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Research article

Education

**BEST PRACTICES OF SCHOOL TEACHERS TO SUSTAIN THEIR STUDENTS LEARNING DURING CRISIS**

## 学校教师在危机期间维持学生学习的最佳实践

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This research aims to identify the best practices implemented by school teachers in Palestine online during COVID-19. A qualitative approach was used to explore in-depth the best practices through two focus group sessions composed of 24 different specialty teachers from different schools. Moreover, semi-structured interviews with 10 teachers were also conducted to listen to their lived experiences and how they sustain teaching and communicating with their students. A grounded theory was used to analyze and categorize the qualitative data. The findings of this study are unique and novel since no other studies related to online learning were done during COVID-19 in Palestine to support best practices that teachers should adopt. Moreover, the results will benefit teachers to rejuvenate and adapt their methods and strategies in different ways to fit learners' needs. The results revealed that teachers use many free tools such as Google Classroom and Zoom and spend a lot of time understanding and learning about these tools. Teachers were eager to explore and use new teaching strategies to engage their students and support them emotionally during the COVID-19 crisis. Additionally, teachers were committed to their social responsibilities during the crisis, were motivated and self-learners, as they asserted by exchanging experiences with colleagues. This study could be used to adapt experiences to other scenarios, so teachers can benefit from the findings of the study and can transfer them to other contexts. It is recommended to conduct a mixed approach for generalization purposes for further investigation.

**Keywords:** Best Practices, Online Learning, COVID-19

**摘要** 这项研究旨在确定在新冠肺炎期间巴勒斯坦学校教师在线实施的最佳实践。通过由来自不同学校的24位不同专业教师组成的两个焦点小组会议，使用定性方法深入探索最佳实践。此外，还对10位教师进行了半结构化访谈，以听取他们的生活经历以及他们如何维持教学与沟通。使用扎根理论对定性数据进行分析 and 分类。这项研究的结果是独特而新颖的，因为在巴勒斯坦新

新冠肺炎期间没有进行其他与在线学习相关的研究来支持教师应采用的最佳实践。此外，结果将有利于教师以不同的方式振兴和调整他们的方法和策略，以满足学习者的需求。结果显示，教师使用谷歌课堂、飞涨等许多免费工具，并花费大量时间了解和学习这些工具。在新冠肺炎危机期间，教师们渴望探索和使用新的教学策略来吸引学生并在情感上支持他们。此外，正如他们通过与同事交流经验所断言的那样，教师在危机期间致力于承担自己的社会责任，具有积极性和自学性。本研究可用于将经验调整到其他场景，因此教师可以从研究结果中受益，并将其转移到其他环境中。建议进行混合方法以进行概括以便进一步调查。

**关键词：**最佳实践，在线学习，新冠肺炎

## I. INTRODUCTION

The forced closure of schools of the academic year 2020/2021 due to the COVID-19 pandemic impacted millions of students' learning processes [1], [2]. Education is now being implemented electronically, which imposes tasks and responsibilities on students, teachers, and parents [3], [4]. Additionally, many educational institutions made plans to teach students online due to the spread of the virus [5]. Unprecedented changes like implementing different teaching strategies than what was used in frontal teaching impacted the teaching and learning process [6]; these strategies focused on more teacher-student interaction for a more conducive online environment.

Even though our lives during COVID-19 shifted to a "new normal", many do not feel normal, especially those who count on scheduled daily practices [3]. Students have also experienced difficulties with these new practices, but there is still an opportunity to adapt, overcome, and prepare for this new transformation [7], [8]. China implemented the largest online education practice in human history during the pandemic [6]; it replaced traditional face-to-face teaching methods with online learning for the time being [9]. This online instruction emerged as an asset to connect with students at different school levels to keep them engaged and avoid interruptions of teaching and learning processes by implementing meaningful learning activities in this pandemic era [10]. In Palestine, face-to-face learning did not continue, and the teaching methods and practices differed and varied. The sudden change of this shift in teaching has driven teachers to implement different educational tools and platforms that they were not familiar with or trained on [11]. So, they did not know how to integrate technology well and keep the students engaged efficiently. Therefore, most teachers depended on themselves to learn how to use available free platforms or social media channels [12]. Best practices could be defined as experiences or professional

procedures accepted or prescribed as being most effective.

### A. Statement of Problem

Due to the COVID-19 pandemic, changes occurred in most aspects of life, including the educational settings [13]. Schools and universities shut down for some time, the unplanned shift to online learning imposed a new experience for teachers and students [2]. Studies and research in this field are still limited [10], especially within the Palestinian environment [12], [14]; thus, the current study explores the best practices used among school teachers in creating effective online learning experiences in schools with different grade levels during the pandemic of COVID-19. This study is unique since it provides teachers and educators with good online teaching practices that they could use and implement in their classrooms and adapt accordingly. Little research has been found addressing online best teaching practices from an evaluative perspective of the staff to materialize [3].

### B. Aim of the Study

As a result of the emergency online learning, many actions carried out by schools during COVID-19 to enhance the teaching-learning processes [15], [16], it is important to identify best practices that teachers employed during this pandemic, so the whole world can benefit and exchange experience and even improve these practices. The present study aimed to identify teachers' online learning best practices during the COVID-19 pandemic, which helped sustain the continuity of students' learning despite the challenges at different educational levels in Palestinian schools.

### C. Contribution

In Palestine, some educational institutions have adopted different approaches since the pandemic at the beginning of March 2020 [14], [17], online learning was adopted in schools and

higher education institutions depending on the institution's capabilities and willingness to offer a good choice, the extent of the local community's acceptance of the new educational practices, and the extent of students' interaction and acceptance. Therefore, most teachers looked for free platforms and social media channels to support students' learning [18]. Some teachers could sharpen their skills to sustain the online teaching and learning processes [19] using these free resources and implemented effective strategies [20]. Online learning provided various opportunities to use effective strategies and different tools from different sources, which attracted students in unconventional ways [11]. The current study reveals many of teachers' best practices during the COVID-19 pandemic that can be reflected positively in the learning process in the present and the future.

Two research questions are highlighted in this study:

What are the best practices of school teachers to sustain their students learning during the COVID-19 pandemic?

How can teachers benefit from their experience to reshape their future practices after the COVID-19 pandemic?

## II. LITERATURE REVIEW

Most schools worldwide switched to online learning during COVID-19, as traditional teaching abruptly shifts from traditional settings due to the pandemic. Remote teaching was practiced among schools globally during the pandemic [12]; therefore, this study explores best practices teachers implemented during this switch. [1] proposed that teachers employ instructional planning and teaching practices to implement a successful online learning experience for their students.

However, to implement a successful learning experience, teachers should be aware of the students' needs and select the appropriate strategies to deliver and construct knowledge efficiently [21]. Even though there is no agreed-upon definition of a best practice, UNESCO describes best practices as having four common features: innovative, different, sustainable, potency to be replicated [22]. Good or best practice of online learning is defined as a method that seeks more effective than other alternatives due to its positive impact on learning outcomes [23]. It includes the best online learning experiences that enhance the quality of learning implementation; it is characterized by providing real-life techniques inappropriate online learning settings. Moreover, good practice in teaching was

defined as an experience that positively influences and adds value to the student learning process in terms of involvement, motivation, and skills development due to its excellent; therefore, it becomes a practice that should be disseminated.

Online learning offers alternative educational solutions to help teach students and support their interaction with the sudden shift during the COVID-19 [16]. Online learning allows teachers to teach students with various tools. Emergency plans should be designed well and followed precisely during the COVID-19 pandemic [12]. Online learning can be defined as using one or more technologies that deliver instruction to students separated from the teacher. That supports interaction between the students and the teacher, either synchronously or asynchronously [24], [25]. During the pandemic, teachers used many practical applications and online teaching tools like WhatsApp and Microsoft Teams for video conferencing and quizzes; these two platforms and applications are easily accessible to both teachers and students [16]. [10] discussed the importance of students being oriented on how to operate these online platforms, such as Google Classroom, Zoom, Kahoot, etc., that will eventually increase their engagement.

Additionally, [3] recommended using the guidelines and standards published by reputable organizations such as the International Society for Technology in Education (ISTE) when implementing online learning supports best practices. Guidelines like equity, providing student-centered approaches, and clarifying outcomes should be followed. Standards are: empowering learners, knowledge constructing, promoting creativity, and reproducing digital resources. [26] added that social media groups promote cooperative learning and provide social support to students during the pandemic. Communication through social media groups allows educators to build a greater understanding of the unique needs of each student; it also provides students with stability and consistency across both the school and home environment. [27] showed that it is necessary to take more live broadcasts to form more teacher-student communication and instant feedback, which is an effective way to improve student performance and achieve the teaching goals more efficiently.

Also, [28] emphasized a need for instructional strategies implementation in online learning among primary level learners in Xi'an, China. These instructional strategies should be tailored to fit the needs of the students. Moreover, [29] explored some good practices that educators have

adopted for many years: engaging students thoughtfully and keep them motivated while teaching online, enabling a safe and nonjudgmental online environment, promoting student-centered learning process, creating individual and group assignments to help students learn both independently and collaboratively while balancing a facilitator role to enhance the learning process further. [30] also described the importance of engagement in online discussion forums and blended learning.

Moreover, [6] conducted a quasi-experiment and compared live broadcasting teaching with teacher-student interaction with the self-study-based recorded video teaching and found that live broadcasting is more efficient in improving students' academic performance. Also, they recommended that teachers not only assume the role of transmitting knowledge but also play the role of an "accompanier" through effective communication with their students online and continuously providing attention and feedback. [22] mentioned that digital equity is one of the priorities that have to be considered during online learning. [31] also conducted a study to investigate factors of best online learning practices among undergraduate students and found that best practices include collaborative activities and students' self-creation through support groups in discussion forums. Moreover, sharing of real-life situations and the effective communication characteristics available in the e-learning environment.

So, previous studies [2], [3], [6], [7], [8], [32] showed that moving from traditional to virtual models needs to be thoughtful to ensure equitable educational experiences for all learners. Before designing and delivering online learning, educators should understand two unique aspects: (a) accessibility and (b) instructional modality, including how these aspects may impact their pedagogical approach [33]. It was also shown that best practices should be employed online since accumulating evidence showed that online teaching had an influential role in improving students' performance. Hence, teachers should help students to improve their academic output via giving students more autonomy in learning to achieve the transition from "leaders" to "helpers" of online learning [4].

Previous studies [34], [35], [36], [37] have shown that online teaching experiences have also offered a great chance for many teachers to prioritize the tasks. Online teaching helps teachers to participate in social activities with their colleagues, affords the level of flexibility, work-life balance, and teaches more specific

skills that they never thought of in traditional teaching like incorporating narrative lectures, audio and video files, electronic resources, wikis, online tests and quizzes, web conferencing, and online discussion forums [34]. Online teaching requires a teacher to be technically knowledgeable of many tools, encourages creative teaching skills to deal with students. It was found that working online improves communication between colleagues and management [36]. Teachers can share material and knowledge online via online training sessions.

### **III. METHODS**

The primary goal of this study is to obtain in-depth information about best practices that teachers used during COVID-19 that accompanied successful learning outcomes. To answer the research questions, two qualitative methods, focus group sessions and semi-structured interviews, were used to gather data concerning online best practices to achieve the purpose of the study. Both focus group sessions and semi-structured interviews were recorded using the application of Zoom after taking permission from participants; then, they were analyzed and coded.

#### **A. Participants**

The researchers conducted two focus group sessions and interviewed 10 teachers from different schools. Two focus group sessions had 24 participants; each was composed of 12 teachers (19 females and 3 males). The interview participants were 8 females and two males. Table 1 provides demographic information about the participants in the focus group sessions and semi-structured interviews.

Teachers were selected by purposive sampling from Palestinian public schools. The criteria for selecting focus groups and the interviews conducted were upon employing online learning during the COVID-19 pandemic in Palestine. Participants were selected carefully by the following criteria: willingness to implement online learning in their teaching process, willingness to participate in this study about best practices, willingness to participate in workshops to promote online learning. Participants were from different backgrounds and teaching six different disciplines and grades. The participant's permission was taken to record the interviews and the focus group sessions.

The focus group sessions and interviews were held by using the ZOOM application. In addition, the researchers conducted semi-structured

interviews with 10 teachers. The interviews lasted for about 30 minutes for every teacher, and the participants agreed to record these interviews. Participants were informed of the recording of the session that was held via the Zoom app.

Table 1.  
Demographic characteristics of the participants

Focus Group Sessions				
Fictive name	Gender	Experience	Level	Subject
Hani	M	Less than 5	Elementary school	Math
Eyad	Male	5-10	Middle school	Arabic
Loay	Male	11-15	Elementary school	English
Alia	Female	11-15	Middle school	Science
Salma	Female	Less than 5	Middle school	Math
Amer	Female	11-15	Secondary school	English
Adel	Female	5-10	Secondary school	Science
Fatima	Female	11-15	Elementary school	Arabic
Salma	Female	5-10	Secondary school	Science
Nuha	Female	11-15	Middle school	Math
Muna	Female	5-10	Middle school	English
Amal	Female	More than 15	Secondary school	Arabic
Tasneem	Female	Less than 5	Secondary school	Science
Rola	Female	11-15	Elementary school	Science
Worrod	Female	11-15	Middle school	Math
Fadia	Female	More than 15	Secondary school	Arabic
Safa	Female	5-10	Secondary school	Science
Hana	Female	11-15	Elementary school	Math
Neda	Female	11-15	Middle school	English
Dua	Female	Less than 5	Middle school	English
Sireen	Female	11-15	Secondary school	English
Alaa	Female	5-10	Secondary school	Math
Nour	Female	11-15	Secondary school	History
Lama	Female	More than 15	Elementary school	English
Semi-structured Interviews				
Ali	Male	11-15	Middle school	Science
Salim	Male	Less than 5	Middle school	Math
Ameera	Female	11-15	Secondary school	English
Ashwaq	Female	11-15	Secondary school	Math
Shorouq	Female	5-10	Elementary school	English
Samia	Female	11-15	Middle school	Arabic
Rateel	Female	More than 15	Secondary school	Biology
Sadeel	Female	5-10	Elementary school	Math
Ritaj	Female	Less than 5	Elementary school	Math
Aleen	Female	More than 15	Middle school	English

## B. Focus Group Sessions

Two focus group sessions were organized over Zoom. The two focus group sessions lasted about 4 hours and were audio-recorded. Participants from different directories with different specialties and experiences are described in Table 1. All the focus group sessions were audio-recorded after obtaining the participants' permission. The focus group sessions' questions were based on the research

questions. The focus group protocol was developed to guide the researchers during the sessions. It consisted of eight open-ended questions as follows:

1. Describe your online experience.
2. Would you describe your online learning experience during COVID-19 as good or bad? Elaborate.
3. What educational tools and applications have teachers adopted to communicate with students and sustain their learning during COVID-19 in Palestinian schools?
4. How did you improve your skills during online learning?
5. What teaching strategies do you employ during online learning?
6. How did you engage your students?
7. Describe how did you overcome online learning challenges?
8. What did you learn from this experience?

## C. Semi-Structured Interviews

The researchers conducted semi-structured online interviews for 25–40 minutes with 10 teachers from different directories with different specialties and grades. Zoom platform was used to conduct the interviews. Individual interviews provided an understanding of the online teaching experiences of the 10 participants on what good practices they employed with implementing different online tools for educational purposes. The interviews aimed to explore teachers' best practices during COVID-19. The principles adopted when determining the questions and followed the procedures outlined by [38] included the development of easy-to-understand, open-ended, focused, avoidance of guidance, multidimensional, and logical organization of the questions [39].

Moreover, the semi-structured interviews were organized after analyzing the focus group sessions. The prompts used in the sessions were generated from the teachers' responses in the focus group sessions. The questions were asked in a series of probing questions to extract more in-depth responses from participants.

Data analysis was conducted through the grounded theory (GT) method to extract the best online practices and successful experiences achieved by teachers during COVID-19, which contributed to sustaining students' learning process in Palestinian schools. Grounded theory (GT) is defined as a systematic set of techniques and procedures that enable researchers to identify concepts and build theory from qualitative data; GT is primarily inductive, which means that researchers move from the specific to the general

to explain phenomena in the qualitative theory-generating process [40].

Researchers transcribed focus group sessions and interviews recordings. All the audio files were transcribed and analyzed. Around four hours of focus group sessions and seven hours of recorded interviews were analyzed by employing the constant comparative method suggested by [41] and cited by [40], as well as by using open coding by breaking down the text into small chunks based on an idea/concept in a statement. In the beginning, they analyzed the focus group sessions responses to find out the themes and group these themes into categories. Then, we organized the data from the semi-structured interviews to compare these themes found after focus group analysis for saturation.

The researchers found the data pattern by considering the frequency of an idea or a concept and categorizing it into themes and subthemes during focus group session analysis. The main categories were developed based on the most relevant ideas and concepts, repeated ones from different participants, or insightful statements mentioned frequently in the focus group sessions and interviews. All quotes were related to specific categories, and subcategories used as evidence were reviewed separately. The constant comparative method involves an iterative process of revisiting the data and reconsidering its implications to increase [40].

#### **IV. RESULTS**

The researchers conducted a triangulation analysis between the data sources – focus group sessions and semi-structured interviews and they found that teachers have employed different best practices during COVID-19. To answer the first question of this study: What are the best practices of school teachers to sustain their students learning during the COVID-19 pandemic? The researchers collected the data from focus groups and interviews; five main categories identified teachers' best practices during online learning. These categories were: good planning, supportive, interactive teaching strategies, various online tools, and prompt feedback.

**Good planning:** Most of the teachers clarified during the focus group sessions and the interviews that one of the best practices they used is good planning of synchronous and asynchronous tools, including recorded videos, non-video materials, and creating peer learning communities. Teachers affirmed that purposeful planning is always a key to successfully implementing online learning and their activities

that fit the student's needs and the institution's culture.

**Designing professional learning:** All teachers who participated in the current study reported that planning professional learning is a pivotal step that gauges students' understanding and creates effective strategies that keep them engaged and involved. Muna commented: "what saved our online learning process is the activities that we designed daily by different tools and strategies".

**Being Supportive:** Most teachers clarified that supporting parents with diverse methods will help students reach classroom sessions and open applications. Attending some electronic sessions with students and followed up with them after the sessions in doing tasks, sending assignments, and uploading them electronically to the required sites. Support from family is needed during online classes; conducive environment and devoid of distraction during online learning.

Moreover, online students need to feel that they are part of a specific community, their contributions to the course are acknowledged and incorporated, and their participation and insights are valued. A sense of class community requires student accountability in response to their peers and the instructor. These aspects develop as students are encouraged to nurture collaborative learning relationships with other members of the class.

Muna said, "I always tried to get students involved in online discussion, dialogue with curriculum, and extracurricular activities to boost their sense of collaboration.

**Digital equity:** Some teachers in focus group sessions discussed their experience of how they should consider some students' limited abilities in accessing e-learning and trying to reach them and keep them in touch with the educational process using the possible methods. Nour said, "Some students were unable to access the online classes due to poor internet or lack of devices; therefore, I recorded the lessons and posted them on the school page so that the students could view them when they could do at the appropriate time".

So, the research findings showed that teachers should raise awareness among students on health and psychology and try to reduce the atmosphere of fear, tension, and anxiety for students and their families in light of COVID- 19 and what it imposes on people.

**Employing diverse online learning tools:** teachers looked for multiple ways to adapt different and influential tools that benefit their students. They tried to promote a successful online learning experience and engage students

with course content, course discussion, and their peers and instructor; it is necessary to create a sense of belonging.

**Alternative tools:** Some teachers used social media tools, such as Facebook and WhatsApp, to interact with students; others created games using Microsoft PowerPoint, Classroom Games (to teach and help students to practice skills).

**Interactive Teaching strategies:** Most of the teachers in the focus groups and interviews reported mixed spurts of discussion, video and audio clips, hands-on exercises that students carry on with brief recorded videos that they can share with their peers. Teachers developed assignments that require students to construct knowledge learned online with real-world experiences. To gauge students' prior knowledge and experiences, teachers provided students with instructional videos and pre-assessments and asked for students' input. Samah commented, "I always tried to make sure that my students have a prior knowledge about the lesson I presented by asking them to complete a short activity or a short video to spark their interest along with a short question about that lesson".

**Active learning strategies:** Effective and efficient strategies are needed to ensure learning remains. Teachers have employed different strategies to engage students and increase the retention of information like flipped learning, game-based learning, cooperative learning, and project-based learning, which promote analysis, synthesis, and evaluation of instructional material.

Hani mentioned, "I let my students do real-life projects individually or collaboratively to apply and synthesize concepts and ask them to record it and even perform it in class time".

**Diversification of learning activities:** teachers provided students with curriculum and extracurricular activities to develop students' talents in singing, drawing, sports and photography.

Muna pointed out, "the students competed in filming the sport of the morning every day and sending it to be published on the school page firstly and on the school activities page of the Education Directorate secondly."

It shows that the activities carried out by students are not limited to the tasks and duties within the school curriculum but rather extend to the various activities that reflect the students' talents.

Hani said: "I discovered among my student's new talents that were not apparent in the classroom; some students have excelled in singing, drawing, photography, imitation of

sounds or acting". So, it was notable that teachers promoted student interaction by keeping effective communication: teachers maintain consistent communication with students through contacting their parents by instant texting, phone calls, and emails.

**Prompt feedback:** All teachers provided prompt, constructive feedback, compliments, and acknowledgments. They asserted that instant feedback is a vital component to make online learning effective and more meaningful and encourage students to progress further because they will recognize their mistakes and false beliefs and be corrected more quickly. Ashwaq said, "I review the work and tasks that the students carry out, and I provide them with the grades; this pushes the students to work and do the assignments and tasks".

Woroud reported: "during hands-on activities, I requested that every student should open the webcam so that I can see what they are doing and I reflect upon their performance". In that way, they are informed that I keep track of their involvement, and I correct them when they need it.

**Reinforcement:** Some teachers enthused positive interactions in blogs, discussion forums; they increased their interaction levels by asking questions, rewarding, and motivating students. Primary school teachers mentioned that positive reinforcement helps their students feel more comfortable, confident about their abilities and motivated them to interact more efficiently and be more productive and active. As Rula said, "I periodically post videos, audio clips, and pictures of students' activities on the school page that they prepared with the help of parents, which raises the motivation of the rest to carry out and publish the activities". Also, Eyad mentioned: "the students are enthusiastically waiting for the results of the Star of the Week competition, and the results are announced and published on the school's page. Loay commented: "the reinforcement was verbal at the beginning, even I let them open the microphones to clap for each other".

The first question is answered. Some of these best practices are good planning, supportive learning activities diversification, and effective learning tools, interactive learning strategies, prompt feedback, and reinforcement.

To answer the second question: how can teachers benefit from their experience to reshape their future practices after COVID -19?

**Self-learning and training:** Most of the teachers who participated in the study mentioned that they learn from mistakes that occur to take

advantage of them in the future to avoid them and try alternative solutions. Ashwaq said, "I am still training on Microsoft Teams program to explain and communicate with students, and every day I discover new uses for the program, I try to implement them with students and train myself for the future"

Eyas reported, "personally, I have some previous experience in designing that helped to handle the programs and applications effectively, but many teachers needed urgent attention in this regard." Moreover, many teachers in the focus groups found that this experience allowed exchanging experiences and expertise of colleagues and supervisors to solve online learning problems.

Nuha said, "we established a school group on messenger which includes all the teachers and the school principals to discuss the use of Zoom and Microsoft Teams applications, and after setting up the teachers' accounts, we held meetings to train on the techniques of using the programs and its components".

Online learning is a complementary part of school life: All teachers believe and are convinced that e-learning has become an inevitable reality in the present and future.

Hani mentioned, "online learning, with its various methods and applications, has become necessary and indispensable in the current conditions of COVID-19, and I believe that it will continue along with face-to-face learning in the future".

Many teachers also reported the following: "taking advantage of students' technical abilities and skills to promote efficient learning environments", "Using educational websites to enhance instructional content", "Control communication with parents and set rules to follow".

Moreover, teachers depend on their colleagues in enhancing their technical competencies. Alia mentioned, "I feel optimistic about the future of online learning; it is a great experience that deserve to work on."

Additionally, all teachers confirmed that instructor involvement is how teachers are involved in students' learning. Teachers indicated their involvement mainly by providing consistent and prompt feedback and being available to the students every day.

Salma said, "I was very cautious to communicate with my students on a daily basis. If I didn't do that, they would be in jeopardy".

The second question is answered. Self-learning and training, teachers' involvement, and

improving students' technical skills is a vital practice as well.

This study's findings will offer a great base to various teachers for best practices in online learning for several reasons. First, there is little related research regarding online best practices, so this study will contribute to local literature on the subject, which in return could be used by relevant authorities in supporting their education initiatives. School teachers in public and private schools may implement these strategies to up-skill their teaching abilities.

Furthermore, the study makes a considerable contribution through its findings by revealing the difference between traditional teaching practices and online teaching practices. More importantly, the findings will act as guidelines for teachers to understand their students' needs and behaviors better.

## V. DISCUSSION

This study aimed to explore best practices teachers who implemented online learning and explore what they benefit from this experience. Best practices of online learning are experiences that teachers go through and describe as efficient, can be replicated, and be innovative.

The finding revealed five main categories: good planning, supportive and diverse online learning tools, interactive teaching strategies, prompt feedback. These are the main best practices that teachers employed during the COVID-19 pandemic. Online teaching process should be well planned to get the desired outcomes; thus, teachers must prepare carefully their online lessons, which need much time and effort; therefore, the teachers spend many hours preparing and planning lessons that will be presented and explained using the online tools and applications. Good planning helps increase the opportunities for success and achieve educational goals, as stated by [2].

Teaching students online needs support in many aspects and encouragement from their teachers; it is not enough to teach them the assigned instructional materials that contain the knowledge, concepts, and skills; in turn, they need emotional support. The findings of this study indicate that teachers play many important roles in the learning process; they are the educators the consultants and play a vital role in encouraging and motivating students to be effective in the learning process and decrease their fear and anxiety [16]. Teachers should be aware of students' needs and choose the appropriate strategies to present and interact with the knowledge effectively for the benefit and use

of students [21], [3]. A very critical issue was also needed support, which is digital equity. Teachers should be aware of technical, cultural, and social challenges students might face and prevent interacting and being fully engaged. Teachers must contact students' parents and communicate with them to offer better learning choices [22].

Moreover, this study has shown tools and applications used by teachers and could be used synchronously and asynchronously to engage students and support their learning. They used both simple and complex tools and applications; they used the school page on Facebook, the messenger, WhatsApp, Google applications, Zoom applications, Screencast-O-matics, and recently used the Microsoft Teams program. That corresponds with the findings of [4], [16], [18] studies. Interactive teaching strategies was one of the best practices that help to stimulate students' learning and motivate them in many ways; some students prefer to participate in extracurricular activities that reveal their interests and talents in different ways; some students who have moderate abilities in frontal teaching became active and more engaged in online learning [28], [29]. The researchers justified this engagement by vanishing the students' fear in the classroom in front of the teacher and students, which is no longer presented online fear. Another reason behind that is the presence of parents and their assistance to the children in carrying out many activities. That matched the findings of previous studies [7], [30], [42].

Researchers found that teachers employed many collaborative tools that promote active learning that encourages students to explore and construct knowledge efficiently; this matched what [31] reported about best practices in online learning that includes collaborative activities which promote students 'self-creation through support groups in discussion forums. Moreover, the immediate or subsequent reinforcement also played a major role in motivating students to participate in the online sessions and to carry out tasks, assignments, and activities, especially when these activities are published on a school page and when students are rewarded virtually and with grades. Hence, feedback is an effective way to improve student performance and help achieve the desired goals in the learning process more efficiently online [27]. More specifically, constructive feedback is essential to keep students motivated and engaged with the learning process. This feedback allows the learners to

assess their progress. It promotes self-lection and provides teachers with important information they can use to increase the effectiveness of online materials in order to improve learner outcomes. These best practices help enhance engagement in the online learning process, which is very important, and in blended learning, as mentioned by [43].

Moreover, the teachers will benefit from these practices and experiences in the future and avoid the mistakes and errors in their online practices, thanks to successful e-learning. Additionally, it was found that the online learning experience has offered a great opportunity for teachers to be self-learners and motivated them to learn the best methods to use to enhance their online teaching practices [36]. Moreover, this study revealed that teachers believed that online learning is a complementary part of school lifeexperience since they noticed how it improved the students' engagement and interaction online, how students participated in different activities with various to fit their abilities [34]. Finally, online teaching experience offers a good opportunity for teachers to exchange experiences and expertise by effective communication with each other [35], [36].

## VI. CONCLUSION

The study aims to identify best practices employed online during COVID- 19 and the learned lessons from this experience. The findings of this study indicate that best practices include: good planning, being supportive, employing various online tools, teaching strategies, prompt feedback can enhance knowledge building, and it has a positive potential to increase engagement and participation among students online. The study findings confirmed the effectiveness of synchronous and asynchronous online environments in supporting students' online learning.

Teachers benefited from online teaching through self-learning and training. They asserted that exchanging experiences with colleagues is a key component for online learning success. They have a strong faith in online learning that might shift to blended learning as students return to school. Teachers used online learning within their abilities; fortunately, the emotional support of teachers and the support of the parents and their follow-up and communication in different ways with teachers helped to achieve the largest possible successes despite many challenges. The teachers' confidence, motivation, and persistence

led to the emergence of best educational practices at this period.

This study suggests novelty in online learning best practice studies. It is significant to explore best practices that teachers adopted during COVID-19 because it illuminates important issues in the transitional process from face-to-face to online settings. This research gave voice to teachers and allow them to share their transition experiences. Collecting real experiences offered insight that might help provide educators with what is needed to promote an effective transitional experience; this insight could provide meaningful information for training strategies that might prepare educators effectively to teach students. This study indicates that teachers in Palestine adopt best practices in online learning during COVID-19 that could be implemented in different disciplines and contexts. This study was first conducted nationally in Palestine; there is a scanty of literature in best practices knowledge. Among best practices that were identified in the literature are effective communication, feedback, and connection. This study added another best practice: good planning, active learning strategies, and emotional and social support. These strategies would provide additional insight into this field of knowledge. They would add quality information to the existing literature in this field since there is a gap in online learning best practices during COVID-19.

#### **A. Implications for Practices and Recommendation**

The importance of this study lies in supporting the continuing emphasis on providing an enriching teaching experience as an important means during a crisis. However, continuing effort should be invested in refining the most effective and meaningful practices to provide high-quality learning experiences for learners.

Specifically, this study could adapt experiences to other scenarios, so teachers' practice that was found in this study can be transferred to other contexts.

Limitations of this study include the sample size, which hinders us from generalizing. Moreover, the research object is specific; a future follow-up study should consider a mixed approach and an online class observation to strengthen and support findings. Additionally, the participants' profiles should be considered by diversification of school level, like special aid and gifted students; these practices might fit school students but not college and postgraduate students.

#### **REFERENCES**

- [1] KOÇOĞLU, E., and TEKDAL, D. (2020) Analysis of distance education activities conducted during COVID-19 pandemic. *Educational Research and Reviews*, 15 (9), pp. 536-543.
- [2] BAO, W. (2020) COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2, pp. 113-115.
- [3] MORGAN, H. (2020) Best Practices for Implementing Remote Learning during a Pandemic. The Clearing House: A Journal of Educational Strategies. *Issues and Ideas*, 93 (3), pp. 135-141.
- [4] TIAN, Y., YAO, J., and DING, J. (2020) How the school's information technology hardware investment affects students' achievements: Based on the empirical research of Nan-jing middle school. *Education Research Monthly*, 37 (1), pp. 87-94.
- [5] EISENBACH, B.B., GREATHOUSE, P., and ACQUAVIVA, C. (2020) COVID-19, Middle Level Teacher Candidates, and Colloquialisms: Navigating Emergency Remote Field Experiences. *Middle Grades Review*, 6 (2), 2.
- [6] YAO, J., RAO, J., JIANG, T., and XIONG, C. (2020) What role should teachers play in online teaching during the COVID-19 pandemic? Evidence from China. *Science Insights Education Frontiers*, 5 (2), pp. 517-524.
- [7] BOKAYEV, B., TOREBEKOVA, Z., DAVLETBAYEVA, Z., and ZHAKYPOVA, F. (2021) Distance learning in Kazakhstan: Estimating parents' satisfaction of educational quality during the Covid-19 pandemic. *Technology, Pedagogy and Education*, 30 (1), pp. 25-37.
- [8] ALVAREZ, A. (2020) The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education*, 15 (1), pp. 144-153.
- [9] ZHU, N., ZHANG, D., WANG, W., LI, X., YANG, B., SONG, J., ZHAO, X., HUANG, B., SHI, W., LU, R., and NIU, P. (2020) A novel coronavirus from patients

with pneumonia in China. *New England Journal of Medicine*, 38 (2), pp. 727-733.

- [10] ABOAGYE, E., YAWSON, J.A, and APPIAH, K.N. (2021) COVID-19 and E-Learning: The Challenges of Students in Tertiary Institutions. *Social Education Research*, 1 (2), pp. 109-114.
- [11] EWING, L.A., and COOPER, H. (2021) Technology-enabled remote learning during Covid-19: Perspectives of Australian teachers, students and parents. *Technology, Pedagogy and Education*, 30 (1), pp. 39-54.
- [12] AFFOUNEH, S., SALHA, S., and KHLAIF, Z.N. (2020) Designing quality e-learning environments for emergency remote teaching in coronavirus crisis. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 11 (2), pp. 1–3.
- [13] CROSBY, L.M.S.W., SHANTEL, D., PENNY, B., and THOMAS, M.A.T. (2020) Teaching through Collective Trauma in the Era of COVID-19: Trauma-informed Practices for Middle Level Learners. *Middle Grades Review*, 6(2), 5.
- [14] KHLAIF, Z.N., and SALHA, S. (2020) The Unanticipated Educational Challenges of Developing Countries in Covid-19 Crisis: A Brief Report. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 11 (2), pp. 130-134.
- [15] DANIEL, S.J. (2020) Education and the COVID-19 pandemic. *Prospects*, 49, pp. 91-96.
- [16] PUTRA, P., LIRIWATI, F.Y., TAHRIM, T., SYAFRUDIN, S., and ASLAN, A. (2020) The students learning from home experiences during Covid-19 school closures policy in Indonesia. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 5(2), pp. 30-42.
- [17] KHLAIF, Z.N., SALHA, S., FAREED, S., and HADI, R. (2021) The Hidden Shadow of Coronavirus on Education in Developing Countries. *Online Learning*, 25 (1), pp. 269-285.
- [18] JUHARY, J. (2020) Emergency Remote Teaching during COVID-19 Pandemic: Roles of Educators in Malaysia. In *E-Learning and Digital Education in the Twenty-First Century-Challenges and Prospects*. London, Intech Open.
- [19] STARKEY, L. (2020) A review of research exploring teacher preparation for the digital age. *Cambridge Journal of Education*, 50 (1), pp. 37-56.
- [20] SCULLY, D., LEHANE, P., and SCULLY, C. (2021) 'It is no longer scary': digital learning before and during the Covid-19 pandemic in Irish secondary schools. *Technology, Pedagogy and Education*, 30 (1), pp. 159-181.
- [21] BOZKURT, A., and SHARMA, R.C. (2020) Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15 (1), pp. 1-6.
- [22] AL GHAZALI, F. (2020) Challenges and opportunities of fostering learner autonomy and self-access learning during the COVID-19 pandemic. *Studies in Self-Access Learning Journal*, 11 (3), pp. 114–127.
- [23] HOON, S. Adult Learning and the Advantages of the Online Learning Experience. *Westcliff International Journal of Applied Research*, 2 (2), pp. 31-36.
- [24] SNOW, W.H., LAMAR, M.R., HINKLE, J.S., and SPECIALE, M. (2018) Current Practices in Online Counselor Education. *Professional Counselor*, 8(2), pp. 131-145.
- [25] HICKEY, C., MCALEER, S.J., and KHALILI, D. (2015) E-learning and traditional approaches in psychotherapy education: Comparison. *Archives of Psychiatry and Psychotherapy*, 4, pp. 48-52.
- [26] SCHWARTZMAN, R. (2020) Performing pandemic pedagogy. *Communication Education*, 69 (4), pp. 502-517.
- [27] GLEDHILL, J., and CURRIE, J.L. (2020) Characteristics of Teachers' Recommended Social Support Strategies for Primary Students with ASD. *International Online Journal of Primary Education*, 9 (1), pp. 18-34.
- [28] AZNAR-DÍAZ, I., HINOJO-LUCENA, F.J., CÁCERES-RECHE, M.P., and ROMERO-RODRÍGUEZ, J.M. (2020) Analysis of the determining factors of good teaching practices of mobile learning at the Spanish University. An explanatory model. *Computers and Education*, 159, 104007.

- [29] SHAROFF, L. (2019) Creative and Innovative Online Teaching Strategies: Facilitation for Active Participation. *Journal of Educators Online*, 16 (2).
- [30] KHLAIF, Z., NADIRUZZAMAN, H., and KWON, K. (2017) Types of Interaction in Online Discussion Forums: A Case Study. *Journal of Educational Issues*, 3 (1), pp. 155-169.
- [31] OLASINA, G. (2018) Factors of best practices of e-learning among undergraduate students. *Knowledge Management and E-Learning: An International Journal*, 10 (3), pp. 265-289.
- [32] GREENHOW, C., LEWIN, C., and STAUDT WILLET, K.B. (2020) The educational response to Covid-19 across two countries: A critical examination of initial digital pedagogy adoption. *Technology, Pedagogy and Education*, 30 (1), pp. 5-23.
- [33] HAVERBACK, H.R. (2020) Middle Level Teachers Quarantine, Teach, and Increase Self-Efficacy Beliefs: Using Theory to Build Practice during COVID-19. *Middle Grades Review*, 6 (2), 6.
- [34] GRAHAM, A.D. (2019). Benefits of online teaching for face-to-face teaching at historically black colleges and universities. *Online learning*, 23 (1), pp. 144-163.
- [35] SOONTHODU, S., and RAO, N.G. (2021) Perception of Working Online versus Offline among Academic Professionals. *International Online Journal of Education and Teaching*, 8 (1), pp. 94-107.
- [36] PEI, L., and WU, H. (2019) Does online learning work better than offline learning in undergraduate medical education? A systematic review and meta-analysis. *Medical Education Online*, 24 (1), 1666538.
- [37] STEPHENS, M.L., and CORYELL, J. (2021) Faculty perspectives on context, benefits, and challenges in fully online graduate adult education programs. *Adult Learning*, 32 (2), pp. 79-88.
- [38] SEIDMAN, E. (2012) An emerging action science of social settings. *American Journal of Community Psychology*, 50 (1), pp. 1-16.
- [39] KOÇOĞLU, E., and EGÜZ, Ş. (2019) Türkiye’de, Sosyal Bilgiler Eğitimine İlişkin Alan Eğitimcilerinin Sorunsal Tespitleri. *Manas Sosyal Araştırmalar Dergisi*, 8 (1/1), pp. 27-38.
- [40] CORBIN, J., and STRAUSS, A. (2014) *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, Sage publications.
- [41] GLASER, B.G., and STRAUSS, A.L. (1976) *The discovery of grounded theory: Strategies for qualitative research*. New York, Aldine De Gruyter.
- [42] PALAU, R., FUENTES, M., MOGAS, J., and CEBRIÁN, G. (2021) Analysis of the implementation of teaching and learning processes in Catalan schools during the Covid-19 lockdown. *Technology, Pedagogy and Education*, 30 (1), pp. 179-195.
- [43] HALE, N., and BRIDGES, C.W. (2020) The Experiences of Counselor Educators Transitioning to Online Teaching. *Journal of Educational Research and Practice*, 10 (1), 10.

### 参考文献:

- [1] KOÇOĞLU, E., 和 TEKDAL, D. (2020) 新冠肺炎疫情期间远程教育活动分析。教育研究和评论, 15 (9), 第536-543页。
- [2] BAO, W. (2020) 新冠肺炎与高等教育在线教学：以北京大学为例。人类行为和新兴技术, 2, 第 113-115 页。
- [3] MORGAN, H. (2020) 在大流行期间实施远程学习的最佳实践。票据交换所：教育战略杂志。问题和想法, 93 (3), 第 135-141 页。
- [4] TIAN, Y., YAO, J., 和 DING, J. (2020) 学校信息化硬件投入如何影响学生成绩——基于南京中学的实证研究[J]。教育研究月刊, 37 (1), 第 87-94 页。
- [5] EISENBACH, B.B., GREATHOUSE, P., 和 ACQUAVIVA, C. (2020) 新冠滑、中级教师候选人和口语：导航紧急远程现场经验。中级复习, 6 (2), 2。
- [6] YAO, J., RAO, J., JIANG, T., 和 XIONG, C. (2020) 新冠肺炎疫情期间，教师应该在网络教学中扮演什么角色？来自中国的证据。科学洞察教育前沿, 5 (2), 第 517-524 页。

- [7] BOKAYEV, B., TOREBEKOVA, Z., DAVLETBAYEVA, Z., 和 ZHAKYPOVA, F. (2021) 哈萨克斯坦远程教育：新冠肺炎疫情期间家长对教育质量的满意度评估。技术、教学法和教育, 30 (1), 第 25-37 页.
- [8] ALVAREZ, A. (2020) 大流行危机中通过紧急远程教学进行远程学习的现象。亚洲远程教育杂志, 15 (1), 第 144-153 页.
- [9] ZHU, N., ZHANG, D., WANG, W., LI, X., YANG, B., SONG, J., ZHAO, X., HUANG, B., SHI, W., LU, R., 和 NIU, P. (2020) 来自中国肺炎患者的新型冠状病毒。新英格兰医学杂志, 38 (2), 第 727-733 页.
- [10] ABOAGYE, E., YAWSON, J.A, 和 APPIAH, K.N. (2021) 新冠滑与电子学习：大专学生的挑战。社会教育研究, 1 (2), 第 109-114 页.
- [11] EWING, L.A., 和 COOPER, H. (2021) 新冠肺炎期间基于技术的远程学习：澳大利亚教师、学生和家长的观点。技术、教学法和教育, 30 (1), 第 39-54 页.
- [12] AFFOUNEH, S., SALHA, S., 和 KHLAIF, Z.N. (2020) 为冠状病毒危机中的紧急远程教学设计优质的电子学习环境。跨学科医学虚拟学习杂志, 11 (2), 第 1-3 页.
- [13] CROSBY, L.M.S.W., SHANTEL, D., PENNY, B., 和 THOMAS, M.A.T. (2020) 新冠滑时代集体创伤教学：面向中级学习者的创伤知情实践。中级复习, 6(2), 5.
- [14] KHLAIF, Z.N., 和 SALHA, S. (2020) 新冠肺炎危机中发展中国家意料之外的教育挑战：简报。跨学科医学虚拟学习杂志, 11 (2), 第 130-134 页.
- [15] DANIEL, S.J. (2020) 教育和冠状病毒大流行。前景, 49, 第 91-96 页.
- [16] PUTRA, P., LIRIWATI, F.Y., TAHRIM, T., SYAFRUDIN, S., 和 ASLAN, A. (2020) 印尼新冠绳学校停课政策期间学生在家学习的经验。伊克拉杂志：教育科学研究, 5(2), 第 30-42 页.
- [17] KHLAIF, Z.N., SALHA, S., FAREED, S., 和 HADI, R. (2021) 冠状病毒对发展中国家教育的隐藏阴影。在线学习, 25 (1), 第 269-285 页.
- [18] JUHARY, J. (2020) 新冠肺炎疫情期间的紧急远程教学：马来西亚教育者的角色。二十一世纪的电子学习和数字教育——挑战与展望。伦敦，英泰公开赛.
- [19] STARKEY, L. (2020) 探索数字时代教师准备的研究综述。剑桥教育杂志, 50 (1), 第 37-56 页.
- [20] SCULLY, D., LEHANE, P., 和 SCULLY, C. (2021) “不再可怕”：爱尔兰中学新冠肺炎大流行之前和期间的数字学习。技术、教学法和教育, 30 (1), 第 159-181 页.
- [21] BOZKURT, A., 和 SHARMA, R.C. (2020) 在冠状病毒大流行导致全球危机时期的紧急远程教学。亚洲远程教育杂志, 15 (1), 第 1-6 页.
- [22] AL GHAZALI, F. (2020) 新冠肺炎大流行期间培养学习者自主性和自主学习的挑战与机遇。自我访问学习期刊的研究, 11 (3), 第 114-127 页.
- [23] HOON, S. 成人学习和在线学习体验的优势。西崖国际应用研究杂志, 2 (2), 第 31-36 页.
- [24] SNOW, W.H., LAMAR, M.R., HINKLE, J.S., 和 SPECIALE, M. (2018) 在线辅导员教育的当前实践。专业顾问, 8 (2), 第 131-145 页.
- [25] HICKEY, C., MCALEER, S.J., 和 KHALILI, D. (2015) 心理治疗教育中的电子学习和传统方法：比较。精神病学和心理治疗档案, 4, 第 48-52 页.
- [26] SCHWARTZMAN, R. (2020) 开展大流行教育。传播教育, 69 (4), 第 502-517 页.
- [27] GLEDHILL, J., 和 CURRIE, J.L. (2020) 教师为自闭症谱系障碍小学生推荐的社会支持策略的特点。国际小学教育在线杂志, 9 (1), 第 18-34 页.

- [28] AZNAR-DÍAZ, I., HINOJO-LUCENA, F.J., CÁCERES-RECHE, M.P., 和 ROMERO-RODRÍGUEZ, J.M. (2020) 西班牙大学移动学习良好教学实践的决定因素分析一个解释模型。计算机与教育, 159, 104007.
- [29] SHAROFF, L. (2019) 创造性和创新的在线教学策略：促进积极参与。在线教育工作者杂志, 16 (2).
- [30] KHLAIF, Z., NADIRUZZAMAN, H., 和 KWON, K. (2017) 在线论坛中的交互类型：案例研究。教育问题杂志, 3 (1), 第 155-169 页.
- [31] OLASINA, G. (2018) 本科生电子学习最佳实践的因素。知识管理和电子学习：国际期刊, 10 (3), 第 265-289 页.
- [32] GREENHOW, C., LEWIN, C., 和 STAUDT WILLET, K.B. (2020) 两国对新冠肺炎的教育反应：对初始数字教学法采用的批判性检验。技术、教学法和教育, 30 (1), 第 5-23 页.
- [33] HAVERBACK, H.R. (2020) 中层教师隔离、教学和提高自我效能信念：在新冠绳中用理论构建实践。中级复习, 6 (2), 6.
- [34] GRAHAM, A.D. (2019). 在线教学对历史悠久的黑人学院和大学进行面对面教学的好处。在线学习, 23 (1), 第 144-163 页.
- [35] SOONTHODU, S., 和 RAO, N.G. (2021) 学术专业人士对在线工作与离线工作的看法。国际在线教育与教学杂志, 8 (1), 第 94-107 页.
- [36] PEI, L., 和 WU, H. (2019) 在线学习在本科医学教育中是否比离线学习效果更好？系统评价和荟萃分析。在线医学教育, 24 (1), 1666538.
- [37] STEPHENS, M.L., 和 CORYELL, J. (2021) 教师对完全在线的研究生成人教育项目的背景、好处和挑战的看法。成人学习, 32 (2), 第 79-88 页.
- [38] SEIDMAN, E. (2012) 一门新兴的社会环境行动科学。美国社区心理学杂志, 50 (1), 第 1-16 页.
- [39] KOÇOĞLU, E., 和 EGÜZ, Ş. (2019) 土耳其社会研究教育领域教育工作者的问题识别。玛纳斯社会研究杂志, 8 (1/1), 第 27-38 页.
- [40] CORBIN, J., 和 STRAUSS, A. (2014) 定性研究的基础：发展扎根理论的技术和程序。千橡市，圣人出版物.
- [41] GLASER, B.G., 和 STRAUSS, A.L. (1976) 扎根理论的发现：定性研究策略。纽约，奥尔丁·德·格鲁伊特.
- [42] PALAU, R., FUENTES, M., MOGAS, J., 和 CEBRIÁN, G. (2021) 新冠绳封锁期间加泰罗尼亚学校教学过程实施分析。技术、教学法和教育, 30 (1), 第 179-195 页.
- [43] HALE, N., 和 BRIDGES, C.W. (2020) 辅导员教育者过渡到在线教学的经验。教育研究与实践杂志, 10 (1), 10.