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Research Article

The teachers' perspective of the impact of distance learning on the quality of early childhood students' practicum in secondary

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ABSTRACT

This study aims to explore the impact of distance learning on the quality of practical applications among early childhood education students in secondary schools within the Green Line. The descriptive correlational approach was used, utilizing a research tool consisting of two main axes: distance learning and the quality of practical applications. The validity and reliability of the tool were verified. The study sample consisted of teachers working with early childhood education students in secondary schools. A survey study was initially conducted by distributing the tool to a sample of 30 male and female teachers from the study population but outside the main research sample. After that, the final tool was distributed to the main sample, which included 160 male and female teachers who were selected through the comprehensive survey method. The data collected through an electronic questionnaire were statistically analyzed. The findings revealed a significant negative relationship between distance learning and the quality of practical applications, indicating that higher engagement in distance learning was associated with lower performance in practical skills and hands-on activities. This highlights the challenges of applying practical training effectively in a fully online learning environment.

Keywords: early childhood education, distance learning quality, practical applications

INTRODUCTION

The world witnessed a significant transformation in learning approaches, with more reliance on distance learning, especially during health crises and rapid technological progress (Mpungose, 2020). Despite the numerous benefits of this educational approach, important questions remain regarding its impact on the quality of education, particularly in fields that require intensive practical training and hands-on applications (Darling-Hammond et al., 2020). Early childhood education is one such field, where direct interaction and practical experience play a critical role in professional development. Theoretical frameworks such as Kolb's experiential learning theory and the TPACK model suggest that effective learning requires a balance of experience, reflection, and technological integration, which may be challenged in distance learning environments (Havnes, 2018).

In practical training, the effectiveness of distance learning may be negatively influenced by several interrelated factors. High levels of distance learning engagement do not automatically translate into improved practical skills due to limited direct interaction, reduced opportunities for hands-on experience, and delayed feedback from instructors (Taghizadeh & Ejtehadi, 2023). Technological readiness plays a crucial role; students and teachers who are less familiar with digital tools may struggle to navigate online platforms, leading to reduced engagement and lower performance in practical tasks (Adnan & Anwar, 2020). Similarly, the

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experience of instructors in integrating technology effectively can moderate the impact of distance learning on practical outcomes, as more experienced teachers may provide clearer guidance and more effective virtual simulations. Socio-economic conditions also act as a significant moderator; students from under-resourced environments may face limited access to reliable internet, digital devices, and supportive learning spaces, exacerbating the challenges of distance learning (Almajali et al., 2021; Ferri et al., 2020). These mediating and moderating factors highlight that while distance learning offers flexibility and accessibility, its influence on practical skill development is complex and context-dependent, particularly in fields requiring intense experiential learning such as early childhood education.

Distance learning in practical training faces several challenges that impact its effectiveness. One of the primary obstacles is the lack of direct interaction with instructors and peers, which limits the exchange of practical experiences and the immediate feedback necessary for effective training (Taghizadeh & Ejtehadi, 2023). Additionally, the absence of sensory and direct experiences in real-world work environments hinders students' ability to develop practical skills, leading to gaps in applied competencies (Fantinelli et al., 2024). Furthermore, the available technology may not support the desired level of interaction, especially when activities require specialized tools or laboratory equipment (Haleem et al., 2022). Technical issues, such as poor internet connectivity or software malfunctions, further impede training progress and limit the achievement of learning objectives. Students may also experience feelings of isolation or anxiety due to the lack of social support and direct guidance, which are crucial in practical training (Leal Filho et al., 2021).

Within the context of practical applications, early childhood education is a vital field that helps to develop skills needed to work with young children. This major necessitates direct interaction and communication with children in real-world educational environments, allowing students to understand their social, emotional, and cognitive development. Practical training is a critical component of preparing students, supporting them with the experience needed to apply their educational skills effectively (McCarthy et al., 2023). Educational programs in this field are based on scientific principles aimed to support children's holistic development through interactive learning activities tailored to their developmental needs (Sutarman et al., 2022). Furthermore, this major plays an important role in creating learning environments that foster children's academic and psychological success. Mustoip et al. (2024) highlighted the importance of early childhood years in achieving positive long-term educational and socio-economic outcomes. This study seeks to investigate the effect of distance learning on the nature of practical applications among early childhood education students in secondary schools, using teachers' perspectives to explore both challenges and potential strategies for effective implementation.

PREVIOUS STUDIES

The study by Al-Nawaiseh (2021) evaluated the advantages and drawbacks of distance learning for students with special educational needs and disabilities (SEND) during the COVID-19 pandemic at a UAE university. Using a qualitative approach (semi-structured interviews), Al-Nawaiseh (2021) found that while distance learning enabled time savings and fostered new technological skills, the absence of high-quality interaction and peer-based learning was a major limitation. Many students reported feelings of isolation, and instructors found it difficult to effectively monitor and assess whether the learning objectives were achieved. The study underscores the dual importance of technological readiness and rich social interaction when designing online practical training for SEND students. By focusing on this vulnerable population, the study also highlights how pedagogical design must accommodate both accessibility and engagement concerns.

In parallel, Ismaili (2021) investigated the attitudes of 200 students toward distance learning versus traditional face-to-face instruction in the pandemic context. Although students still preferred face-to-face delivery, their generally positive attitudes toward distance learning suggested that hybrid models (combining in-person and online formats) might hold promise for practical education. The findings emphasize that student perceptions are a key indicator of readiness and medium acceptance, and they signal the potential for blended formats to mitigate some of the practical-skills gaps characteristic of fully online modes.

Building on the focus on practical participation, the work of Pergantis (2024) explored how distance learning affected classroom participation among seventh- and ninth-grade students. While interactive online programs yielded moderate improvements in engagement, the study found persistent limitations in hands-

on, practical experiences–especially pertinent in subjects requiring direct manipulation or peer collaboration. This aligns with calls in literature for enhanced design of online practical modules, not just content delivery.

The evaluation by Al-Khatlan (2023) reviewed the readiness and outcomes of distance learning during and after COVID-19, particularly in the perspective of national educational systems. Their findings indicated that evaluations of distance learning were "average," thereby implying the need for improved infrastructure and professional development for teachers to achieve quality practical application. This study highlights system-level barriers, such as teacher training and institutional readiness, which can significantly influence practical learning outcomes in online or hybrid environments.

Addressing a more specific learner group, Mohd-Dom et al. (2022) investigated the attitudes of students with learning difficulties toward distance learning, and found largely negative perceptions, especially in their capacity to acquire hands-on practical skills. The study emphasizes that online learning environments must be tailored and supported to offset the deficits in interactive, kinesthetic, and peer-mediated learning opportunities. This further reinforces the notion that online delivery for practical training cannot be "one size fits all".

Focusing on higher-education applied disciplines, Tang and Tang (2024) reported that about 65% of students in fields such as nursing and engineering indicated limitations in practical experience when learning remotely; teachers likewise noted weaker performance for skills requiring direct interaction. These results make clear that disciplines heavily reliant on manual or interpersonal skills must carefully rethink online or hybrid designs to preserve hands-on competence.

Similarly, the study of Lee and Jang (2024) looked at fully online transitions in higher education and found that while opportunities existed (flexibility and access), there was a pronounced lack of practical training and real-world practice. The authors recommended that online formats be supplemented with virtual simulations and structured physical activities to sustain educational quality in skill-based programs.

More recently, research in 2025 has expanded this field further. For instance, Álvarez-Chaves and Saborío-Taylor (2025) provide a methodological guide for hybrid course design in higher education, which strongly emphasizes student-centered pedagogy and technology integration to circumvent the limitations of purely online delivery. Their work reinforces the need for a blend of modalities to ensure engagement and practical skill acquisition.

Recent studies have continued to refine the understanding of distance and hybrid learning. Álvarez-Chaves and Saborío-Taylor (2025) provided a methodological guide for hybrid course design in higher education, emphasizing the centrality of student-centered pedagogy, active participation, and technology integration. Manousou (2025) examined the development of critical thinking in distance education over the past decade, noting that while online learning fosters independent thinking, it risks weakening analytical depth without sufficient dialogic interaction. Hsu (2025) demonstrated that blended and cooperative learning pedagogies improve student engagement, motivation, and applied skill acquisition. Similarly, Lubner et al. (2025) conducted a large-scale longitudinal study encompassing hundreds of thousands of students across modalities, revealing consistent performance gaps favoring hybrid over purely online formats, particularly in courses requiring practical training.

Building on this literature, the current study distinguishes itself through its contextual and methodological focus. It examines Arab schools within the Green Line, investigating the impact of distance learning on practical applications specifically among early childhood education students from teachers' perspectives. Unlike previous studies conducted in broader or international settings, this research addresses unique contextual factors–including population characteristics, sample composition, location, and timeframe–and introduces mediating and moderating variables such as technological readiness, teacher experience, and socio-economic conditions. This comprehensive framework enables a deeper understanding of how distance learning affects practical skill development in early childhood education within a culturally specific environment.

STUDY PROBLEM

The study focuses on examining the effect of distance learning on the quality of practical applications in various educational fields. As distance learning becomes a widely adopted approach, especially in response to exceptional global circumstances, concerns arise regarding its effectiveness in delivering a meaningful learning experience, particularly in subjects that rely heavily on practical applications. While distance learning enhances access to information and educational resources, it presents important challenges in facilitating and applying practical skills effectively. Therefore, evaluating the effect of distance learning based on the quality of practical applications is essential to determine its effectiveness and identify potential obstacles. This study aligns recommendations from previous research, such as Tang and Tang's (2024) study, which highlighted the need for further investigation into this issue.

Research Questions

The purpose of this study is to answer the following questions:

1. What is the level of distance education in secondary schools within the Green Line from the teachers' perspective?
2. What is the level of quality of practical applications among early childhood education students in secondary schools within the Green Line from the teachers' perspective?
3. Is there a statistically significant correlation at the significance level ($\alpha \leq 0.05$) between distance learning and the quality of practical applications among early childhood education students in secondary schools within the Green Line from the teachers' perspective?

Study Objectives

The current study seeks to achieve the following objectives:

1. Determining the level of distance learning among early childhood students in secondary schools within the Green Line from the teachers' perspective.
2. Evaluating the quality of practical applications among early childhood students in secondary schools within the Green Line from the teachers' perspective.
3. Studying the relationship between distance learning and the quality of practical applications among early childhood education students in secondary schools within the Green Line from the teachers' perspective.

Significance of the Study

The significance of this study lies in its theoretical and practical contributions, as shown below.

Theoretical significance

1. The study provides a cognitive framework that supports decision-makers and educational institutions in developing curricula and programs.
2. It contributes to enhancing the professional competence of students in early childhood education.
3. It helps identify gaps and challenges in distance learning to improve the quality of practical training.

Practical significance

1. The study highlights the impact of distance learning on the quality of practical training in early childhood education, a crucial component in preparing students to work with children in real-world educational settings.
2. It focuses on the challenges students face due to reduced direct interaction, which affects training quality.
3. It aims to provide recommendations to improve distance learning strategies, ensure a balance between theoretical and practical aspects.

Study Scope

The scope of this study is defined as follows:

1. **Topical scope:** The study is limited to the concept of distance learning and the quality of practical applications among early childhood education students in secondary schools within the Green Line from teachers' perspectives.
2. **Human scope:** The study was conducted on a sample of teachers in secondary schools within the Green Line.
3. **Geographical scope:** The study was conducted in secondary schools within the Green Line that offer early childhood education programs.
4. **Timeframe:** The study was conducted during the first semester of the academic year 2024/2025.

Study Terminology

Distance learning

A learning model that utilizes information and communication technology to provide education to individuals in geographically distant locations, away from traditional classrooms. It relies primarily on the internet to deliver educational content and facilitate interaction between teachers and students through learning platforms and multimedia, such as videos and interactive lectures. It aims to provide flexible learning opportunities, especially for those facing challenges in attending traditional classes (Huang et al., 2020). In practical terms, it refers to the score a respondent obtained on a distance learning assessment tool.

Quality of practical applications

This refers to the effectiveness of learning and training activities in achieving their intended objectives efficiently. It emphasizes direct interaction with educational materials in real or simulated environments. Quality factors include the relevance of educational content, trainer competency, training tools, learner engagement, and the availability of adequate resources and a conducive learning environment. This concept reflects the role of practical experiences in enhancing students' skills and their ability to apply theoretical knowledge in real environment (Ali et al., 2024). In practical terms, quality is measured by the score a respondent obtained on the validated assessment tool.

Early childhood education

This field focuses on the study and care of children from birth to age eight. It is a multidisciplinary field that integrates education, psychology, and healthcare to ensure comprehensive child development (Richter et al., 2017).

Secondary schools

Secondary schools refer to institutions that provide education for students in grades 10, 11, and 12. In these schools, students take the matriculation exam known as the *Bagrut*, which is considered a key qualification for academic success and admission to higher education.

METHODOLOGY AND PROCEDURES

Research Methodology

To achieve the study's objectives and answer its research questions, the descriptive correlational approach was adopted.

Study Population

The study population consists of teachers working with early childhood education students in secondary schools, totaling 190 male and female teachers during the first semester of the academic year 2024/2025.

Table 1. Demographic analysis (N = 160)

Details	Level/category	n	Percentage (%)
Gender	Male	67	41.9
	Female	93	58.1
Academic degree	Bachelor's	67	41.9
	Postgraduate studies	93	58.1
Years of experience	Less than 5 years	19	11.9
	5 years-10 years	59	36.9
	10 years and above	82	51.3

Table 2. Reliability test

Scale and its fields	Internal consistency reliability	Replay consistency
Academic area	0.891	0.921
Psychological and social area	0.912	0.901
Technological area	0.871	0.897
Skills area	0.856	0.872
Distance learning tool	0.921	0.931
Implementation and supervision	0.901	0.890
Planning and preparation	0.900	0.891
Evaluation and feedback	0.913	0.912
Communication with employees	0.891	0.901
Professional development and continuous Improvement	0.878	0.898
Quality of practical applications tool	0.934	0.945

Study Sample

The study sample was selected using the intentional (purposive) sampling method, targeting all teachers working with early childhood education students during the academic year 2024/2025. The researchers conducted a comprehensive survey of the entire study population (190 teachers), but after applying the inclusion criteria and accounting for incomplete or non-responses, the final sample consisted of 160 male and female teachers. This sample represented 100% of eligible participants, distributed as shown in **Table 1**.

Study Tool

For the purpose of developing the tool, the researchers referred to educational literature and previous studies related to the impact of distance learning on the quality of practical applications for early childhood education students. The researchers based on the tools used in previous studies, such as Alzayed's (2022) study. The tool consisted of two main sections: The first section dealt with the level of distance learning in secondary schools and included four areas: (academic, psychological and social, technological, and skill areas). The second section focused on the quality of practical applications, which included five areas: (implementation and supervision, planning and preparation, assessment and feedback, communication with employees, professional development and continuous improvement).

Validity of the Study Tool

The questionnaire was applied to a survey sample consisting of 30 male and female teachers from the study population and outside the sample. The findings indicated that the correlation coefficients for all items were greater than 0.20, which was considered appropriate to achieve the study's objectives and goals.

Proof of the Study Tool

Two methods were used to verify the reliability of the study tool. The first method is retesting by redistributing the tool to the survey sample two weeks after the initial application. The second method is calculating Cronbach's alpha coefficient for the survey items, as shown in **Table 2**.

Table 2 reflects the quality of the tool used to measure the quality of practical applications in distance learning, based on the values of internal consistency reliability and retesting reliability, all of which are high, exceeding 0.850. The psychological and social field shows the highest reliability among the individual dimensions 0.912 for internal consistency and 0.901 for retesting), highlighting its importance in evaluating the distance learning experience. Meanwhile, the skills dimension has relatively lower reliability values (0.856

Table 3. The arithmetic means

Arithmetic mean	Level
1.00 < mean < 1.80	Very low
1.80 < mean < 2.60	Low
2.60 < mean < 3.40	Moderate
3.40 < mean < 4.20	High
4.20 < mean < 5.00	Very high

Table 4. Arithmetic means and standard deviations for the areas of the level of distance learning

Number	Field	Arithmetic mean	Standard deviation	Rank	Level
1	Academic area	3.90	.754	1	High
3	Psychological and social area	3.89	.752	3	High
2	Technological area	3.81	.808	2	High
4	Skills area	3.81	.754	4	High
	Distance learning tool	3.85	.687		High

and 0.872) but still falls within acceptable ranges. The practical applications quality tool recorded the highest values (0.934 for internal consistency and 0.945 for retesting), reflecting its strength and accuracy in assessment.

A significant convergence between the internal consistency and retesting values is observed for most dimensions, indicating stability and consistency of the tool over time. This indicates that the tool is comprehensive and accurate, covering academic, psychological, technological, and skills-related aspects, in addition to organizational aspects such as planning and evaluation. It is recommended to confidently use the tool in research, with the possibility of enhancing the skills dimension to improve reliability.

Correction of the Study Tool

To evaluate the arithmetic means of the items, fields, and the tool as a whole, the statistical criterion was based on the following equation:

Category = (Highest value - lowest value) ÷ number of options.

Category = (5 - 1) = 4 ÷ 5 = 0.8. Thus, the criterion for evaluation is shown in **Table 3**.

Study Variables

The study included the following variables:

1. **Independent variable:** Distance learning.
2. **Dependent variable:** Quality of practical applications.

Statistical Treatment

To answer the first and second research questions, the arithmetic means and standard deviations were used and to answer the third question, Pearson's correlation coefficient test was used.

PRESENTATION OF RESULTS

Results of the First Question

The first question stated: " What is the level of distance learning in secondary schools within the Green Line from the teachers' perspective?"

To answer this question, the arithmetic means and standard deviations of the participants' estimates on the areas of the level of distance learning in secondary schools inside the Green Line were calculated. **Table 4** shows these results.

The findings of **Table 4** indicate that all areas of distance learning received high ratings within the "High" level, reflecting an overall positive evaluation. The "academic area" came in first with an arithmetic mean of 3.90, indicating a significant interest from participants in this aspect. Example questionnaire items for this area included statements such as: "Distance learning helps students achieve academic objectives effectively"

Table 5. Arithmetic means and standard deviations for the participants' estimates on the level of quality of practical applications

Number	Field	Arithmetic mean	Standard deviation	Rank	Level
2	Implementation and supervision	2.90	.972	1	Moderate
1	Planning and preparation	2.86	1.060	2	Moderate
3	Evaluation and feedback	2.80	1.022	3	Moderate
4	Communication with employees	2.80	1.052	4	Moderate
5	Professional development and continuous improvement	2.72	1.024	5	Moderate
	Quality of practical applications tool	2.81	.950		Moderate

and "Teachers are able to deliver course content clearly through online platforms." It was followed by the psychological and social area with an arithmetic mean of 3.89, with sample items like: "Distance learning supports students' social interaction through virtual collaboration" and "Online learning positively affects students' motivation and self-confidence." In last place, the skill area had an arithmetic mean of 3.81, with example items such as: "Distance learning enhances students' practical skills in simulated environments" and "Teachers can assess students' skill development effectively through online tools." Overall, the general arithmetic mean for distance learning was 3.85, reflecting a high level in all areas. This result is implicitly consistent with the findings of Stevanović et al. (2021).

Results of the Second Question

The second question stated: " What is the level of quality of practical applications among early childhood education students in secondary schools within the Green Line from the teachers' perspective?"

To answer this question, the arithmetic means and standard deviations of the participants' estimates of the areas of quality of practical applications were calculated. **Table 5** shows these results.

The findings of the **Table 5** show that all areas related to practical applications received an "moderate" rating with arithmetic means from 2.72 to 2.90. The "implementation and supervision" area ranked first with an arithmetic mean of 2.90, indicating that this area received the highest evaluation among the listed areas. Example questionnaire items for this area included: "Teachers provide clear guidance during practical sessions" and "Students receive timely supervision while performing practical tasks." It was followed by "planning and preparation" with an arithmetic mean of 2.86, with items such as: "Lesson plans are effectively designed to support practical activities" and "Materials and resources are adequately prepared before practical sessions." Both "evaluation and feedback" and "communication with the workers" received an arithmetic mean of 2.80, with sample items like: "Students receive constructive feedback on their practical performance" and "Teachers maintain effective communication with colleagues and students during practical training." Regarding "professional development and continuous improvement," it received the lowest mean score of 2.72, with items such as: "Teachers engage in ongoing professional development to enhance practical instruction" and "Opportunities for reflective practice are provided regularly." In general, the findings show that the quality of practical applications needs improvement in all fields studied. This result aligns with Al-Hammouri & Abu-Shanab (2018) study, which indicated that distance learning had moderate effects on class participation and the quality of learning activities, emphasizing the need to enhance practical items. Similarly, Barbag (2024) study highlighted challenges in effective planning and preparation during the COVID-19 pandemic, which explains the moderate rating in areas such as "planning and preparation" and "evaluation and feedback" in the tool. Furthermore, Elsalem et al. (2021) study showed that distance learning lacks the personal interaction and communication necessary to enhance practical applications, reinforcing the importance of improving various aspects of the learning process. These studies support the findings that show the need to improve all areas related to practical applications, especially the distance learning environment, which requires comprehensive development in organization, planning, and implementation.

Results of the Third Question

The third question stated: "Is there a statistically significant correlation at the significance level ($\alpha \leq 0.05$) between distance learning and the quality of practical applications among early childhood education students in secondary schools within the Green Line from the teachers' perspective?"

Table 6. Pearson's correlation test between distance learning and the quality of practical applications

Distance learning areas	Correlation	Quality of practical applications
Academic area	Pearson's correlation	-.665**
	Statistical significance	.000
	Number	160
Psychological and social area	Pearson's correlation	-.727**
	Statistical significance	.000
	Number	160
Psychological and social area	Pearson's correlation	-.708**
	Statistical significance	.000
	Number	160
Skills area	Pearson's correlation	-.580**
	Statistical significance	.000
	Number	160
Distance learning tool	Pearson's correlation	-.749**
	Statistical significance	.000
	Number	160

To answer this question, Pearson's correlation coefficients were extracted between distance learning and its areas, and the quality of practical applications for early childhood specialization students in secondary schools inside the Green Line, from the teachers' perspective, as shown in **Table 6**.

The findings of the correlation analysis indicate a significant negative relationship between the areas of distance learning and the quality of practical applications at the significance level ($\alpha = 0.05$). Specifically, the overall relationship between "distance learning" and the quality of practical applications was strong and negative, reaching (-0.749). Similar negative correlations were observed with the "technological area" (-0.727) and the "psychological and social area" (-0.708), while the "academic area" (-0.665) and the "skills area" (-0.580) also showed negative associations.

This strong negative relationship can be attributed to several key factors. Distance learning inherently limits direct personal interaction between teachers and students, which is critical for activities that require ongoing guidance, supervision, and immediate feedback. Additionally, planning and implementing practical activities in a distance learning environment is challenging, as it requires adapting hands-on tasks to online formats, which can reduce students' ability to apply theoretical knowledge in practice. The lack of physical presence and real-time monitoring restricts experiential learning opportunities, thereby lowering the overall quality of practical applications.

Moreover, technological readiness and access issues may exacerbate this negative relationship. Students and teachers who are less familiar with digital tools or face unreliable internet connectivity may struggle to engage fully in online practical activities, further hindering performance. The psychological and social dimensions are also affected, as the absence of direct interaction can lead to feelings of isolation and reduced motivation, which negatively influence students' ability to participate effectively in practical exercises.

These findings are consistent with previous research. Elsalem et al. (2021) highlighted that distance learning limits effective teacher-student interaction, reducing support for practical activities. Al-Shamsi et al. (2023) found that the absence of direct contact negatively impacts students' values and behavior, thereby affecting the quality of practical applications. Al-Hammouri & Abu-Shanab (2018) reported moderate effects of distance learning on class participation, which can explain difficulties in applying knowledge practically. Barbag (2024) and Bashir and Lapshun (2025) emphasized that the lack of personal interaction undermines psychological and social support, further decreasing the effectiveness of practical learning.

In conclusion, the negative correlation underscores the structural and pedagogical obstacles faced by students and teachers in distance learning environments, particularly in fields requiring intensive hands-on experience, such as early childhood education. These results highlight the need for innovative strategies to enhance interaction, guidance, and practical engagement in online learning contexts.

Recommendations

In light of the findings, the study recommends the following:

1. Prioritizing face-to-face learning for practical applications in early childhood education programs whenever possible, to ensure effective skill development.
2. Developing and enhancing electronic and blended training programs that address the specific practical needs of students.
3. Providing continuous professional development for both students and teachers on the latest digital teaching strategies and tools to improve the quality of practical training, especially during crises and emergencies.
4. Conducting comprehensive studies on the challenges and limitations of distance learning to ensure inclusivity of all learners in educational policies and procedures.
5. Exploring further research on the obstacles of distance learning during exceptional circumstances, such as conflict or emergencies, and examining their relationship with other educational variables to inform policy and practice.

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Declaration of interest: The authors declared no competing interest.

Data availability: Data generated or analyzed during this study are available from the authors on request.

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