dimensions and total score).



**Table 4.** Results of T-test between teachers, member staff, and parents

| Measurements                | Group | N   | Mean   | t     | Sig. (2-tailed) |
|-----------------------------|-------|-----|--------|-------|-----------------|
| Infrastructure intelligence | 2.00  | 194 | 14.763 | .168  | .867            |
|                             | 1.00  | 105 | 14.667 |       |                 |
| Political intelligence      | 2.00  | 194 | 14.345 | .992  | .322            |
|                             | 1.00  | 105 | 13.752 |       |                 |
| Technological intelligence  | 2.00  | 194 | 15.984 | .075  | .941            |
|                             | 1.00  | 105 | 15.943 |       |                 |
| Family intelligence         | 2.00  | 194 | 18.098 | 1.214 | .226            |
|                             | 1.00  | 105 | 17.390 |       |                 |
| Health Care intelligence    | 2.00  | 194 | 18.871 | 1.038 | .300            |
|                             | 1.00  | 105 | 18.638 |       |                 |
| Total                       | 2.00  | 194 | 82.062 | .788  | .431            |
|                             | 1.00  | 105 | 80.390 |       |                 |

These results are compatible with Barker [6] belief that the focus of distance learning is the teacher; as when the teacher is at an acceptable level, technology becomes more apparent. That weak teaching harms distance learning, but when a good teacher can use technology creatively, this enriches the learning process for the student who is not sitting within the standard study walls.

McKenzie et al. [20] indicated many factors that may contribute to the success of distance learning programs, including the easy use of the system, clarity of the characteristics of distance learning that distinguish it from traditional learning, compatibility with the teacher's style, motivations, and motivations of students and their development, availability of sufficient time.

The qualitative study revealed a new learning theory through the COVID-19 pandemic based on the student's counseling from the data analysis. This theory contains five concepts infrastructure intelligence, political intelligence, technological intelligence, health care intelligence, and family intelligence. The findings found that the political and social institutions play very important roles in dealing with educational problems through the COVID-19 outbreak. To interpret these roles from the teachers and parents, the researchers conduct a quantitative study. They developed a checklist about distance learning success elements according to the results of the qualitative study. This checklist, consisting of 25 items, measured the role of political and social institutions to deal with the educational problems through the COVID-19 pandemic and applied it to samples of teachers and parents. The results showed that there are many roles the ministries of education and families must take to deal with the educational problems. Also, there are no significant statistical differences between teachers' and parents' views about the importance of distance learning success through the COVID-19 pandemic.

The results of this mixed study detected the important role of political and social institutions in dealing with the

educational problems facing both normal students and those with special needs. Therefore, the success of distance education according to the new learning theory that the qualitative study has revealed confirms the importance of the availability of five factors that contribute to the success of distance education during the COVID-19 pandemic. This theory sets a framework for the distance learning process. Policy-makers efforts in the ministries of education cooperates with social and family institutions to make distance education effective during this pandemic which we do not know when it will end.

## 4. Conclusion

The current study was applied the sequential exploratory mixed design, which started with collecting and analyzing qualitative data, followed by collecting and analyzing quantitative data to interpret the qualitative results and prepare a scale of the success factors of e-learning from the parents and teachers' point of view during the COVID-19 pandemic. The findings of the current study showed the impact of COVID-19 on the educational system, the effects of school closures on students and their families, and educational technology's role in solving the academic problems resulting from the outbreak COVID-19 epidemic. The study reached actual results on the role of the form institutions (ministries of education) and the inform institutions (the students' family) in solving educational problems related to COVID-19. The study also prioritized students' education with special needs and the role of ministries of education and families in continuing students with special needs their learning in light of the pandemic outbreaks of the COVID-19 pandemic and imposed by the quarantine.

These results have many implications for solving educational problems that face decision-makers in education and families to deal with these problems effectively. The difficulties that emerged in the educational process during the COVID-19 pandemic require a significant shift in traditional theories of learning that maximized learning by receiving or indoctrination in which the teacher plays the primary role and students only recipients, to modern theories of learning that focus on self-learning that enhances the role of the student in the learning process, during this pandemic, makes the role of the teacher is guidance, planning, follow-up, and supervision.

This recent learning theory contains five concepts: Infrastructure intelligence, political intelligence, technological intelligence, health care intelligence, and family intelligence. This pandemic resulted in a change in the labor market requirements based on 21st century technological and communication skills as necessary skills in integrated or full e-learning.

This study provided recommendations for workers in

education: decision-makers in ministries and education departments and school leaders and universities. This study also presented results that benefit teachers in dealing with educational problems during the COVID-19 pandemic. These findings suggest future studies to reveal the importance of self-learning during the COVID- 19 pandemic. Also, to detect the skills that underlie it. The current study findings turned the decision-makers in the

ministries of education towards planning curricula in light of this shift in student-centered learning theories and planning psychological services programs to the students and their families.

## Appendix

**Appendix 1.** Distance learning success elements checklist

| N   | Items  |
|-----|--|
| 1.  | Technically equipping the building of educational institutions.  |
| 2.  | Application of the latest communication and information technologies in educational institutions.                                |
| 3.  | Educational institutions employ educational technologies to achieve their goals.   |
| 4.  | Providing local and global information networks (the Internet).  |
| 5.  | Training the faculty to an appropriate and sufficient degree in the use of educational technologies.                             |
| 6.  | The flexibility of decision-makers in educational institutions.  |
| 7.  | Smart planning for distance learning programs in educational institutions.   |
| 8.  | The ability of decision-makers to solve problems in effective ways.  |
| 9.  | Making smart decisions at the right time.  |
| 10. | Meeting the educational needs of students during distance learning.  |
| 11. | Development of educational institutions for online education platforms.  |
| 12. | Developing the knowledge management system in educational institutions.  |
| 13. | Application of information technology within educational institutions.   |
| 14. | Providing modern synchronous and asynchronous communication media in educational institutions.                                   |
| 15. | Providing technological services in support of electronically registering students.  |
| 16. | Establishing a health care center within educational institutions.   |
| 17. | Development of online psychological services programs.   |
| 18. | Applying information technology in providing medical and psychological health care to students.                                  |
| 19. | Advisors contacted students to provide support and advice.   |
| 20. | Following up on students' health conditions, physically and psychologically, and determine their needs during distance learning. |
| 21. | The resilience of the family in addressing the problems of educating their children during distance learning.                    |
| 22. | Family flexibility in solving their children's problems during distance learning.  |
| 23. | Supporting students' siblings during distance learning.  |
| 24. | Accepting family members to educate their children at home.  |
| 25. | Providing families with the necessary needs to educate their children from a distance (computers - an Internet network).         |

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