Blended Learning in Palestinian Public Schools: A Study of the Perspectives of Principals and Teachers

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Abstract

This study aimed to assess the implementation of blended learning in Palestinian public schools in the Nablus area, based on principals and teachers' perspectives. The study also examined whether this level varied by gender, school location, and educational stage. The study involved a random sample of 82 principals (57 males and 25 females) and 422 teachers (117 males and 305 females). An electronic questionnaire covering seven domains used to collect data on the extent of blended learning implementation. The results revealed a moderate level of blended learning implementation, with principals reporting slightly higher levels compared to teachers. Female teachers expressed a more positive view of blended learning compared to their male counterparts. Significant differences found based on school location, with urban schools having better access to technological resources and thus higher implementation levels. However, no significant differences observed across different educational stages. The study highlights several challenges in implementing blended learning, including limited technological infrastructure, poor internet access, and the need for continuous teacher training. The findings suggest that while blended learning implemented at a moderate level, further support needed to address these challenges, particularly in rural schools. The study recommends that the Ministry of Education improve resources in rural areas, provide more professional development for teachers, and enhance access to digital tools for both students and educators.

***Key words**: blended learning, public schools, principals, and teachers.*

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التعلم المدمج في المدارس الحكومية الفلسطينية: دراسة من وجهة نظر المديرين والمعلمين

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مستخلص الدراسة

هدفت هذه الدراسة إلى تقييم درجة تطبيق التعليم المدمج في المدارس الحكومية الفلسطينية بمنطقة نابلس، وفقًا لتصورات المديرين والمعلمين، واستكشاف ما إذا كان هذا التطبيق يختلف بناءً على متغيرات الجنس، موقع المدرسة، والمرحلة التعليمية. وتم اختيار عينة عشوائية تتكون من 82 مديرًا (57 من الذكور و25 من الإناث) و422 معلمًا (117 من الذكور و305 من الإناث)، وتم استخدام استبانة الكترونية تتضمن سبعة مجالات لقياس مدى تطبيق التعليم المدمج في المدارس الحكومية الفلسطينية بمنطقة نابلس. وقد أظهرت نتائج الدراسة أن درجة تطبيق التعليم المدمج كانت متوسطة وفقًا لتقييمات المديرين والمعلمين. وقد أشار المديرون إلى تطبيق أعلى للتعليم المدمج مقارنة بالمعلمين، كما أظهرت النتائج أن المعلمات قيمّن تطبيق التعليم المدمج بشكل إيجابي أكثر من المعلمين الذكور. وتبين أن هناك فرقًا ذا دلالة إحصائية بين مدارس المدينة والقرية في نابلس، حيث كانت مدارس المدينة تتمتع بمستوى أعلى لتطبيق التعليم المدمج، وذلك لتوفر الموارد التكنولوجية والإنترنت بشكل أفضل مقارنة بمدارس القرية، ومن ناحية أخرى، لم تظهر نتائج الدراسة أي فروق ذات دلالة إحصائية بناءً على المرحلة التعليمية للمدرسة. كما أظهرت نتائج الدراسة بعض التحديات التي تعيق تطبيق التعليم المدمج، ومن هذه التحديات نقص البنية التحتية التكنولوجية، وضعف الوصول إلى الإنترنت، مما يتطلب دعمًا إضافيًا وخصوصا في مدارس القرى. وأوصت الدراسة بضرورة تعزيز التدريب المهني للمعلمين، وتوفير المزيد من الموارد الرقمية لتحسين تطبيق التعليم المدمج في المدارس الحكومية الفلسطينية.

الكلمات المفتاحية: التعليم المدمج، المدارس الحكومية الفلسطينية، المديرون، المعلمون.

Introduction

We live in an era of remarkable scientific advancements and a revolution in information and communication technology. A defining characteristic of this era is the rapid dissemination of information and the widespread sharing of experiences. Consequently, education systems must adapt to these rapid changes to remain effective. Technological progress has brought about significant transformations in educational environments, marked by the increased integration of modern technologies and multimedia in classrooms worldwide (Caner, 2012). In this context, the teaching and learning process has evolved beyond the traditional teacher-student dynamic. Education now emphasizes how students acquire, interact with, and apply knowledge, as well as their ability to communicate effectively. Education is increasingly viewed as a communicative process, where all elements—sender, receiver, and communication channels—interact dynamically. Advances in communication technologies have enhanced teacher-student interactions, whether synchronous or asynchronous, through diverse media such as text, audio, images, and other digital tools (Yau & Cheng, 2012).

The widespread adoption of e-learning systems, as noted by Bismala (2022), has generated positive outcomes in educational practices, encouraging many institutions to embrace this approach. However, E-learning also faces notable limitations, such as social isolation, reduced face-to-face interaction, and challenges in ensuring quality and reliability (Yau & Cheng, 2012). These challenges have underscored the need for a hybrid educational model that integrates the strengths of both e-learning and traditional education—known as blended learning. This approach aims to optimize the educational process by combining the best elements of each system (Alammary et al., 2014).

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The rapid development of information and communication technologies has led to innovative teaching methods that reduce reliance on traditional approaches while leveraging modern strategies aligned with technological advancements (Tossavainen & Faarinen, 2019). Blended learning has emerged as a cornerstone of educational reform, offering significant benefits and addressing critical challenges, particularly during crises like the COVID-19 pandemic. As a result, educational institutions have increasingly embraced blended learning to achieve optimal outcomes in a rapidly changing educational landscape.

1. Problem Statement

We are currently in an age of significant scientific advancements and a revolution in information and communication technology. A defining characteristic of this era is the rapid pace at which information circulates and experiences are exchanged. As a result, education systems need to adapt to these fast-paced changes. Driven by technological progress, educational environments have undergone numerous transformations, with the increased use of modern technologies and multimedia in schools across the globe (Caner, 2012).

These developments and crises have led educational systems across the globe to utilize all available resources and capabilities to adapt to these changes and manage these crises. One of the approaches has been the implementation of a blended learning system. This approach combines traditional in-person classroom education with remote online learning, integrating the two as needed and depending on the type of crisis, as discussed (Harida, 2020). The goal is to ensure continuity, achieve desired educational objectives effectively, and attain the best possible outcomes, as elucidated by (Al-Fodeh et al., 2021). Given that the experience of blended learning in Palestine is relatively recent, studying its

effectiveness, challenges, difficulties, and obstacles is crucial. This is especially true considering the implementation took place amid evident weaknesses in the infrastructure and a lack of necessary expertise and qualifications for using technological tools and platforms for education. Additionally, there is a deficiency in psychological readiness for employing such a mode of education. The aim is to identify the strengths and difficulties of this new experience and subsequently propose a model that used and consulted in the future within Palestinian government schools. Hence, the current study attempts to assess the extent to which the blended learning system employed in government schools under the supervision and management of the Directorate of Education in Nablus. This assessment done from the perspectives of both administrators and teachers. The study also investigates whether the assessment varies among administrators and teachers based on gender, the location of their school, the educational stage of the school, and their level of technological expertise.

2. The importance of the study

Education is undoubtedly the key foundation for the progress and development of societies and nations. In the context of the Arab world, including Palestine, it is apparent that the education system is still depend on traditional face-to-face teaching, where teachers bear most of the responsibility, and students tend to adopt a passive role. In light of the limitations of this traditional approach, many educational institutions—particularly in the current era and following the COVID-19 pandemic—have been working to improve their systems by diversifying teaching methods and introducing new approaches. The aim is to make students more active, engaged, and self-reliant. At the same time, there is an increasing demand for teachers to be more innovative, modern, and well prepared. Teachers are now expected to not only deliver lessons but also design and plan the educational process,

evaluate its outcomes, and serve as mentors and guides to their students, as highlighted by Jaeger et al. (2020).

The emergence of modern educational concepts has encouraged institutions, schools, and universities to explore the adoption of blended learning as a key educational strategy, as noted by Mphahlele et al. (2021). This shift became more pronounced, especially after the global spread of the COVID-19 virus in 2019. The pandemic significantly accelerated the implementation of blended learning by the end of 2019 in many countries, including Palestine, as observed by Santhanasamy (2022).

The importance of this study lies in its attempt to examine the adoption of this relatively new and vital educational approach, which increasingly embraced by Palestinian educational institutions, leveraging technological advancements as pointed out by Harida (2020). This shift has gained even more significance during the period marked by the COVID-19 pandemic, which prompted social distancing and a greater reliance on online and distance learning. The study aims to provide valuable insights into blended learning, contributing to the Arab academic community in general and the understanding of its application in Palestine, especially during this era of rapid change and innovation.

3. Theoretical Background

The world is undergoing a significant scientific and technological revolution, profoundly affecting various aspects of life, including agriculture, industry, commerce, health, economy, and education. Given the education system's critical role in shaping skilled individuals, there is an urgent need to adopt educational methods aligned with the electronic revolution (Stosic et al., 2020). This revolution is characterized by the emergence of educational computers, diverse technological educational tools, electronic platforms, multi-faceted applications, and more, as pointed out by (Caner,

2012). These advancements aim to address the emerging educational challenges posed by the technological revolution, such as the explosion of information and knowledge, the increase in the student population, and the development and diversification of technological tools and communication methods. Consequently, new educational strategies needed to prepare students who are skilled, creative, and capable of contributing positively to society.

The importance of leveraging instructional technology has become even more apparent in the aftermath of the COVID-19 pandemic, given the significant educational challenges it posed to students, teachers, administrators, supervisors, and others within the education system. The most prominent of these challenges was maintaining the continuity of education at various levels despite the lockdown measures that forced people to stay at home and disrupt many daily activities. Many countries around the world sought to mitigate the pandemic's effects, and the education sector attempted to minimize the potential disruptions caused by the suspension of traditional face-to-face learning while maximizing the use of remote learning (e-learning) and blended learning, as discussed by (Ayasrah et al., 2022), to achieve the desired educational goals.

Both E-learning and blended learning have their advantages, and as educational challenges, and environmental, political, and social crises can arise at any time, educational institutions worldwide have embraced the integration of these systems. This integration, known as blended learning, entails updating educational systems, and moving away from traditional teaching strategies where the teacher is the central figure controlling most of the elements and aspects of the teaching process, transmitting knowledge in a didactic manner. In the modern educational systems, the role of the teacher has evolved. They have become planners, designers, supervisors, and motivators of the educational process, encouraging students to interact, engage, and contribute to enriching the

content from various sources. The teacher evaluates outcomes, and with the advent of computers, the internet, and technological developments, along with the adoption of remote education systems by some, the teacher's role has become more effective, active, and responsible for their teaching performance and the student's achievements (Frederick, 2017)

In this context, the role of the student has also changed in the 21st century, becoming more positive, active, and engaged, moving from a passive recipient of information to a proactive participant responsible for their learning.

The student is expected to interact with multimedia educational materials, explore various learning sources, and effectively use technology for learning and communication, utilizing social media platforms and technological applications such as Zoom and Teams, among others.(Sansone et al., 2021). This is a significant shift from the traditional role of the student, which was limited to receiving, memorizing, and recalling information without much critical thinking, critique, or contribution to the preparation of content.

Moreover, in the Palestinian context, the role of the teacher and their responsibilities in the blended learning system, which combines traditional face-to-face lessons with the meaningful use of technological tools inside the classroom, as well as virtual lessons and synchronous and asynchronous learning via the internet, have been redefined. In the academic year 2022-2023, a new performance evaluation model introduced for Palestinian teachers, emphasizing their updated role in the blended learning environment.

Overall, the integration of technology in education has led to changes in the roles and responsibilities of both teachers and students, driven by the necessity to adapt to the evolving technological landscape and prepare individuals who can thrive in a modern, technology-driven world. The blended learning system considered synonymous with modern education,

combining traditional face-to-face methods with contemporary electronic methods. It defined differently by educators. For example, (Al-Bazar et al., 2021) viewed it as an alternative approach compared to traditional e-learning, characterized by educational flexibility, learner control over the learning environment and interaction within it, and the enhancement of an effective learning atmosphere.

Ghimire (2022) referred to it as a hybrid model that allows the use of traditional teaching methods alongside modern electronic resources and activities simultaneously.(Cronje, 2020) and (Frederick, 2017) Defined it as a blend of interactive face-to-face learning in traditional classrooms and synchronous and asynchronous remote learning, integrated effectively. (Dziuban et al., 2018) Viewed it as the integration of traditional face-to-face methods with remote learning through optimal utilization of modern technology and the internet.

(Kumar et al., 2021) Defined blended learning as an organized integration of e-learning and traditional face-to-face learning methods. It employs computer and internet-based technological tools and applications, combining face-to-face interaction between teachers and learners simultaneously. (Lim & Yoon, 2008) Described it as a mixture of traditional roles of teachers in physical classrooms and complementary roles in virtual classrooms for electronic learning. (Noroozi et al., 2021) Characterized it as a method that organizes the combination of e-learning advantages with traditional education's interaction, direct engagement, practice, and application of various skills for maximum educational benefit.

Blended learning emerged strongly in response to excessive use of technology or exclusive reliance on traditional methods. This approach combines resources, activities, and technological tools to achieve educational goals. It offers flexibility, diverse strategies, and multiple avenues for learning. It is seen as a model capable of developing cognitive

processes and enhancing the learner's personality. The integration of traditional and electronic teaching methods within the blended learning system has garnered substantial attention from educators and researchers. This approach believed to lead to better learning outcomes by accommodating diverse learning styles and strategies.

Considering the importance and effectiveness of the blended learning system, it is adopted in educational institutions, especially during crises such as pandemics or emergencies, to ensure continuity and success in achieving educational objectives. It combines both traditional and electronic methods to optimize learning experiences and outcomes.

4. Methodology

The descriptive-analytical methodology employed in this research due to its alignment with the study's nature, objectives, issues, tools, description, and evaluation.

Population

The study's population consisted of all male and female principals and teachers working in government schools within the Directorate of Education in Nablus. The data collection conducted during the academic year 2021-2022. The population included 182 principals and 2967 teachers, as reported by the Research, Development, and Quality Department in the Directorate of Education in Nablus for the mentioned academic year.

Table 1
The Original Population distributed according to gender among male and female principals and teachers in Palestinian government schools in the Nablus Directorate, based on records from the Palestinian Ministry of Education for the year 2021-2022.

Job title	Social gender		
	Male	female	Total
principal	86	96	182
Teacher	1251	1716	2967
Total	1337	1812	3149

From the previous table, it is evident that the numbers of female principals and teachers are greater than the numbers of male principals and teachers.

Sample of the Study

A random sample selected from the original population of principals and teachers in the schools of the Directorate of Education in Nablus, based on the variable of job title. The sample size for the questionnaire was (504): (82) principals and (422) teachers, of which (174) were males and (330) were females.

Study Questionnaire

After reviewing the educational literature and a sample of relevant previous studies on the topic of blended learning, and also referring to the Palestinian Ministry of Education's guide on school improvement based on standards (Educational Institute, 2010), the researcher constructed the questionnaire of the current study using a five-point Likert scale. This was done with the aim of exploring the perspectives of principals and teachers regarding the extent of implementing blended learning in Palestinian government schools under the supervision of the

Directorate of Education in Nablus. The final version of the questionnaire consisted of (49) items distributed across the following seven domains:

1. Domain of Blended Learning Planning, consisting of 6 items.
2. Domain of Managing the Learning and Teaching Process, consisting of 12 items.
3. Domain of Efficient Management of Educational Resources, consisting of 6 items.
4. Domain of Technology Integration, consisting of 7 items.
5. Domain of Collaboration within and outside the School, consisting of 5 items.
6. Domain of Utilizing Appropriate Assessment Tools, consisting of 6 items.
7. Domain of School Psychological Climate, consisting of 7 items.

The Questionnaire's Validity

The credibility of the reviewers:

After developing the initial version of the questionnaire, which comprised 54 items covering the seven studied domains related to the implementation of blended learning, the researcher verified its validity and its ability to measure what it was intended to measure. This was achieved by presenting it to a panel of experts in the field of education, teaching, and educational technology. This panel included 5 university professors, 2 principals, and 2 teachers, making a total of 9 experts.

The reviewers were provided with a definition of blended learning to guide them during their assessment of the questionnaire's items. They were given instructions on how to respond to the questionnaire and how to evaluate each item by assigning an appropriate weight to it. They were also asked to determine whether each item truly reflected the reality of

blended learning and whether it pertained to the seven domains being measured from their perspective. The reviewers were encouraged to express their opinions, suggest modifications, deletions, additions, or rephrasing of items whenever they deemed it necessary.

Furthermore, the reviewers were requested to share their observations and opinions regarding the precision of item formulation, the clarity of content, the relevance to the measured topic, and the linguistic accuracy and educational terminology of the words used in the items. After collecting the feedback from the reviewers and considering their suggestions, the researcher finalized the questionnaire, resulting in a total of 49 items.

Following this, the Content Validity Ratio (CVR) of the questionnaire was calculated using the Lawshe's formula.

$$\mathbf{CVR = (N1 - N2) / N}$$

Where: CVR is the Content Validity Ratio. N1 is the number of reviewers who consider the item relevant to the studied topic. N2 is the number of reviewers who consider the item not relevant to the studied topic. N is the total number of reviewers.

After statistically processing the responses of the reviewers to the questionnaire items, a CVR value of 0.91 was obtained, which is considered high.

The reliability of the questionnaire

The questionnaire's reliability was assessed using the Cronbach's Alpha coefficient, which reflects the internal consistency within the questionnaire items as a whole and within each of its domains, concerning both principals' and teachers' responses.

The overall reliability coefficient of the questionnaire reached (0.90) for the responses of principals, with a range

across each domain of (0.77-0.89). As for the teachers' responses, the reliability coefficient was (0.92), with a range across each domain of (0.71-0.88). All of these are high reliability coefficients that fulfill the requirements of scientific research purposes.

5. Results

Question 1: "What is the overall degree of blended learning implementation for both principals and teachers in Palestinian government schools in the Directorate of Education in Nablus?"

Upon referring to the mean scores for both principals and teachers on the survey items that assessed the implementation of blended learning in government schools within Nablus Directorate, the mean score for principals was (M=3.33) out of a possible five points, indicating a percentage of (66.6%) and a moderate average estimation. As for the teachers, their mean score was (M=3.16), representing a percentage of (63.2%) with a moderate average estimation as well.

Question 2: Do principals and teachers in Palestinian government schools in the Directorate of Education in Nablus differ in their perception of blended learning implementation with a statistically significant difference attributed to the gender variable?

The analysis of variance, using the "F" test, revealed a statistically significant difference indicating that the perception of principals towards blended learning implementation was higher (M=3.33) with a statistically significant difference (p=0.00) compared to the teachers' perception (M=3.16). However, this difference was not observed between male (M=3.15) and female (M=3.21) teachers' perceptions.

Moreover, the "F" test showed a statistically significant interaction (p=0.02) between the job title (principal, teacher) and the gender variable (male, female). This indicated that there was a difference in male teachers' perception of blended

learning implementation (M=3.05) compared to female teachers' perception (M=3.21), favoring female teachers. On the other hand, there was no difference in male principals' perception of blended learning implementation (M=3.35) and female principals' perception (M=3.28).

Question 3: Do principals and teachers in Palestinian government schools in the Directorate of Education in Nablus differ in their perception of blended learning implementation with a statistically significant difference attributed to the school location variable?

The two-way analysis of variance using the "F" test showed a statistically significant difference (p=0.00) for the job title variable, indicating that the perception of principals towards blended learning implementation was higher (M=3.33) with a statistically significant difference compared to teachers' perception (M=3.16). Additionally, for the school location variable (p=0.03), the analysis revealed that the perception of principals and teachers in Nablus city schools towards blended learning implementation (M=3.24) was higher than the perception of principals and teachers in villages under its jurisdiction (M=3.15). However, this difference did not appear in the interaction between the job title variable and the school location variable.

Question 4: Do principals and teachers in Palestinian government schools in the Directorate of Education in Nablus differ in their perception of blended learning implementation with a statistically significant difference attributed to the educational stage of the school?

The two-way analysis of variance using the "F" test showed a statistically significant difference (p=0.00) for the job title variable, indicating that the perception of principals towards blended learning implementation was higher (M=3.33) with a statistically significant difference compared to teachers' perception (M=3.16). However, no statistically significant

difference was observed in the perception related to the educational stage of the school (p=0.12) between elementary lower-stage schools (M=3.14), elementary upper-stage schools (M=3.22), and secondary schools (M=3.14).

Furthermore, an interaction effect between the job title variable and the educational stage of the school was found to be statistically significant (p=0.03). Subsequent post hoc analysis using the Scheffe test indicated that the perception of blended learning implementation by principals in secondary stage schools (M=3.91) was higher with a statistically significant difference (0.028) compared to principals in elementary lower stage schools (M=3.33), without significant differences between elementary upper stage schools (M=3.30). No such statistically significant differences were observed among teachers' perceptions, whether in elementary lower-stage schools (M=3.04), elementary upper-stage schools (M=3.21), or secondary schools (M=3.08).

Table 2

Results of Post Hoc Analysis using Scheffe Test for the Evaluation of Principals' and Teachers' Perception of Blended Learning Implementation Considering the Educational Stage in Palestinian Government Schools in Nablus Directorate.

principals	Elementary lower	Elementary upper	Secondary
Elementary lower		0.14	* - 0.028
Elementary upper	0.14		0.60
Secondary	* 0.028	0.60	
Teachers			
Elementary lower		0.15	0.07
Elementary upper	0.15		0.63
Secondary	0.07	0.63	

The previous table shows the existence of differences in favor of principals in secondary schools.

Discussion

The results indicated that the degree of utilizing blended learning in Palestinian government schools under the Directorate of Education in Nablus, both from school principals and teachers, was moderate according to the researcher's established rating scale. The overall average for principals was (M=3.33) with a percentage of (66.6%), and for teachers, it was (M=3.16) with a percentage of (63.2%), with a significant statistical difference (p=0.00) favoring principals.

The reason behind this moderate degree could be attributed to the novelty of the experience, especially as it emerged during the COVID-19 pandemic that swept the world at the end of 2019, disrupting most countries, and institutions, including the Palestinian education system that was not accustomed to this new experience. Additionally, there were shortcomings in the skills of using technological tools, applications, and various programs, along with the inadequacy of the internet network and its unavailability for many students and teachers. Many students and even teachers lacked computers at their homes with internet connectivity. Furthermore, there was a lack of acceptance by students for this mode of education, and their motivation towards it was low, mainly due to their unfamiliarity with it, especially among primary and secondary-level students. This also coupled with a lack of awareness among parents regarding the importance of using this type of education and supervising their children during it. All these factors contributed to the utilization of blended learning resulting in a moderate degree.

Despite this moderate degree, there are still diverse stories and successful instances amidst the many obstacles, challenges, and difficulties, particularly given the scarcity of necessary resources and material and technological

requirements, along with the shortage of experience and skills. However, this experience has been steadily strengthening day by day, especially during the COVID-19 pandemic and beyond, confirming that blended learning has become a reality. The need to employ it in this technological age has become an urgent necessity that tops the priority list, as emphasized (Harida, 2020). Despite its novelty and the challenges, it accompanied, this experience encouraged the Palestinian educational apparatus to seek insights from the educational experiences of other countries, to keep abreast of the latest technological educational developments, and to utilize them to the best of their abilities. Implementing these strategies in our schools to enhance the education system's development and elevate it from a moderate to a high degree in the future, in a manner that achieves the desired educational objectives, as indicated by (Aji et al., 2020) when discussing blended learning and its potential to improve educational outcomes and outputs.

As for whether the degree of assessment of school principals and teachers regarding the utilization of blended learning differs based on the social gender variable, the study's results indicated no statistically significant differences between the assessment scores of males, whether they were principals or teachers, and the assessment scores of females. This result explained by the fact that both male and female principals and teachers equally engaged in the experience of blended learning and worked towards its success. They adhered to the methods and procedures defined by the ministry for implementing blended learning and its instructions.

Furthermore, the problems that school principals and teachers might face could be similar regardless of their gender. Especially since most of these problems are related to infrastructure and are not gender-specific. The experience itself posed a significant challenge for both male and female teachers and principals alike. Each of them tried to make the experience

a success within the framework of their school environment. They collaborated with their colleagues in other schools, shared experiences, and especially utilized media platforms and social networking sites to connect with their peers and discuss common educational issues. This has made blended learning one of the most important topics that school principals and teachers, regardless of their gender, engage with, discuss, and express their opinions about, as it becomes a shared concern and priority in the educational context. Regarding the interaction between the job title variable and the social gender variable, the study revealed a statistically significant difference ($p=0.02$), indicating that female teachers' assessment of the utilization of blended learning was better than that of male teachers. However, such a difference not observed in the assessment of male principals and female principals. This result explained by the fact that female teachers often tend to be more precise and careful in mastering the tasks assigned to them. Additionally, the teaching profession generally aligns well with their nature and constitutes a significant part of their professional lives. Therefore, they put in extra effort in their work and cope with work-related pressures.

Regarding the result related to the degree of blended learning utilization by teachers and principals in schools under the Nablus Directorate, based on the school's location, the results indicated a statistically significant difference in relation to the school location variable ($p=0.03$) in favor of city schools. The researcher explained this result by the proximity of city schools to the Education Directorate office, facilitating access in case of technical problems or malfunctions, and easing the implementation of blended learning. Additionally, the majority of city schools have the required financial support to purchase the necessary devices and technological tools for using and activating technology in classrooms, which contributes to the utilization of blended learning.

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In contrast, most village schools struggle with limited financial support due to economic conditions in many villages within the Nablus Directorate. The majority of villagers are engaged in government jobs with limited salaries, while city residents are involved in trade and the private sector, leading to better overall financial situations. This circumstance may encourage city residents to provide the necessary educational devices for students to use at home, with the support, supervision, and oversight of their schools.

As for the extent of blended learning utilization by school principals and teachers considering the educational stage of the school (primary lower, primary upper, or secondary), the results revealed no statistically significant differences among them. This result rationalized from a perspective that suggests that both principals and teachers in all schools within the directorate are equally engaged in the utilization of blended learning, regardless of the educational stage of the school (lower primary, upper primary, or secondary). From another viewpoint, this experimental approach is still new for all schools across their various educational stages. Additionally, the majority of schools in the directorate have similar resources and receive the same instructions from the ministry. The experience of both principals and teachers, along with the students, in blended learning is nearly identical. All these reasons might explain the absence of statistically significant differences attributed to the variable of the school's educational stage where principals and teachers work.

Recommendations:

Based on the results of the current study, the researcher has formulated the following recommendations:

1. It is essential to work on enhancing the performance of the school staff in collaboration with students and their families to improve the utilization of blended learning in Palestinian government schools. This is particularly important since the

degree of utilization found to be moderate. Additionally, given that these schools have begun implementing this type of education, especially during times of crisis, there is a need for improvement.

2. Conduct training courses on the mechanisms, methods, and requirements of employing blended learning for both male and female principals and teachers, regardless of the educational stage of the schools they work in and the geographical location of their schools.
3. Increase the attention of the Directorate of Education in Nablus and the Ministry of Education in Palestine towards schools in rural areas, providing them with electronic devices and supporting tools for e-learning, as well as ensuring access to the internet.

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