Jerusalem, May 2020

Distance learning and back-to-school requirements under the COVID-19 pandemic

This paper provides a summary of the requirements for distance learning in case it continues, and the requirements for returning to schools under the COVID-19 pandemic. The paper is based on data and findings from three studies and a Procedures Manual developed by the Faisal Husseini Foundation (FHF) during the pandemic period.

The first study identified a group of aspects that affected schools due to the pandemic. This includes the exposure of schools to income losses, the extent of the response of its teachers and students in engaging in distance learning, and their needs of devices and training if the distance learning continues.

The second study addresses the need to prepare the infrastructure for schools in Jerusalem when schools re-open to receive their students.

The third study is on evaluating the training and education processes during the pandemic and identifying the needs in case the pandemic continues. It also identifies lessons learnt from these processes, based on the experience of training the teachers and parents and working with the students remotely. The Procedures Manual introduces the preventive measures that are proposed in schools once they are re-opened.

The studies conducted by FHF, on which these papers are based, reflect a great risk to the future of our students if the situation continues as is, and if the appropriate measures were not taken into consideration in both cases: in case of continuing with distance learning and in case of re-opening schools.

In the first case, the major risk is that schools cannot communicate with an estimated 12 percent of their students, 15 percent of their students do not respond adequately despite having the necessary devices and are in urgent need for 8 percent of their students to be equipped with devices.

The second risk is the decline in the quality of education provided to students. The third study indicated that teachers during their distance teaching were highly focused on instructional learning during their encounters with students. Trainee teachers have not been able to adequately practice education through scientific research, critical thinking, dialogue, or participation, and most of them were satisfied with only implementing simple experiments and activities. It also indicated that 36% of teachers need devices, 8% need access to the Internet, 54% need training in using technology in education, and 45% of teachers need other skills related to distance learning. The third study also indicated that the tools, educational games and stationery are not sufficiently available to students, which makes it difficult to carry out activities with students in general, and in particular, with students who suffer from learning disabilities. It also indicated a total loss of contact with students whose parents are suffering from psychological or material distress. In addition, many parents have an urgent need for training, devices and tools, especially those whose children suffer from autism or dyslexia.

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The risk of returning to schools lies in the possibility of infection due to the lack of necessary infrastructure requirements. The most important of which is the limitation in schools in Jerusalem that do not have adequate spaces; the average area available to a student is 1.5 square meters, where it should be two square meters according to international standards. The risk also lies in the lack of a sufficient number of sanitary units and drinking taps. There are currently 1,825 sanitary units in all Palestinian schools in Jerusalem, while according to the standards, there should be 2,200 sanitary units available for the current number of students. There are 1,623 available drinking taps, while according to standards there should be 2,292 taps. It should be noted that such standards apply to normal conditions and not to a pandemic situation.

The Procedures Manual and the three studies provide proposed solutions, recommendations and costs in the two cases.

Summary of the first study:

This study provides an initial overview of the needs of Palestinian schools in Jerusalem in facing COVID-19 if they are re-opened, and information on the needs for distance learning if this pandemic continues.

This paper was based on studying the needs of 17 schools in Jerusalem out of 146 Palestinian schools that are not affiliated to the municipality of the Occupation, and then generalizing the results to schools within this category.

The 17 schools that were selected as a sample for the study represent 12 percent of all the Palestinian schools that are not affiliated with the municipality of the Occupation in Jerusalem. The sample consisted of eight Public Endowment schools (Awqaf) and nine private schools. The percentage of students in these schools reached (7,633) male and female students (17% of all students in Palestinian schools in Jerusalem that are not affiliated with the municipality of the Occupation), while the percentage of teachers in these schools represent 22% all the teachers in those schools (620 male and female teachers). The study showed that schools face income losses that reached an average of 28% of the annual income of private schools, taking into account that the losses of some private schools reached 50% and where the rate of losses reached about 166,000 dollars per school. Meanwhile, the loss rate was 8.1% in schools affiliated to the Awqaf, at the rate of 815 dollars per school.

Schools affiliated with Awqaf did not stop paying the salaries of any of their employees. Schools that received funding from the municipality stopped paying the salaries of 10% of their employees (one of the four schools stopped paying teachers that are on temporary contracts). Meanwhile, schools that do not receive subsidy from the municipality of occupation did not pay salaries of 26% of their teachers.

Close to 36% of teachers in the schools that filled out the survey indicated that they need additional devices, and accordingly, it is estimated that 1,015 teachers in all Palestinian schools in Jerusalem need devices.

The percentage of teachers who need internet connection is 7.9% of teachers, and accordingly, it is estimated that 223 teachers in East Jerusalem need to be connected to the Internet.

The percentage of students who urgently need devices reached 12.3% of school students in the sample, and accordingly, it is estimated that 5,640 devices are needed for students.

The percentage of students who had no contact with the sample schools reached 12%, while the percentage of students who did not respond adequately with distance learning reached 15.2%.

The percentage of teachers who need training in technological skills is 54% of the total number of teachers in the sample. Accordingly, it estimated that there is an initial need to provide 76 training courses in technology for 1,523 teachers.

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The percentage teachers who need distance learning skills, other than technology skills, is 45% of the total number teachers in schools that participated in the survey. Accordingly, it is estimated that there is a need for 73 training courses in distance learning skills for an estimated 1,467 teachers.

The schools have reflected their inability to cover most of the requirements to prevent COVID-19 infection if schools are re-opened. The details of which are listed in the second study shown below.

Summary of the second study:

This study provides an overview of the infrastructure needs in schools if they are re-opened. The study, which was developed based on the Prevention Procedures Manual in Schools developed by FHF, includes a description of the infrastructure situation in the 146 Palestinian schools in Jerusalem, and identifies the different needs to achieve prevention requirements in schools.

The status of infrastructure in schools:

According to the international design standards for model schools, ventilation and natural lighting should be provided by directing the classrooms on the northern side of the building. Schools should allocate an average of two square meters for each student inside the classroom, and accordingly, the standard classroom space should be 65 square meters for an average class of 30 students. As a general standard average, 12 sanitary units must be provided for every 250 students, five drinking taps for every 100 students, and the area of laboratories should not be less than 75 square meters. This is in addition to having appropriate yards and playgrounds to serve as safe outlets that are suitable for the number of students.

Most of the schools in East Jerusalem are residential buildings that have been adapted for use as schools, and therefore, they do not meet all the specifications in the model school. In comparison from the data of the Directorate of Education, the space allocated to the student in the classroom in the Awqaf schools is approximately 1.60 square meters and 1.52 square meters in private schools. Out of 146 schools, only 96 contain a science laboratory with an area of 48.31 square meters. Only 121 of schools have a computer laboratory with an average area of 44.60 square meters. All schools have a total of 1,825 sanitary units, while it must not be less than 2,200 sanitary units for the total of 45,850 students. As for the drinking taps, a total of 1,623 drinking taps are available, compared to 2,292 drinking taps that must be available in these schools.

Infrastructure development needs in schools to prevent pandemics:

The required interventions must provide the necessary basic materials and elements, in light of the urgent need to provide the necessary accommodations for schools during pandemic. These interventions are to ensure adherence to the instructions and recommendations of the World Health Organization to regulate the educational process in Jerusalem schools, in terms of social distancing, preventing mixing and physical contact, and mainly preventing sneezing or coughing.

The main interventions that need to be provided are:

- Allocating a special room for temporary quarantine, in case a school staff or a student is experiencing high temperature. This room can be allocated for this purpose from among the capabilities of the current school. Schools can allocate stores, archive rooms, or any other room that is not being utilized. In case that additional rooms are not available, part of the yard can be allocated with its borders set on the ground to ensure that this area should not be approached. Schools should have thermometers, masks and gloves to inspect and take isolation measures in a timely manner before any infections occurs.

- Installing transparent separators between students inside the classroom, in case it was required by the Ministry of Education. If it is difficult to implement this intervention in schools with small classes, it is possible to provide caps/ headcovers with transparent face protectors for each

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student. It should be noted that the procedures adopted in the event of returning to schools recommend that the number of students in one classroom should not exceed 15 students to ensure maintaining the safety distance between students. (This number may be large for some classrooms, and therefore they have to ensure that there is a recommended spacing distance and work to implement the shift system). It is also important to ensure good ventilation in the classroom, and therefore the windows must be open continuously during the school working hours.

- Defining distancing lines in the classroom, yards, halls, entrances, and gathering and waiting areas to ensure physical distancing between students. Monitoring and adherence committees must be set to monitor commitment and adherence to the specified distances and to avoid overcrowding. It is also possible to raise awareness of students and individuals about avoiding facing others when present in narrow spaces such as elevators.

- Installing of carriers of antiseptics in corridors, classrooms, yards, and at the entrance/ inside of elevators, to be operated by sensors to prevent any infection from being touched repeatedly. Carriers of antiseptics can be installed at the main entrances of buildings and sanitary units.

- Installing hand-drying machines that operate by sensors in sanitary units, kitchens, and teacher room(s). The used tissues must be disposed of in open-foot containers and all dirt must be disposed of within a specific mechanism approved by the Ministry of Health.

- Installing faucets that open by a foot press or by sensors in sanitary units and drinking taps. These must adhere to the instructions of the Ministry of Education or the Ministry of Health, which may prohibit or limit the use of drinking taps as they constitute a gathering place for students. It is preferable to provide a water bottle for each student for his/her personal use and without sharing it with others. It is also advised that there will be special monitoring method to regulate use and sterilization of drinking taps where necessary.

- Installing automatic siphons for toilets, operating with sensors. These siphons can be installed inside the siphon of the current toilets, so they can be operated by sensors.

- Installing sensors for lighting units in each room to operate the lighting units when entering the room. It is also possible to install an automation system for the lighting system if schools want to control the timing of lighting instead of activating the lighting based on the movement of individuals within each room. An automation system for the window blinds can be included within this system if needed in the future.

- Installing swing doors by converting existing doors by replacing the doorframe and lock, while providing doorstops to open doors. It is possible to install sensors if the door is electronic, that is by means of a magnetic lock, or sliding door.

- Providing cleaning robots that regularly rub and clean floors during working hours.

- Installing sterilization and examination gates at the main entrances, which provide complete sterilization for everyone entering or leaving school, with a temperature test to detect the possibility of infection with the virus. The price of the inspection gate depends on the cameras used, and the gate requires special electrical and mechanical installations at the school entrance. It is also possible to provide a tablet instead of an examination gate, and provide manual sprinklers to sterilize visitors and students and their bags. These measures are less expensive compared to those proposed for sterilization and examination gates to serve small size schools, especially those that are located in buildings shared with other services.

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The total estimated cost of the infrastructure needs to re-open schools during pandemic is approximately $ 9.5 million for all Palestinian schools in Jerusalem.

Summary of the third study:
This study provides recommendations for the requirements of training in the contexts of both distance learning and face-to-face education. It is based on the experience of the training FHF's consultants team during the COVID-19 pandemic between March 7 and April 30, 2020.

FHF supports schools in Jerusalem through a comprehensive program that serves various aspects of the educational process including infrastructure, equipment, tools and training programs. The program aims to develop democratic school environments that rely on learning that is based on scientific research and critical thinking, and that seeks to promote the values of equality, justice and human rights.

To build on its experience in distance training, FHF has developed a questionnaire, detailing the work of the nine consultants who worked during the above-mentioned period.

In addition to the results of consultants and trainers' questionnaire, recommendations have been formulated based on FHF's observations from the training and on the material and observations received from the teachers during that period. The recommendations were supported by findings coming from the survey on 17 schools, which included the needs of schools in term of training.

In reference to the data provided by the training advisory staff, the consultants worked with the teachers of 12 schools through training workshops and individual work, in addition to follow-up on preparing their students for the FHF's competitions. Close to 57 male and female teachers participated in workshops on learning difficulties, the school constitution and scientific research in history. In addition, 31 male/ female teachers participated in individual training in learning difficulties and scientific research in natural sciences. Moreover, 16 male/female teachers participated in preparing their students for scientific research and reading competitions, and three female counselors received support in guiding students during the pandemic. The Learning Disabilities Team worked individually with 79 parents and their children and with 45 parents in group workshops. The main learning disabilities consultant, together with two specialists in the cognitive and psychological aspects, were able to complete the work as planned in the field of awareness in the learning difficulties and in improving the cognitive skills of their sons/daughters, and how to work with them as teenagers. A third specialist worked to support mothers to overcome the current stage.

The autism consultant worked individually with 15 mothers and their children to support the independence of the children in the daily transition between events, self-time management, functional communication, independence in play, and independence in bathroom and household living skills.

Most consultants were satisfied with the implemented training and mentioned several success stories, despite the short period of work. Their experience reflected the success of the distance training, even more than the face-to-face training, in the context of training the parents in the group workshops and in individual training that includes the mother and/or the father and the students together. This distance training experience also succeeded in individual training with the teachers that does not require interacting with the students, while it showed weakness compared to face-to-face training in cases of group and individual teachers' training that requires interaction with students.

Although the consultants expressed their satisfaction with the success training, however, the effect of this success is limited to those teachers, parents and students who were able to communicate with the trainers. There is significant number of students and parents who have lost contact with their schools and with FHF's specialists because of the lack of devices available to them. According to the study of FHF on 17 schools in Jerusalem, schools were unable to communicate with 12% of their students in average; the importance of this percentage cannot be undervalued. The counselors and advisors also indicated that they were unable to communicate with a group of mothers who were not responsive due to

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psychological and material stress they faced before the pandemic. The current lack of communication with those parents predicts the possibility of impediment of their children's psychological, cognitive and educational status. This is because children have lost contact with the school and specialists who were working with them inside the school, despite the lack of communication with their parents.

The responses of the consultants showed that they made adaptations/changes in the preparation for the training, implementation methodology and their methods of communicating with the trainees, all of which that have contributed to the success of distance training. These changes were classified in 15 points, while the training consultant team identified 15 challenges faced during their work. Moreover, based on the feedback of the consultants, nine lessons learned and 14 recommendations were identified. The recommendations identified by FHF were classified into two groups. The first group relates to the work of FHF, while the second group of recommendations relates to the need for combined efforts by the Ministry of Education, schools, and civil society institutions. The two groups of recommendations are as follows:

Recommendations relating to the work of FHF:

- Recommendations that relate to organizing the process during emergencies:

1- Developing a guide for the mechanism of organizing the training process during emergency situations that require remote work.

2- Developing training materials on how to prepare, implement and evaluate distance training.

3- Developing special applications to monitor students' development during distance learning.

-Recommendations related to the implementation of the training in the future:

1. Utilizing distance training to support future face-to-face training, especially with parents, and individual training for teachers that does not interaction with students.

2. Training teachers on implementing learning that is based on scientific research and critical thinking remotely, where it was noted that most trainee teachers tend to utilize indoctrination during distance learning, or only choose simple experiences and activities without emerging them into researches or developing the skills of questioning and thinking around these experiments/activities. The teachers faced difficulty in implementing this type of learning with students who were not previously trained in scientific research skills with regular face-face methods. Moreover, teachers also faced challenges with the inability of the previously trained students to provide all the required research tools, especially in the case of the necessity of repetition in research in the natural sciences. This has led, at times, to the elimination of the requirement of repetition and the acceptance of sufficiency of the first result. Moreover, some teachers faced difficulty urging students to deal with history texts from an analytical, comparison and conclusion methodology. This is due to students' cognitive weakness on the one hand and lack of attention to this aspect since there were no grades of achievement during distance learning. Despite the success of Arabic language and religion teachers in training their students during the pandemic to discuss reading stories and stimulate dialogue about them through WhatsApp groups, they were unable to practice the methodologies used during regular education, and they were more focused on aspects of grammar and language.

3. Using the remote arbitration mechanism for competitions that do not require manual work and that are limited to interviews, such as arbitration of social science research and discussing reading competition books.

4. Intensifying work with parents, as the experience reflected the inability of teachers and trainees to continuously communicate with students and supervise their learning in the same way that is

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done in the classroom. The experience also showed the need for the parents to have intensive intervention, especially in cases of students who suffer from autism or learning difficulties. This highlighted the need for additional training for parents in time management, technology use and developing home educational methods, and training parents on how to teach their children.

5. Concerning the framework of the learning difficulties program, there is a need to work with the student/parents together, where the parents are usually trained in group courses without the presence of students, and the work with students is done separately.

6. Seek ways to communicate with "parents and students in distress" during the emergency, where communication with a group of parents in distress was lost despite all attempts.

7. Providing devices, Internet subscriptions and cloud spaces for those trainees in need of these services.

8. Providing educational materials and games for the trained students and training the students to develop the materials and games.

9. Focusing on supportive human communication with the trainees and not only on professional communication.

General recommendations
The consultants' feedback highlighted the need for a system that governs distance learning, provides it with the necessary training and infrastructure needs, and develops mechanisms for monitoring and evaluation.
Recommendations for developing procedures

1. To ensure that all parties, i.e. students, families and educational teams cooperate in activating the distance learning process, it is necessary to develop the necessary formal procedures to compel all parties to the distance educational/learning process in cases where it is needed. Noting that distance learning is not necessarily limited to electronic communication only.

2. To ensure that all parties are able to commit to distance learning in emergency situations, there is a need to provide a general training program that provides training to all parties involved in the educational process. This is not limited to training in the use of hardware and software, but also includes training on how to plan, prepare and implement distance learning for teachers, and training them on how to teach students research-based, self-learning and critical thinking skills. Moreover, there is a need to provide training on time management for all parties, training in developing home educational aids and repairing electronic devices.

3. To ensure the development of self-learning skills among students, it is imperative to develop methodologies for scientific research and critical thinking in educational curricula. This includes training teachers to train students to develop learning skills through scientific research, critical thinking and dialogue. Moreover, it is necessary to develop a special program for reading open texts from local and international narratives based on the values of equality and justice, and exalting research and thinking.

4. Providing the necessary devices and tools to all parties to enable them to practice distance learning.

5. Upgrading the internet service and providing it free of charge to needy students.

6. Creating a high quality professional framework to follow up on what is being taught to students remotely to ensure scientific credibility.

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7. To ensure the possibilities of transition to distance learning in any future circumstances, it is necessary to find a formula for continuing distance learning by ensuring that there is at least one lesson for each class to be provided via distance learning, and to ensure that all teachers are practicing distance learning.

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