

Elementary Stage Teachers' Towards Implementation of Blended Learning in Language Teaching and Challenges

I. Aburub¹, A. Al-Qerem², Mohammad. Al-Qerem¹, I. Jebreen³ and A. Nabor^{3,*}

¹Arab American University, Palestine

²Department of Computer Science, Faculty of Information Technology, Zarqa University, Zarqa, Jordan

³Department of Software Engineering, Faculty of Information Technology, Zarqa University, Zarqa, Jordan

Received: 6 Mar. 2023, Revised: 21 Sep. 2023, Accepted: 19 Jun. 2024

Published online: 1 Jul. 2024

Abstract: This study aims to investigate the attitudes of lower primary teachers toward blended learning in language teaching. For this study, we collected data from a random sample of 257 Palestinian teachers. Descriptive research was used to compose the questionnaire questions. The questionnaires were comprised of 39 questions divided into two sections: The Challenges of Blended Learning, and Teachers' Attitudes. The findings of the study highlighted several challenges preventing primary Arabic teachers from implementing blended learning. The challenges were divided into four categories: technical, educational, cultural, and workload. The findings also recorded average attitudes toward implementing blended learning in language teaching. The response rate of the first section, The Challenges of Blended Learning, was 66.6% on average. As for section two, teachers' attitudes toward blended learning, an average response rate of 67.4% was recorded regarding implementing blended learning. The study results suggest providing training for Arabic teachers on implementing blended learning in the classroom, integrating technology in schools to facilitate transitioning to online and blended learning, evolving the educational environment, and incorporating interactive technology to effectively implement blended learning.

Keywords: blended learning, language teaching, teachers' attitudes, Elementary stage, challenges.

1 Introduction

1.1 The Importance of Blended Learning

The technological and scientific advancements of the late 20th century greatly affected learning and teaching processes at different educational stages. Teaching and learning in this era of cognitive revolution and technological advancement are facing different challenges due to the impressive achievements and major advancements in the information technology field. Those advancements affect all aspects of life, especially educational systems. New digital educational systems have surfaced as a result of said advancements. There was a shift from traditional learning to digital learning that largely depended on self-directed, continuous learning. This shift was centered on learners since it promoted flexibility and resourcefulness and helped learners become more organized [52]. [44] emphasized the importance of implementing modern educational technologies as well as technical and electronic tools to promote interaction between learners and teachers by providing a variety of flexible distance-learning tools. Nonetheless, a total transformation from conventional to online learning presented great challenges in areas such as meeting the technical requirements, providing necessary resources, overcoming physical distance, etc. Therefore, blended learning served as an attempt to overcome the downsides of technology, integrate it to boost its effectiveness, and incorporate it into the traditional learning setting to promote efficiency and improve outcomes. Blended learning is not merely the use of technology in education; It is a reconstruction of the learning process while providing creative deliveries of content, which allows educational flexibility, and ensures a safe and healthy environment for teaching at home [21].

According to [17], blended learning strives to reconstruct the learning process by extending students' work and learning outside of the classroom, resulting in a continuous learning process. Blended learning entails the creation of successful pedagogies as well as the preservation of social experiences throughout the learning process, with a focus on active digital learning. In addition [40] emphasized that blended learning is consistent with constructivism and social constructivism theories. Blended learning altered several variables, including knowledge acquisition, sharing ideas and information, accessing and interacting directly with content, and promoting learning activities. Accordingly, implementing modern

*Corresponding author e-mail: anabot@zu.edu.jo

educational technologies facilitates language learning and engages learners in ways they prefer [47]. [41] also adds that using blended learning tools aims to aid teachers in traditional classroom settings and create a welcoming cooperative environment supported by computers. [4] believes in the integration of language and technology, which enhances the role of blended learning in language teaching. This approach supports language learning, improves student performance, and helps develop learners' writing and oral skills [38, 54]. This educational strategy boosts students' interest in learning languages with more engagement and excitement [15]. It also makes language lessons more intriguing and improves the learners' ability to communicate, interact, and excel in a language [56]. Furthermore, it helps students improve their reading comprehension and enrich their vocabulary. Additionally, it provides learners with an environment that incorporates indirect learning strategies, including metacognitive, affective, and social strategies [8]. [33] pointed out that blended learning, if effectively implemented, would be an efficient approach to enhancing students' reading, writing, speaking, and listening skills. In this digital age, there is an increased interest in implementing blended learning in language teaching with the rising use of technology in language learning. [49] express optimism about the impact of modern educational technologies on student productivity in language learning classrooms. [13] in their survey concluded that "Students showed positive attitudes when learning English through blended learning and social media applications". A study by [51] concluded that the integration of information and communication technology (ICT) in education had a big effect on improving students' language skills. They also argued that the integration of ICT and blended learning corresponds with learning styles and strengthens English language learners through active learning strategies unavailable in traditional learning settings. One other benefit to implementing blended learning in language teaching is easing the shift from language learning to communicating using the language. The developments in information technology encourage interaction between teachers and learners, whether through synchronous or asynchronous communication methods such as text messages, audio messages, static and animated images, and other educational tools [55]. The use of educational technology in teaching Arabic, as perceived by [56], helps develop higher-order thinking skills, including problem-solving, reasoning, organization, interpretation, evaluation, and judgment formation. Therefore, blended learning can be implemented through language labs, multimedia presentations, encouraging students to write and communicate with others through technology, and providing active learning tools that provide images, videos, practical applications, and language practice [42]. According to [26], communication networks and internet technology are new educational tools for teaching languages; they create a meaningful learning environment that engages learners, involves them in independent learning, considers individual differences, and allows for more student participation. Arabic has taken an active part in the digital world and the field of informatics, which only deems implementing blended learning in teaching it more necessary. Arabic is a rich language that can be easily integrated into computer systems and software; any language-related software program can surely be modified to include it. Additionally, various software and operating systems are now available in Arabic thanks to the expansion of the Arabic informatics market. Using Arabic is a regularly available option in different communication fields nowadays. Furthermore, the Internet Speculative Fiction Database can be adapted to use and teach Arabic [11]. Another factor that promotes implementing blended learning in Arabic language teaching is the emergence of computational linguistics, which makes teaching the language easier with smoother, less complicated techniques. Furthermore, the accelerated pace of developments in the field of informatics led to important innovations in multimedia; it is now far more engaging for learners with its combination of visual and auditory effects, images, and animations. This technological evolution led to the emergence of new pedagogical approaches to teaching and learning, such as independent learning, virtual learning, distance learning, and programmed learning [30]. [1] believes that Arabic is capable of coping with this advancement; therefore, Arabic Computational Linguistics can be implemented to transfer the language from the traditional format to the digital one. Similarly, [7] emphasized that blended learning has proven improvement in Arabic reading skills for second graders.

1.2 Challenges and Horizons of Blended Learning

Despite the potential benefits of blended learning, there are also several challenges that need to be addressed. These challenges include:

1. Resistance to change: Some educators may resist implementing blended learning due to a lack of familiarity with the technology or a belief that traditional teaching methods are more effective.
2. Technical issues: Technical difficulties, such as poor internet connection or inadequate hardware and software can negatively affect the effectiveness of blended learning.
3. Student engagement: Students may struggle to engage with course material in an online environment, particularly if they lack self-discipline or motivation.
4. Assessment: It can be challenging to develop effective assessments for blended learning courses that accurately measure student learning and provide meaningful feedback.

Training Teachers may require additional training and support to effectively integrate technology with blended learning and optimize student-learning outcomes [5, 9, 12, 43].

Blended learning has serious potential to improve student-learning outcomes and enhance educational institutions' effectiveness. However, addressing the challenges of blended learning, including identifying learners' needs, institutional readiness, teacher motivation, providing feedback to students, offering training to teachers, and implementing transformative learning, is essential for a successful implementation [10, 25]. According to [29], blended learning will dominate educational programs. This is related to the use of new technological advancements that help bridge the gap between traditional face-to-face learning and other methods of education [31]. Integrating blended learning has become common in a diverse learning

environment in Palestine; thus, the Palestinian Ministry of Education and Higher Education (2017) initiated an education-centered project. Unfortunately, the Ministry was unable to implement its project policy for the following reasons: exploitation of the technological structure to support local communities, the delay of internet connection to schools as a result of the Ministry’s bureaucratic procedures, and the Ministry’s need for external support to be able to provide classrooms with technology during the learning process [53]. In addition to the aforementioned challenges, blended learning faces new ones, such as the mandatory implementation of blended learning following COVID-19. In this sudden, unplanned shift to online learning, which relied on unprepared infrastructure technology, teachers have been tackling new methods of learning after they used to teach traditionally. Many students also face difficulty accessing the internet due to financial constraints and the high costs of digital devices. This resulted in a technological gap and, hence, a rise in educational inequality [3, 23]. A study conducted by [6] attempting to assess teaching in schools by the Ministry of Education and Higher Education in Palestine during the COVID-19 pandemic revealed that this strategy faced a variety of challenges, particularly school preparation, teacher training, organizational and structural aspects of blended learning, and the appropriation of program content. Based on the importance of implementing blended learning in the educational process and the role of teachers, the Ministry of Education and Higher Education urges computerizing educational programs to make a paradigm shift within the learning process. Therefore, this study aims to investigate the attitudes of Arabic language teachers in primary schools in Palestine about blended learning and study challenges that prevent implementing blended learning. This study examines blended learning, which is not a new learning structure or setting; yet apparently, applying blended learning in learning environments in the Arab world is a novel technique with financial challenges [18, 35]. Al-Rub’s (2020) study relies on the Palestinian educational system, which seeks to incorporate technology as an external component within the educational process, particularly in terms of training teachers to use blended learning and create content that is appropriate for this educational strategy. According to a study, there are fewer prerequisites for blended learning than for traditional learning [2]. [7] proposed conducting an analytic study to learn more about Arabic language teachers who are hesitant to integrate computerized programs into traditional classes. As a result, the finalized two questions about the study’s problem were:

1. What are the attitudes of Arabic language teachers in elementary stage toward implementing blended learning?
2. What are the challenges to implementing blended learning for Arabic language teaching from the perspective of Arabic language teachers in elementary stage?

2 Methodology

A quantitative survey was used in the study to collect and analyze numerical data to understand opinions and insights about a specific problem. The primary tool used to measure the variables in the research was a questionnaire on the employment of Arabic language teachers for blended education, which was an evaluation questionnaire that used a 5-point Likert scale. The questionnaire was developed based on the findings from previous studies [1, 6, 54]. It included 35 items divided into two domains: The first is the attitude of Arabic language teachers in lower primary schools toward blended learning (17 items). The second domain is the challenges that limit the implementation of blended learning (18 items). However, before the questionnaire’s distribution and shortly after its conceptualization, five specialists in information technology and Arabic language teachers reviewed each of the questionnaire’s items and gave their assessment of the survey instrument’s content quality in regard to its relevance to the questionnaire’s aim, its clarity, its comprehensiveness and completeness, and, finally, its significance and meaningfulness for each item. As such, items have been modified in light of the notes. Finally, to confirm the questionnaire’s usability, accuracy, and reliability, we undertook a pre-test in which 35 teachers were asked to evaluate the proposed questionnaire format and research items. Numerical values were assigned to each group of items using Cronbach’s alpha as it is clarified in table 1.

Table 1: Cronbach’s alpha factors

Domain	Participants (N)	Questionnaire items (N)	Alpha value
Attitudes	257	17	0.953
Challenges	257	22	0.868
Total	257	39	0.905

Table (1): revealed that the reliability value of the investigation was 0.90, which is acceptable and allows the instrument to be used.

2.1 Interpreting participants’ responses

In order to interpret the response of the sample group, the following scale was used: very high: 80% or more, high: 70 - 79.9%, average: 60 - 69%, low: 50 - 59.9%, and very low: less than 50%.

The survey was sent out via Google Drive and posted on schools' Facebook pages to collect data from the teachers. All survey items had to be answered post approval.

2.3 Population and sample

Participants in the survey of a random sample of 257 included Arabic language teachers in elementary schools in the West Bank, Palestine, during the second semester of the academic year 2022–2023. Figure 1 reveals the percentage of survey participants for the sample survey by school type.

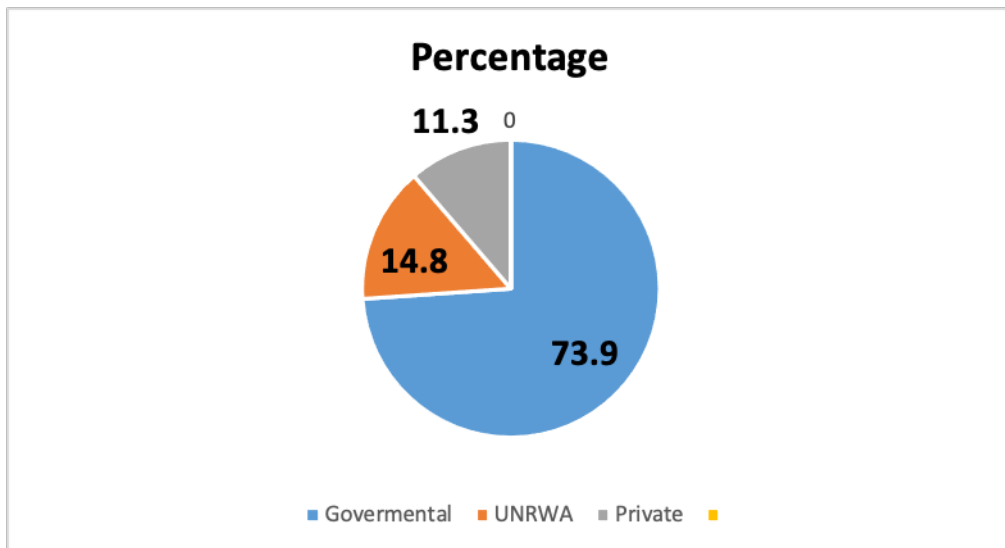


Fig. 1: Distribution of code comment vulnerabilities

The authors are grateful to the anonymous referee for a careful checking of the details and for helpful comments that improved this paper. As per the above diagram, the highest percentage was that of national schools with 73.9%, while the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) schools had the second highest percentage of 14.8%, and private schools came last with 11.3%.

2.4 Data Analysis

Statistical Packages for Social Sciences (SPSS) was applied to the statistical data. Descriptive analysis of averages, standard deviation, and percentage were used. Cronbach's alpha was used to measure consistency.

3 Results

This study explored the attitudes of Arabic language teachers in lower primary schools about blended learning and the challenges that limit implementing blended learning in Palestine through their responses to the items of the survey. After applying the required statistical analysis and using the survey that included 39 items, the following findings have been extracted:

3.1 Findings related to the first question

Q1. What are the attitudes of Arabic language teachers in elementary stage toward implementing blended learning?

To answer the first question, averages, standard deviations, percentages, likelihood of items, and the sum of the attitudes of the Arabic language teacher in lower primary schools toward blended learning were calculated.

Table 2: Mean, standard deviation and percentage of the respondents' answers (dimension one)

Items	M	S.D	Percentage %	Interruption
1 Through blended learning, I can apply logical educational activities	1.1	3.4	68.6	Average
	2	3		ge

2	Through blended learning, I can apply engaging activities for students to practice (speaking, writing, and reading)	1.1 5	3.3 4	66.8	Average
3	Blended learning improves students' ability to acquire language skills	1.2 0	3.1 0	62.0	Average
4	Blended learning improves the interaction between teachers and students	1.4 0	3.0 8	61.6	Average
5	I have learned more information by applying blended learning	1.3 1	3.3 8	67.6	Average
6	Blended learning helped me to use different computer programs	1.2 3	3.6 6	73.2	High
7	During blended learning, I use my devices such as mobile phone	1.2 6	3.7 5	75.0	High
8	During blended learning, I access social media applications	1.2 6	3.6 1	72.2	High
9	Blended learning helps students master school subjects	1.3 1	3.0 1	60.2	Average
10	Applying blended learning helps me self-reflect to assess teaching and learning	1.3 5	2.5 9	59.0	Low
11	Blended learning motivates my professional career	1.3 6	3.3 3	66.6	Average
12	Blended learning adds a social quality to technology	1.0 2	3.6 9	73.8	High
13	Blended learning motivates students to be independent learner	1.4 1	3.2 1	64.2	Average
14	Blended learning motivates students to apply Arabic language skills in real life	1.1 4	3.1 6	63.2	Average
15	Blended learning enhances teaching and learning with various activities inside and outside classrooms by applying different methods of e-learning and face-to-face learning	1.2 5	3.3 3	66.6	Average
16	Blended learning allows students to access school subjects anytime	1.2 5	3.4 8	69.6	Average
17	Blended learning helps me provide feedback continuously for all teachers and learners				
Total degree		0.9 5	3.3 3	66.6	Average

Table 2 demonstrates averages of findings, standard deviations, the likelihood of the items, and the total scale of attitudes of Arabic language teachers in lower primary schools toward blended learning. Results clarify that the average response is high on items 6, 7, 8, and 12, where the response rate varied between 72.2% and 75%. Teachers' attitudes were positive and high regarding blended learning's enhancement of teachers' ability to use different computer systems, social media, and various technological devices. On the other hand, attitudes towards blended learning were average on items (1, 2, 3, 4, 5, 9, 11, 13, 14, 15, 16, and 17), where the response average was between 60.2% and 69.6%. Finally, attitudes towards Item 10 were low with a response rate of 59%. Teachers concurred with an average score on the potential blended learning holds for providing a chance for teachers to present variant, meaningful activities that improve students' language skills. This led to increased interaction between teachers and students, helping them learn and self-improve, granting more flexible and easy access to the educational subject in its different forms, and providing feedback continuously. The total score of the first section was 66.6 percent average rate. This concludes that teachers' attitudes toward blended learning and its role in teaching Arabic language and skills in lower primary schools were consistent and average. The highest item was (7) (during blended learning, I use my devices, such as mobile phones), with an average response of 75%. The lowest item was (10) (applying blended learning

helps me self-reflect to assess teaching and learning), with an average response of 59%.

3.2 Findings of the second question

Q2. What are the challenges to implementing blended learning for Arabic language teaching from the perspective of Arabic language teachers in elementary stage?

To answer the second question, averages, standard deviations, and impact degree of each item in the second section and the total score of the section were calculated, as seen in Table (3).

Table 3: Mean, standard deviation and percentage of the respondents' answers (dimension two)

No.	Items	SD	Mean	Percentage %	Impact degree
18	Arabic content for lower primary does not correspond with blended learning	1.2	3.78	75.6	0> <0>High
19	The content of Arabic textbooks needs to be improved to fit blended learning.	2	4.07	81.4 High	<0 Very
20	Lower secondary students lack blended learning skills.	0.8 9	4.15	83 High	Very
21	It is very difficult to evaluate students during blended learning.	0.9 9	4.12	82.4 High	Very
22	Blended learning can teach students immoral behavior such as cheating.	0.9 8	4.01	80.2	Very High
23	Blended learning leads to student negligence and dependency.	1.0 7	3.95	79	0> <0>High
24	The educational scene in schools does not correspond with the requirements of blended learning.	0.9 7	3.88	77.6	< 0 0> <0>High
25	Parents are not cooperative which limits the efficiency of blended learning.	1.1 5	3.78	75.6	< 0 0> <0>High
26	Blended learning encourages school absenteeism.	1.0 8	3.95	79	<0 0> <0>High
27	Very few students interact during blended learning	1.2 5	3.66	73.2	<0 0> <0>High
28	School administrations involve teachers in developing plans to implement blended learning.	1.4 1	3.29	65.8	<0 Average
29	School administrations develop plans to correspond with blended learning.	1.3 7	3.27	65.4	Average
30	School administrations support teachers to carry out blended learning plans.	1.3 8	3.21	64.2	Average
31	School administrations communicate with parents to follow up on the educational process.	1.3 9	3.07	61.4	Average
32	Internet connection hinders implementing blended learning.	1.0 0	4.06	81.2	Very High
33	Learning through blended learning is inferior to learning in physical classrooms.	1.1 1	3.85	77	0> <0>High
34	Schools are not qualified technically to implement blended learning.	1.0 7	3.86	77.2	<0 0> <0>High
35	My skills in implementing technology prevent me from implementing blended learning.	1.3 3	3.34	64.8	<0 Average

36	Available e-learning programs hinder achieving blended learning aims.	1,0 9	3.55	71	0> <0>High
37	I did not receive the proper training to implement blended learning.	1,2 3	3.46	69.2	<0 Average
38	There are enough TV channels that help implement blended learning.	1,3 1	2.99	59.8	Low
39	There are sufficient audio and video resources to help achieve the aims of blended learning in teaching Arabic.	1,3 6	3.06	61.2	Average
The total scores of the second section		0,5 6	3.37	67.4	Avera ge
The total score of all items		0,5 5	3.35	67	Avera ge

The table above demonstrates the challenges preventing the implementation of blended learning in Arabic language teaching from the perspectives of lower primary Arabic teachers. The findings indicated that the average response was very high to items (19, 20, 21, 22, and 32), with a response rate varying between 80.2% and 83%. Meaning the response rate was very high regarding challenges facing blended learning, including the contents of Arabic textbooks, students' lack of blended learning skills, and the difficulty of accurately evaluating students due to the inability to detect cheating in tests and assignments. The findings also illustrated a high response rate to items (18, 23, 24, 25, 26, 27, 33, 34, and 36), where rates varied between 71% and 79%. Teachers concurred to a high degree that the educational scene in Palestinian schools does not correspond with the requirements of blended learning. Responses to the challenges of blended learning were average for items (28, 29, 30, 31, 35, 37, and 39); response rates varied between 61.2% and 69.2%. In other words, teachers' attitudes toward the role of schools and administration in developing and executing plans that correspond with the needs and aims of blended learning were average. Furthermore, teachers had limited skills and low competence in using technology, which posed a challenge to implementing blended learning and arriving at real outcomes. The response rate to the total score of all items in Section 2 was an average of 67.4%. The highest response was to item (20), which

stated that lower primary students lacked blended learning skills, with a rate of 83%. The lowest response, on the other hand, was to Item 38 at 59.8%, which stated that "there were sufficient channels to help implement blended learning.

4 Discussion

The findings recorded the attitudes of Arabic teachers toward blended learning as average. These findings were derived from the Palestinian experience that aimed to implement blended learning under the strain of COVID-19, which led many countries to search for educational opportunities outside the traditional classroom. This implementation was not done right in the Palestinian context. Teachers divided classrooms into two groups: one that studied face-to-face and another that did so online. This implementation resulted in many challenges, such as teachers' inability to follow up with students, leading to more work pressure that triggered negative teacher attitudes [6]. Another challenge was the shift to blended learning in the Palestinian educational scene without considering its success criteria, including teachers' needs to know different curricula and receive professional development in lesson design [36]. Taking these criteria into consideration promotes positive attitudes toward blended learning. [45] indicated in a paper that teachers who have received specialized training in using online learning environments are more inclined to apply these environments effectively. Furthermore, the Palestinian experience faced cultural and social challenges. Teachers doubted the efficiency of blended learning since they were more used to the traditional method of teaching, which caused difficulties in adapting to this method of learning for both students and teachers. This act of resistance is expected since people are reluctant to change or adapt to new conditions, yet the same resistance does not surface when one takes a stand against the internet. Teachers simply occupy a passive role in the change and hold onto traditional teaching methods. They might also be unwilling to adapt to new techniques and strategies or appear disinterested in new changes [46]. Another cultural factor is the negative attitude of Palestinian students toward building a digital culture, which was evident through the neglect to implement digital technologies and their applications in educational settings, leading to many negative outcomes [19]. The findings also indicated serious challenges preventing primary Arabic teachers from implementing blended learning due to the lack of a foundation necessary to make it work and the emergence of new challenges limiting its application [23, 27, 50]. The challenges were more evident and widespread in Arabic-speaking countries, including Palestine, which essentially suffered a lack of technological resources, making technology implementation in education challenging since only 70.5% of West Bank schools had an internet connection. According to a report by the Palestinian Central Bureau of Statistics in 2019, most computers available in schools were old and only used in computer classes. The Palestinian Ministry of Education did not allow schools to use their budgets to pay for internet plans. In addition, most teachers did not use computers [53]. These challenges were more serious since the shift toward implementing technology in teaching was due to unusual circumstances. Because of COVID-19, many countries searched for educational opportunities outside the traditional classroom by providing content on the internet and TV broadcasts [6]. The shift revealed the depth of the crisis. The Palestinian Ministry of Education launched a plan for technology-based learning

that failed in practice for several reasons. The main reason was the inability to develop classrooms that rely on technology due to a lack of domestic resources and the need for foreign aid, which is usually conditional and likely to stop [16]. In addition, using technology in the classroom is bound to be affected by markets, profit, and trading rather than pedagogies and learning theories. Since markets control technology, they are not neutral; therefore, it is complicated to apply their effect in poor educational settings. Improper application of blended learning is bound to create unintended negative effects in the classroom [48]. Another major obstacle has to do with the nature of the Arabic language. Digital technology needs to be implemented to introduce blended learning; this poses a challenge for Arabic in the mechanisms of digital technology in the following aspects: The relationship between spoken and written language, explicit and implicit content, symbols and codes, and computing and language units [1]. A study by [20] demonstrated that teaching Arabic online still faces challenges in terms of students, teachers, and curriculum. Another study by [14] revealed that student interaction with multimedia in other language studies was rather low as well. These challenges affected the educational system's ability to implement blended learning, especially in Arabic language teaching, since its success relied on different variables, including equipped facilities, the availability and accessibility of e-content, curricula designed to fit hybrid learning and different learning styles, and finally, the workload.

5 Conclusion

The study aimed to explore the role of blended learning in the Palestinian educational scene by analyzing the challenges it faces and Arabic teachers' attitudes toward it. According to the study results, many challenges still face blended learning from all aspects: technical, educational, cultural, and workload. These results call for serious measures when providing the requirements necessary for the success of this type of learning. There is a need for basic training on implementing blended learning. School principals need to take a more active role in the shift to digital and hybrid learning by providing teachers with the necessary professional development [37], especially since education in Palestine is primarily traditional [39]. Furthermore, for this type of learning to succeed, several factors should be taken into consideration; the challenges of different educational settings should be addressed and different environments should be merged into one. Blended learning models should also be developed to correspond with the local environment while still maintaining the building blocks of the organizational structure. Finally, the institutional procedures related to regular evaluations and the publication of their results should be upheld. The process should not be limited to adding technology to the classroom [50]. Additionally, in the Palestinian educational scene, study results indicated a clear gap and a need for providing better internet connections, upgrading computer labs, reducing information technology costs, and enhancing the educational environment with interactive technology. Consequently, a positive educational environment is one of the vital requirements for the success of blended learning. One of the essential requirements for the success of blended learning is providing the proper infrastructure, like training qualified professionals, for instance, and providing them with the required communication steps that facilitate transferring education from one platform to another [24]. To promote the role of blended learning in the Palestinian educational structure, encourage Arabic teachers to develop positive attitudes towards it, and overcome the challenges hindering its effectiveness, the following must be done: Identifying the types of programs used in blended learning, finding the right learning strategy and the proper methods for merging e-learning and traditional learning. Curricular and educational content should also be considered, as well as the needs of learners [32]. Furthermore, raising awareness around the importance of this type of learning among community members is imperative. On top of that, educators have a fundamental role in creating and designing content for blended learning [22]. Developing a wholesome and applicable plan to implement blended learning is necessary since the shift from traditional classrooms was not expected or planned but rather a reaction to COVID-19 [6]. Along with that, research studies should be conducted to evaluate the Palestinian experience in implementing blended learning in educational settings in more depth and in a more holistic way. More research should also be conducted to develop blended learning models that correspond with the local environment to provide content that not only covers the curriculum but also engages learners [28]. When it comes to implementing blended learning in teaching Arabic, its content must be digitalized. [34] argue that many languages, such as Japanese, Chinese, Turkish, and Hebrew, came out ahead of Arabic in the number of Arabic terms available in digital content. Those languages also have a stronger online presence than Arabic. There is an urgency to bridge the digital gap on the internet. The study also recommends holding training sessions for teachers on implementing blended learning, raising awareness among community members, encouraging educators to create and design content for blended learning, and providing schools with digital linguistic techniques that enable teachers to implement blended learning in teaching Arabic.

6 Limitations of the Study

The study had the following limitations: First, the study was limited to lower primary Arabic teachers in public, private, and UNRWA schools in Palestine during the first semester of the academic year 2022–2023. Second, it was limited to the challenges facing effective implementation of blended learning as well as Arabic teachers' attitudes toward it.

Acknowledgement

Special thanks to all Arabic language teachers in elementary stage in Palestine for their cooperation.

References

- [1] H. Abu-Asee. Computational linguistics and its impact on the development of arabic language sciences (linguistic phonetics as a model). *Hebron University Research Journal (B)*, 15(1):90–113, 2020.
- [2] M. A. Abu Sarah and H. T. Herzallah. The degree of distance e-learning availability requirements in the schools affiliated to the palestinian ministry of education during covid-19 pandemic as perceived by teachers. *Palestinian Journal for Open Learning & e-learning*, 17:17–34, 2023.
- [3] I. Aburub and D. Assaf. Digital transformation of higher education in palestine: employment, obstacles, and trends. *Baltic Journal of Law & Politics*, 15(3):551–566, 2022.
- [4] E. Al-Ajjawi. The extent to which the use of integrated learning among arabic teachers for the middle basic stage in the schools of zarqa governorate. *Scientific Journal of the Faculty of Education - Assiut University*, 38(7):211–223, 2022.
- [5] R. AL Mawadieh and T. Al-Zoabi. The trends of implementing blended learning among jordanian universities' faculty members and the obstacles they face. *Zarqa Journal for Research and Studies in Humanities*, 20(1):38–48, 2020.
- [6] I. O. I. A. AL-Rub. The procedures of education administration and the exploration of challenges during covid-19 pandemic in palestine. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(6), 2020.
- [7] A. F. Al Saud. The effect of blended learning on children's arabic reading during covid-19 quarantine. *International Journal of Innovation, Creativity and Change*, 14(12):1132–1152, 2021.
- [8] A. W. Q. Al Zumor, I. K. Al Refaai, E. A. Bader Eddin, and F. H. Aziz Al-Rahman. Efl students' perceptions of a blended learning environment: Advantages, limitations and suggestions for improvement. *English Language Teaching*, 6(10):95–110, 2013.
- [9] M. Aldoghami. Degree of satisfaction of english language students in jouf university with the department of distance learning quality. *Zarqa Journal for Research and Studies in Humanities*, 2(22):240–252, 2022.
- [10] N. Almazova, E. Krylova, A. Rubtsova, and M. Odinokaya. Challenges and opportunities for russian higher education amid covid-19: Teachers' perspective. *Education Sciences*, 10(12):368, 2020.
- [11] A. Alsayat and N. Elmitwally. A comprehensive study for arabic sentiment analysis (challenges and applications). *Egyptian Informatics Journal*, 21(1):7–12, 2020.
- [12] R. A. Alshdifat. Obstacles facing the application of distance learning during the corona pandemic, from the viewpoint of students of hail university in the kingdom of saudi arabia. *Zarqa Journal for Research and Studies in Humanities*, 2(22):228–239, 2022.
- [13] A. S. Andriyani, M. Maulina, S. Amin, R. Nasrullah, A. Asdar, and A. Hamsiah. Students' perception in learning english through blended learning. *Journal of Education and Teaching (JET)*, 3(1):50–68, 2022.
- [14] E. Anwas, Y. Sugiarti, A. Permatasari, J. Warsihna, Z. Anas, L. Alhapi, H. Siswanto, and R. Rivalina. Social media usage for enhancing english language skill. *International Association of Online Engineering*, 2020.
- [15] S. Banerjee, B. Jambrina-Canseco, B. Brundu-Gonzalez, C. Gordon, and J. Carr. Nudge or not, university teachers have mixed feelings about online teaching. *Humanities and Social Sciences Communications*, 10(1):1–10, 2023.
- [16] A. K. Barham. *Computer Integration in Palestinian Secondary Schools: Theory and Practice*. PhD thesis, University of Massachusetts, Amherst, MA, USA, 2014.
- [17] S. Batista-Toledo and D. Gavilan. Implementation of blended learning during covid-19. *Encyclopedia*, 2(4):1763–1772, 2022.
- [18] M. BazBaz and A. Obiedat. Difficulties of applying blended learning in secondary schools of irbid governorate from teachers' point of view. *Dirasat: Educational Sciences*, 46(6):433–451, 2019.
- [19] L. P. Beland and R. Murphy. Ill communication: technology, distraction student performance. *Labour Economics*, 41:61–76, 2016.
- [20] A. Bin Muhammad, A. K. Al-Shehri, and M. A. Al Harthi. The degree of availability of skills needed to build and employ electronic exams for faculty members at the university of jeddah in light of the global trend in e-learning. *EDUCATIO: Journal of Education*, 6(1):14–28, 2021.
- [21] R. Boelens, M. Voet, and B. De Wever. The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning. *Computers Education*, 120:197–212, 2018.

- [22] B. Bruggeman, J. Tondeur, K. Struyven, B. Pynoo, A. Garone, and S. Vanslambrouck. Experts speaking: Crucial teacher attributes for implementing blended learning in higher education. *The Internet and Higher Education*, 48:100772, 2021.
- [23] S. Dahwan. Online learning: A panacea in the time of covid-19 crisis. *Journal of Educational Technology Systems*, 49(1):5–22, 2020.
- [24] K. L. Dangwal. Blended learning: An innovative approach. *Universal Journal of Educational Research*, 5(1):129–136, 2017.
- [25] C. Dziuban. *Blended learning: Online learning enters the mainstream*. New York, 2005.
- [26] A. M. A. El Rous. The effectiveness of blended learning in the development of creative reading skills for students of arabic learners of other languages. *International Interdisciplinary Journal of Education*, 4(7):1–32, 2015.
- [27] H. Fazza and M. Mahgoub. Student engagement in online and blended learning in a higher education institution in the middle east: Challenges and solutions. *Studies in Technology Enhanced Learning*, 2(1):417–431, 2021.
- [28] L. D. George-Walker and M. Keeffe. Self-determined blended learning: a case study of blended learning design. *Higher education research development*, 29(1):1–13, 2010.
- [29] C. R. Graham. *Blended learning systems: Definitions, current trends and future directions*. Pfeiffer, San Francisco, 2006.
- [30] B. Gros and F. J. García-Peñalvo. *Future trends in the design strategies and technological affordances of e-learning, learning Design, and Technology*. Springer, USA, 2016.
- [31] B. Güzer and H. Caner. The past, present and future of blended learning: an in-depth analysis of literature. *Procedia-Social and Behavioral Sciences*, 116:4596–4603, 2014.
- [32] H. Haidi and M. Hamdan. Analysis of the home-based online teaching and learning policy during the covid-19 second wave in brunei: a joint parent/teacher perception. *Asia Pacific Education Review*, pages 1–16, 2022.
- [33] A. Hashemi and K. Si Na. The effects of using blended learning in teaching and learning english: A review of literature. *Online Submission*, 18:173–179, 2020.
- [34] A. T. Issa and A. G. Siddiek. Arabic language and computational linguistics. *Applied Science Reports*, 6(11):4–13, 2018.
- [35] A. Jawida, O. Tarshun, and A. Alyane. Characteristics and objectives of distance education and e-learning—a comparative study on the experiences of some arab countries. *Arab J. Lit. Hum*, 6:285–298, 2019.
- [36] P. Jokinen and I. Mikkonen. Teachers' experiences of teaching in a blended learning environment. *Nurse Education in Practice*, 13(6):524–528, 2013.
- [37] J. Keengwe and J. J. Kang. A review of empirical research on blended learning in teacher education programs. *Education and Information Technologies*, 18:479–493, 201
- [38] A. S. Keshta and I. I. Harb. The effectiveness of a blended learning program on developing palestinian tenth graders' english writing skills. *Education Journal*, 2(6):208–221, 2013.
- [39] A. Mahmood and O. Darag. The importance of e-learning and the requirements for its success. Retrieved from <https://pulpit.alwatanvoice.com/articles/2020/03/23/516810.html>, 2020.
- [40] M. Milad. The pedagogical development of blended learning. In *English language teaching research in the Middle East and North Africa: Multiple perspectives*, pages 609–635, 2019.
- [41] F. A. E. Mohamed. The effectiveness of the blended learning in enhancing efl learning and collaboration. *World Journal of English Language*, 12(1), 2022.
- [42] K. N. Mohd, A. H. Mohd Adnan, A. A. Yusof, M. K. Ahmad, and M. A. Mohd Kamal. Teaching arabic language to malaysian university students using education technologies based on education 4.0 principles. In *Proceedings of the International Invention, Innovative & Creative (InIIC) Conference, Series*, pages 38–51, 2019.
- [43] M. A. Muraweh. Teachers' perspective of educational technology integration in secondary stage islamic education curricula. *Zarqa Journal for Research and Studies in Humanities*, 20(1):49–59, 2020.
- [44] N. Nikitinsky, P. Kachurina, S. Sergey, and E. Shamis. Generation theory in hr practice: text mining for talent management case. In *Proceedings of the International Conference on Electronic Governance and Open Society: Challenges in Eurasia*, pages 262–266, 2016.
- [45] T. Owens. Hitting the nail on the head: The importance of specific staff development for effective blended learning. *Innovations in Education and Teaching International*, 49(4):389–400, 2012.
- [46] M. Park and Y. K. Sung. Teachers' perceptions of the recent curriculum reforms and their implementation: what can we learn from the case of korean elementary teachers? *Asia Pacific Journal of Education*, 33(1):15–33, 2013.
- [47] A. G. Picciano. Theories and frameworks for online education: Seeking an integrated model. In *A guide to administering distance learning*, pages 79–103. Brill, 2021.
- [48] J. Poon. Blended learning: An institutional approach for enhancing students' learning experiences. *Journal of online learning and teaching*, 9(2):271, 2013.

- [49] L. Skenderi and S. Sadiki. Teacher perceptions on computer and media learning (ict) in english language acquisition in primary and secondary schools in macedonia. *International Journal of English Language Studies*, 4(1):51–57, 2022.
- [50] E. Stacey and P. Gerbic. *Success factors for blended learning. In Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008, 2008.*
- [51] Tarazi, A., & Arafat, S. (2021). *The Role of Using iPad Technology in Enhancing Students' Motivation Toward Learning the English Language. EDU REVIEW. International Education and Learning Review Revista Internacional De Educación Y Aprendizaje*, 9(2), pp. 89–98.
- [52] M. L. Ulanday, Z. J. Centeno, M. C. Bayla, and J. Callanta. *Flexible learning adaptabilities in the new normal: E-learning resources, digital meeting platforms, online learning systems and learning engagement. Asian Journal of Distance Education*, 16(2), 2021.
- [53] N. Wahbeh. *ICT and education in Palestine: Social and educational Inequalities in Access to ICT.* QattanCenter for Educational Research and Development, Ramalla, Palestine, 2006.
- [54] X. Wang and W. Zhang. Improvement of students' autonomous learning behavior by optimizing foreign language blended learning mode. *Sage Open*, 12(1):21582440211071108, 2022.
- [55] H. K. Yau and A. L. F. Cheng. Gender difference of confidence in using technology for learning. *Journal of Technology Studies*, 38(2):74–79, 2012.
- [56] N. Zainuddin and M. S. Sahrir. Multimedia courseware for teaching arabic vocabulary: Let's learn from the experts. *Universal Journal of Educational Research*, 4(5):1167–1172, 2016.
-